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The Prophetic Medicine And Raw, Natural, Pure Cow's Milk

A Religious, Scientific And Historical Account Of Raw, Pure Cow's Milk As A Cure And Medicinal Treatment For Disease

With A Brief Discussion of the Compositional, Biochemical, Nutritive and Immunological Elements of Milk, The Social Circumstances Behind the Adoption of Pasteurisation in 20th Century Industrialized Nations And the Superiority of Real, Natural Milk Over Processed, Treated Milk

Ibn al-Qayyim stated, "The medicine of the followers of the Prophet is more sound and more beneficial than that of any others. Thus the medicine of the followers of the Seal and Master and Leader of the prophets, Muhammad bin 'Abdullaah, (sallallaahu alayhi wasallam) is the most perfect medicine, the soundest and the most beneficial. This will only be recognised by one who knows both the medicine of other people and that of the followers of the Prophet (sallallaahu alayhi wasallam) and then compares them, whereupon the difference will become clear to him". (Zaad al-Ma'aad 3/380)

From Ibn Mas'ood (radiallaahu `anhu) who narrates that the Messenger of Allaah (sallallaahu alayhi wasallam) said, تداووا بألبان البقر فإني أرجو أن يجعل الله فيها شفاء فإنها تأكل من كل الشجر "***Take cow's milk as (medicinal) treatment for indeed I hope that Allaah places a healing therein, for indeed it ruminates upon every herbage***". Related by at-Tabaraanee and declared Hasan by Imaam al-Albaanee in *Saheeh al-Jaami' as-Sagheer (no. 2929).*

From Taariq bin Shihaab who narrates that the Messenger of Allaah (sallallaahu alayhi wasallam) said, إن الله تعالى لم يضع داء إلا وضع له شفاء فعليكم بألبان البقر فإنها ترم من كل الشجر "***Indeed, Allaah the Most High, did not create a disease except that he created for it a cure, so upon you is cow's milk for indeed it ruminates upon every herbage***". Reported in the Musnad of Ahmad Ibn Hanbal and declared Saheeh by Imaam al-Albaanee in *Saheeh al-Jaami' as-Sagheer (no. 1808).*

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Contents

Introduction

Bismilllaahir-Rahmaanir-Raheem. All Praise is due to Allaah, we praise Him, seek His aid and His Forgiveness. We seek refuge in Allaah from the evils of our souls and the evils of our actions. Whomsoever Allaah guides there is none to misguide and whomsoever Allaah misguides there is none to guide. I bear witness that there is none worthy of worship except Allaah, alone, without any partners and I bear witness that Muhammad is His servant and messenger.

This is a paper put together to provide some insights into the issue of raw, natural, fresh, pure cow's milk, around which there is "controversy" today. Considering that Allaah has referred to what is called "***labanan khaalisan*** **لبنا خالصا**" (pure milk) in the Qur'aan and considering that there are statements from the Sunnah regarding the medicinal and curative properties of cow's milk, it is a topic that is worthy of investigation since cow's milk is part of the "Prophetic Medicine", as we shall see inshaa'Allaah.

In this paper, we will look at the religious, scientific and historical issues connected to this matter with a view to resolving the apparent controversies that surround the subject. The controversies revolve around the beneficial health claims made regarding raw milk on the one hand and claims of the inherent danger to health associated with raw milk consumption on the other.

This paper is an elaboration upon whatever has currently been published on **HealthyMuslim.Com** (as of 4th December 2008)

Raw Milk As A Controversial Issue

In any discussion on any contested issue, it is vital that the pertinent facts and realities are established, be they historical, scientific or religious. The realities of a situation ought to be known before conclusions and judgements are made.

Therefore, this paper is intended as an information sharing exercise that will allow people to develop their own "informed opinion" on the issue of "raw, pure milk".

It is highly recommended that you suspend all judgement until you have sequentially read through this *entire document*, and read through *each and every single paragraph*. Comments, observations, corrections, objections, refutations – whatever can be thrown at it are very welcome.

In this paper we touch upon:

- Distinguishing between the different types of "raw milk" so as to avoid any confusion about what specific milk we are speaking about,
- The benefits of fresh, pure, natural milk (as it always has been in the creation),
- It's textually established medicinal and curative properties in the Sunnah,
- It's wide use as a cure for a very broad range of chronic diseases in the 19th and early 20th century,
- It's vast superiority over heat-treated milk,
- A review of the milk supply in the 19th and 20th centuries and unique historical precedents of the time,

- The background to adoption of pasteurisation and opposition to it from doctors and physicians who fought for a naturally clean milk supply as opposed to an artificially (pasteurised) milk supply,
- Understanding outbreaks of illness from raw and pasteurised milk by looking at the actual evidences,
- Chronic illnesses such as heart disease, diabetes, asthma and others associated with heated milk proteins
- … and many other related topics.

This will provide a much broader and deeper context within which the most appropriate and correct position(s) can be taken.

The main motivations behind the discussion of this topic are

1. To defend the Book of Allaah, the Prophetic Sunnah and the Prophetic Medicine from statements of malignment and ridicule – implied, or explicit, intended or unintended – which emanate from physicians and scientists, be they Muslim or non-Muslim.

2. To affirm and venerate the greatness of Allaah's creative ability in His placing of such causes and effects (al-asbaab wal-musabbibaat) within the creation for the benefit of mankind.

3. To establish the superiority of the Prophetic Medicine, which is a completion and perfection of the Divine Sharee'ah.

10th January 2009

Terms and Definitions

There are numerous terms often used in the paper that should be clarified here:

Pathogen	This means "disease causing".
Coliform	This means "colony forming units" and this simply refers to how many bacterial colonies are formed in a cell culture from a certain amount of a substance. It is used to test the bacterial quality of the milk. It is NOT a measure of milk safety, as bacterial presence in and of itself does not determine milk safety.
Somatic Cell Count	This refers to the number of white blood cells (leucocytes) found in one cubic centimetre of milk. It is *an indicator* of the quality of milk. Higher counts indicate that the cow is undergoing infection. This is not necessarily an indicator of the *safety* of milk, but of its *quality*.
Bacteriocidal	Description of something that kills bacteria
Bacteriostatic	Description of something that stops growth of bacteria
Lactic Acid Bacteria	Beneficial bacteria found in milk and which stimulate and modulate the immune system as well as destroying, or outcompeting harmful bacteria.
Chronic Illness	Long term, or long-lasting illness (as opposed to acute illness – short term)

A Review of Raw Milk Covered on HealthyMuslim.Com

We will briefly review the articles currently on HealthyMuslim.Com and point out what is covered and raised in the five or six articles currently published (all before December 4th 2008). The rest of this paper is essentially a detailed treatment of what is briefly alluded to in these articles.

Untreated Raw Milk Gains in Popularity and Demand
http://www.healthymuslim.com/?vrecj
Wednesday, September 24 2008

This first article was chosen to give coverage to this topic in a balanced way, and it highlights numerous important issues – such as health concerns, milk safety, types of raw milk and so on.

This is a newspaper report on the subject. Some of its contents:

- I stated as an introductory comment to the news article, "One thing to note when you read about raw milk (as again there is a lot of propaganda and scaremongering against it) is that there are two types of raw milk. Firstly, The raw milk that is produced from cows that are only fed on pasture in the open. And secondly the raw milk from cows that are fed grains, are injected with growth hormones (to produce more milk) and are kept in mass herds on solid ground (not grass) to produce milk. Obviously the two types of raw milk are certainly not the same."

Here I distinguished between raw milk from grass-fed cows (their natural diet) kept in the open in their natural habitat and raw milk from conventional dairies.

Quotes from the news report itself:

- "But aren't they dicing with disease? The Government would have us think so. "The risk of food poisoning from unpasteurised milk is very real," says a spokeswoman from the Food Standards Agency (FSA). "We particularly wouldn't recommend it for vulnerable people - the sick, infants and the elderly." One of the main reasons raw milk was banned in the first place was because 65,000 people caught TB from it. Although the likelihood of this happening today is negligible, bovine TB is increasing."

- "Elsewhere, the legislation is more draconian. In Scotland, raw milk has been banned since 1983 after a scary outbreak of milk-related illnesses. In America, you virtually have to own a cow to get your hands on the stuff."

These are just some instances in which government and state healthy authority concerns have been mentioned in the course of the coverage of the issue. Also in the same article:

- "Thomas Cowan, a doctor from San Francisco, sees it as a big-versus-small business issue. "In order to produce raw milk, you need healthy cows, which precludes big business. You can't raise a healthy cow on anything but pasture. The giant dairies keep cows on concrete and feed them grains, soya and sometimes even meat; they turn them into factory animals. And then the cows get sick. You couldn't drink raw milk from those herds"."

- "In Britain, the small dairies are much cleaner now than they were when pasteurisation came in. In addition, farmers who want to sell raw milk must pay for frequent tests."

The article makes clear the difference between the *raw milk intended for consumption* and the *raw milk intended for pasteurisation*. The latter is not safe milk – it must be pasteurised. And the article also alludes to the frequent testing that the herds and milk (raw milk intended for ***consumption***) must undergo.

Frequently Asked Questions on Raw Untreated Milk
http://www.healthymuslim.com/?fohil
Wednesday, September 24 2008

This next article covers the superiority of fresh, natural raw milk from cattle fed on pasture over pasteurised milk from a compositional, nutritive and immunological perspective and provides biochemical evidence for that. It touches upon the issues of Tuberculosis and Brucellosis, and other safety issues. In particular it covers:

- The living nature of raw, natural milk.
- Inferiority of pasteurised milk that retains all dead bacterial debris and causes allergies.
- Historical reasons for pasteurisation of milk.
- The practice of grass feeding (cows' natural diet) has significant impact on cow's immune system and internal rumen – producing "pathogen" free milk.
- Immune and digestive aspects of raw, natural milk including immunoglobins and enzymes – destroyed by pasteurisation

This article gives some evidence for the superiority of natural, pure, raw milk from a biochemical, physiological and immunological perspective.

Drink It Raw: Great Article On Unprocessed Milk
http://www.healthymuslim.com/?rzvgu
Thursday, November 13 2008

A fairly lengthy news report that goes into lots of detail about all aspects of the raw milk versus pasteurised milk debate. It covers safety aspects of raw milk, the views of state regulatory bodies, differences between raw and pasteurised milk, references to studies highlighting benefits of fresh raw milk on health and allergy, the history of pasteurisation, the recognition of doctors in the early 20th century that milk pasteurisation destroys vital nutrients and enzymes, doctors in the early 19th century using raw milk to cure diseases and much more.

It is a balanced article that covers a variety of issues.

Are You Drinking Living Milk Or Dead Milk?
http://www.healthymuslim.com/?mkcxg
Saturday, November 15 2008

This provides expert testimony from strongly qualified professionals with outstanding credentials on the subjects of pathology, illustrating the effect of pasteurisation upon the inherent immune systems of milk, implications upon milk safety and related issues. The effects of pasteurisation and homogenisation

are discussed in the introduction to the information and the entire court transcript is available for download at the end of the article.

The points covered in the article:

- Milk has been consumed since recorded history, without pasteurisation which was only used widely in the early 1900s.
- This fresh, raw milk was safe for consumption otherwise it would have disappeared from the diets of cultures
- Milk does not have to be free of bacteria in order to be safe.
- Pasteurized milk is more susceptible to "pathogens" since it's inherent immunity has been killed.
- Raw milk kills Listeria if it is inoculated into it, due to its inherent anti-microbial activity. Pasteurised milk does not.
- Raw milk is living because it contains living components, lactic-acid bacteria are living organisms, it also has white blood cells and other defence systems that are active working components. Pasteurisation kills that life and activity.

The article establishes, from expert witness testimony (from dairy experts) that heated milk is inert, lifeless, dead milk. This is the viewpoint of a specialist in the field of dairy microbiology, and this matter is elaborated upon in this paper.

At the end of the same article is the following advice that is given:

> **"What Milk Should You Buy?**
>
> If you are in a position to get raw milk, you should try it. Just ensure that the farm you are buying from has established hygiene standards in the collection and bottling of milk and also have pathogen count tests on their milk. They should give you this information if you ask. Here are some resources to help you find raw milk providers:
>
> - From RealMilk.Com
> - A UK Source
>
> For the vast majority of people it may be difficult to get raw unprocessed milk. In that case you should try to buy **organic pasteurized milk which is NOT homogenized**. If you can't get it organic, then get pasteurized non-homogenized milk. By doing this, you are limiting the extent of the problem with processed milk. If its organic, which means the cows are pasture fed, then even if it is pasteurized, it is milk that will have better quality. So your ideal choice in the absence of real milk, **is organic, pasteurized but non-homogenized milk**."

And a comment was added to this article on 16th November 2008,

> "When getting raw milk you have to "know your source". In western countries, farms that supply raw milk will be complying with certain standards and would be getting regular pathogen tests or counts done on their milk. If you are going to get some raw milk, you can ask the farm keepers about their standards and testing. It's just like any other food which

> can undergo contamination such as salads and meats, leading to food poisoning. So you have to know your source and ensure it meets standards of food hygiene."

Illnesses Associated With Pasteurized, Homogenized Milk
http://www.healthymuslim.com/?wfdco
Monday, November 17 2008

An excerpt from a book covering illnesses associated with pasteurised, homogenised milk and raises the subject of heart disease, diabetes with focus on allergies and conditions such as eczema, arthritis respiratory problems.

Untreated Milk Cuts Childrens Allergies
http://www.healthymuslim.com/?mzonm
Wednesday, December 03 2008

This is a quotation of a news article that discusses published research on the effect of untreated (unpasteurised) milk upon allergy in children. Specifically quoted in the article were the following paragraphs:

> "Untreated milk cuts children's allergies. Drinking "raw" milk could reduce children's risk of suffering allergy-related conditions such as eczema and hayfever, new research suggests. British academics investigating why farmers' families suffer fewer allergies than others found that even occasional consumption of raw unpasteurised milk had a powerful effect. Just a couple of glasses a week reduced a child's chances of developing eczema by almost 40 per cent and hayfever by 10 per cent. Blood tests revealed that drinking raw milk more than halves levels of histamine, a chemical pumped out by cells in response to an allergen. It is thought the milk contains bacteria that help to prime the immune system.
>
> "But the findings, published in the Journal Of Allergy, asthma And Immunology, are controversial because unpasteurized milk is also a source of potentially fatal food-poisoning bugs. Raw milk was banned from sale in Scotland 20 years ago, and can be sold by farmers in England and Wales only with labels clearly warning of the risks."
>
> "When researchers at the University of London analysed the diet and health of 4,700 primary school children in Shropshire, they found that those who lived on farms had significantly fewer symptoms of asthma, hayfever and eczema. The study looked at whether children were breast-fed and how often they were in contact with animals or played in barns. The greatest benefits were found to come from drinking raw milk."

In this article, the stated safety concern is clearly mentioned.

The same article also mentions the numerous food-poisoning incidents arising from pasteurised milk over the years, discusses the effects of pasteurisation upon milk composition and quality, pointing out the presence of anti-microbial residues in pasteurised milk, and makes mention of the state legal requirements for provision of raw milk for public consumption.

The above gives an overall picture of the points being made and the issues addressed on **HealthyMuslim.Com** in relation to this subject.

Clarifying The Raw Milk That Is Under Discussion

Firstly: It is important to make clear that when we use the phrase "raw milk" that we are clear about what specifically is being spoken about:

- There is a "raw milk" that is described as "***raw milk destined for pasteurisation***". This is standard terminology in the industry. This milk comes from conventional dairies where the aim is to maximise milk production using cows pretty much as production factories. Cows are fed unnatural diets such as grains and feedlot aimed at artificially increasing milk yield and kept indoors on concrete. The use of hormone injections to increase yield are commonplace too in many countries. As they are prone to disease with this unnatural diet and habitat, they are frequently ill and given antibiotics. This raw milk is not the milk I am speaking of, and this "raw milk" is extremely dangerous as it routinely tests for "pathogens" where those tests are conducted. This milk **must** be pasteurised to protect people as it is not truly natural, pure milk. This milk forms almost all the supply found in developed nations. Because of the nature in which it is produced from cattle and processed, this milk **simply must be pasteurised** as it poses serious danger to public health and safety.

- There is "raw milk" that is produced by small dairy farms all across the UK (and likewise the US, and Europe). Fifteen years ago there were over 700 registered producers of raw milk in the UK. With newer and stricter regulations coming into force around 10 years ago, this number has dwindled to around 150-200 or so, which is a good thing. This group has to abide by very strict legal requirements. The raw milk that I am speaking of does not even come from this group exclusively.

    - There is "raw milk" from a subset of the above group who use either conventional dairy production (like in the first group), or a mix of conventional and natural dairy production. Thus, this group still retains some unnatural methods (as it relates to the cattle diet and habitat) – this would include a large number of so called "organic" milk producers who take advantage of loose "organic" law standards to pass off their milk as organic, and push out smaller competing local farms. This is not the milk I am speaking of either.

    - Then there is "raw milk" that is produced by another sub-group who feed their healthy cattle on a totally natural diet (grass, shrubs, plants), allowing them to graze in their natural habitat, with plenty of water, without the use of antibiotics and drugs – these cows are naturally healthy. These are farmers registered and certified to produce "***raw milk intended for consumption***". They combine natural cattle farming with compliance to strict government standards for bacterial counts and "pathogen" testing. This is the milk that I am speaking about, and if you read all the articles published on the website prior to 4th December 2008, you will realise this very clearly. *This is milk as Allaah placed it in the creation. Milk as it has always been for thousands of years.*

Therefore, it should be noted that the use of the terms "real milk", "pure milk", "fresh milk" or "raw milk" wherever used in this paper should be considered synonymous and defined as follows:

> *Milk taken from* ***healthy cows*** *that are* ***fed on herbage and pasture*** *(i.e. their natural food) allowed to* ***remain in their natural habitat,*** *acquired in* ***a hygienic setting,*** *and which has*

> ***not been fundamentally altered from its natural state*** *by artificial processes such as pasteurisation or homogenisation – all* ***in compliance with state and national regulations for hygiene, and bacterial and "pathogen" testing.***

To emphasize, we are not speaking about raw milk from conventional mass-production dairies, or raw milk from cattle fed on grains and feed lot and subjected to hormones and antibiotics, and ultimately destined for pasteurisation.

This is also known as "raw milk" in the industry, and referred to as "***raw milk destined for pasteurisation***". Outbreaks are associated with this raw milk, as well as the pasteurised milk arising from it – there are abundant examples. We are not speaking about this raw milk, but the fresh, real milk as Allaah placed it in the creation.

Milk coming in the natural way is not as copious as that coming from mass-production dairies. **The former is superior in quality, nutrition and taste**. **The latter is cheap, low quality, inferior milk, cleaned up for consumption**, and is associated with much allergy and disease. Much of the milk-borne diseases are associated with the "raw milk intended for pasteurisation" which is other than the raw milk that we are speaking of here and on **HealthyMuslim.Com**.

Whenever the phrase "raw milk" is being used, I kindly ask that you keep this **constantly in mind** whilst you read the rest of what is in this paper inshaa'Allaah, as it could be referring to three different types of raw milk. I am only speaking of one of these – the milk that Allaah placed in the creation and as it has always been.

Secondly: After extensively researching this issue in the past, I hold there is a level of extremism exhibited on both sides of the raw milk issue.

- An extremism in denying raw milk's (real milk's) health benefits coupled with an exaggeration and excessive fear mongering of the risk of infection given current strict legal requirements for raw milk provision, and given the fact that food poisoning has been greatly increasing over the decades in developed nations through the food supply in general, which clearly has nothing to do with raw milk exclusively.

- Then an extremism in the negation, or downplaying of *a clear history* of infection arising from raw milk[1], its being a vehicle of disease, along with the promotion of raw milk consumption without the appropriate qualifications, precautions and checks on the other hand.

I want to share with you information that elaborates upon these matters so that we can have a clearer idea of the position I am coming from, from ***a religious, scientific and historical*** point of view. Observations and corrections on anything found below are welcome.

I stand in the middle and believe current testing standards and hygiene protocols can be successfully used to produce high quality, safe raw milk, milk that can and ought to be sought for anyone wishing to taste and benefit from real pure milk and it's medicinal qualities.

I also believe it is more than just in the realm of possibility.

[1] Why this raw milk was implicated in much disease has historical reasons which are discussed in detail in this paper. A main reason was the circumstances surrounding the actual production and processing of milk.

It is actually being done – in the millions of gallons, without a single proven, incidence of food poisoning, as an example from one farm in the US (amongst many others in many countries) *that fulfil strict legal requirements and must be certified to produce such milk.*

The historical literature also gives evidence to the fact that high quality milk was produced in the early 19th century all the way to the 20th century, in parallel with the "swill" milk of that era (which definitely needed to be pasteurised). The quality of that clean milk was equal to today's "Grade A" pasteurised milk in the US, and was used to cure disease (whilst the "swill" milk was causing disease). Such milk has always been available, and will continue to be available inshaa'Allaah.

This is discussed in detail in the paper.

Brief Summary of This Paper on the Issue of Milk

Raw, fresh, pure milk, as it has always been in the creation[2] from cattle in their natural habitat feeding on pasture and herbage (grass, shrubs and plants) has great and undeniable benefits. Amongst such benefits are those textually stated in the Prophetic Sunnah that also encourages the use of such milk as medicine for its curative properties.

Nations and societies have enjoyed this (non-pasteurised, non-homogenised) milk for thousands of years. Had there been inherent danger within it and no inherent benefits, *it would have quickly disappeared from the food supply*.

The Arabs, the Bulgars and the Swiss are amongst just a few societies and cultures who have enjoyed superior health due to the abundance of consumption of raw and fermented, soured dairy products. The Bulgars routinely lived into their 100s and over, with reports of some even reaching ages of over 140 according to early 20th century researchers.

Fresh, natural, pure, raw milk is a living food that consists of hundreds of components amongst which are nutrients, enzymes, proteins, inherent immune-giving elements, living organisms (lactic acid bacteria) and more. It loses its living nature through heat treatment, rendering it an inert and lifeless food that is inferior to fresh, natural milk.

With the advent of the 19th century industrialized nation state, with its conditions of filth, squalor, despicable standards of personal hygiene, abundance of disease, and the increased demand for milk due to the growth of cities, milk became a major vehicle for transmission of disease (alongside water and food in general). Pasteurisation was an immediate, but not much-liked, temporary solution. The ideal solution was to engineer a clean milk supply. This was simply not practical at the time, and given the disease incidence, it was not something that could provide an immediate solution, due to how long this would have taken to implement nationally.

For political and economical reasons, in addition to the immediate and easy solution granted by pasteurisation, pasteurisation became more or less universal after the second world war. The fact that it reduced disease incidence is undeniable, but as much credit should be given to the cleaning of the milk supply initiated by conscientious doctors such as Henry Coit and his "Medical Milk Commission". It was an interplay of these two factors that led to disease reduction. The above occurred pretty much in all Western nations in the first half of the 20th century.

From the very beginning of the 20th century the "certified milk movement" embodied in the "Medical Milk Commission" was responsible for the cleaning up of the milk supply in cities all across the United States. This movement had its parallel in England. They were responsible, as a result of their efforts, for the production of "Grade A Raw" milk whose quality in terms of bacterial count was equivalent, if not better than today's "Grade A" pasteurised milk in the US. Fresh, raw, clean, safe milk was available throughout the 19th and early 20th century and still is today.

When one goes back to the books of that time discussing the problem of milk supply, it is found that pasteurisation was looked down upon but deemed essential for the circumstances. It was known that it produced inferior milk and could never be a replacement for fresh milk produced from a clean supply

[2] Refrigeration, homogenisation and pasteurisation were not invented until the 19th century. Milk has always been "raw" and consumed "raw".

route, the most desired situation. Those most vocal against pasteurisation were doctors. It was cheaper and less troublesome for state authorities compared to the cost involved in enforcing and ensuring a naturally clean-milk supply, state or nation-wide.

Pasteurisation simply makes unclean, "pathogen" containing milk of inferior nutritional quality safer for human consumption. This situation is highly favourable for commercial purposes. There were and still are ample instances of infection through pasteurised milk and from the existing evidence, these infections, when they occur are generally much larger and more serious given the compositional nature of post-pasteurisation milk, and the more complex nature of its production method (allowing greater scope for contamination).

Currently, provision of fresh, pure raw milk – in various parts of the developed world - is very tightly regulated and has strict requirements. Stricter measures were legislated during the last 10 years. As such, raw milk produced under these requirements is superior quality, real milk. Such milk is being produced right now, and being enjoyed by hundreds of thousands of people, in the tens of millions of gallons. This is milk as Allaah placed it in the creation, and it is found walhamdulillaah for whoever seeks it.

As with *all other foods*, milk (whether heat-treated or raw) is subject to contamination. No food can be made 100% safe. People become seriously ill from eating raw spinach, raw tomatoes and other produce. As "pathogens" are ubiquitous this is bound to happen with a very wide range of foodstuffs being the medium of transmission. It is currently possible to produce "pathogen" free, raw milk, in a commercial setting, and it is in fact being achieved, as it was achieved more than a hundred years ago. There is a growing realisation of this amongst savvy consumers in all parts of the developed world. These are not ignorant, ill-informed, uneducated people or laymen.

We will now proceed to expand upon the contents of this summary.

Regarding Pure, Fresh, Raw Milk And Its Health Benefits

An objection raised often is that that "raw milk" has no benefits, and that there has been no proof or evidence shown, or demonstration of any proof in the scientific research literature that "raw milk" has beneficial health and medicinal properties.

Such a statement (above) would not be in agreement with the Book of Allaah and the Sunnah of the Messenger (sallallaahu alayhi wasallam), and the writings of great Salafi scholars such as Ibn al-Qayyim (rahimahullaah) – specifically the texts that relate to pure, fresh milk.

Thus, such words are not befitting in relation to a food that Allaah mentions in His Book and which the Messenger (sallallaahu alayhi wasallam) mentions in the Sunnah and whose benefits are empirically known for thousands of years to most nations, peoples and societies, and whose *disease-curing characteristic* is in fact *explicitly stated in the Sunnah*.

Pasteurisation was invented in the late 19th century. It was applied to milk as an emergency measure and rightly so, given the circumstances. It did not exist prior to that. Neither did refrigeration, which was invented in the late 18th century. So milk as Allaah placed it in the creation was always "raw", and it was always consumed in this manner, often being mixed with cold water (as is found in the Sunnah, for example).

As for evidence, on **HealthyMuslim.Com**, there is evidence presented from a compositional point of view addressing factors of biochemistry, physiology and immunity, clearly illustrating the superiority of real, natural milk over processed, heat-treated milk. This should be evident to anyone with basic knowledge of biochemistry.

Environmental hygiene issues[3] are a separate concern from the issue of fresh, pure milk's inherent health benefits.

The above objection can be found in statements made by a state epidemiologist for Connecticut, "*It has yet to be demonstrated that raw milk has any beneficial health effects*…", mentioned during a congressional hearing on the issue of raw, pure milk back in 1994. Another example of such statements coming from non-Muslims is that made by Mark Finucane and Jonathon Fielding, directors of public health service bodies, in a report they submitted that, "*a review of the literature found no scientific study which demonstrates medical or health benefits of raw milk*". These are very unbefitting and inaccurate statements based upon ignorance (as will be illustrated inshaa'Allaah) considering that the milk that Allaah placed in the creation and which nations and societies have consumed for thousands of years has always been raw, fresh, living milk from cattle fed on their natural diet.

I would therefore like to expand upon this matter further. This requires of discussion of fresh, raw, pure, unprocessed milk's benefits and superiority, as well as the background to pasteurisation in industrialized nations in the 19th and early 20th centuries. I will develop each of these two themes in much detail, and this will allow us to have a fact-based perspective on our point of discussion.

[3] Environmental hygiene issues apply to all foods. Any shortcomings in the maintenance of safety standards and hygiene do not reflect upon the inherent qualities of the food in question When compared to the relative risk of infection from produce, poultry and beef, the issue becomes clear as one of general hygiene and safety protocols, and not necessarily the inherent nature of the food. This will be established in what follows. Dairy (pasteurised and non-pasteurized) accounts for less than 1% of all food borne illnesses.

The Qur'aan, the Sunnah, and the Prophetic Medicine on Fresh, Raw, Unprocessed, Natural Milk

I am coming from the angle of the Prophetic Medicine, from the work of Ibn al-Qayyim, as it relates to **HealthyMuslim.Com**. This applies very specifically to the issue of milk. I would like to establish that the Prophetic Medicine is the most comprehensive and complete guidance on affairs of health, and this will formulate the background and supporting context to most of the first-half of this entire paper.

The Prophetic Guidance is the Most Perfect Guidance in the Management of Health

Ibn al-Qayyim states that the guidance of the Messenger is in fact **the most perfect of guidance** as regards to the management of the affairs of health: "**So when this is the importance of health (al-'aafiyah was-sihhah), we shall mention from His (sallallahu alayhi wasallam's) guidance regarding the management of these affairs what will make clear that it is absolutely the most perfect of guidance by way of which the preservation of the health of the body and the heart, and the life of this world and the Hereafter is obtained** …" (Zaad al-Ma'aad 4/198).

Ibn al-Qayyim further says at the end of the book, addressing an observation that questions about the connection of the guidance of the Messenger to what Ibn al-Qayyim discusses in his book of the affairs of health, treatment and medicine, "**We have shown you the three foundations of the medicine in the Quran**. **So how could you deny that the Law of the Messenger, sent with the welfare of this world and the next, should be concerned with bodily welfare**, **as well the welfare of the hearts and that it guides towards the preservation of the bodily health, repelling [bodily] afflictions, by comprehensive ways**? …" (Zaad al-Ma'aad 4/380)

The Prophetic Medicine Came As a Completion of the Divine Law

Ibn al-Qayyim said, "**As for the physical medicine (for treating the bodily ailments) then it came as a perfection of his Divine Law (Sharee'ah)** …" (Zaad al-Ma'aad 4/22).

Thus, we find in the Sunnah numerous affairs that relate to those matters by which bodily ailments can be treated. In numerous places in his book, "the Prophetic Medicine", Ibn al-Qayyim stresses the importance of the diet in the preservation of health (and treatment of disease). I concur with the view of Ibn al-Qayyim, and its actually from this angle that I am coming from with regards to the issue of pure, natural, fresh milk (and other issues). The Prophetic guidance is the most perfect of guidance through which preservation of health is obtained, and it guides to preservation of bodily health and repelling bodily ailments in comprehensive ways.

Ibn al-Qayyim mentions much from the guidance of the Prophet (sallallaahu alayhi wasallam) in this regard, as well as detailing all of the foodstuffs and medicines mentioned in the Sunnah and their benefits and uses, **amongst which is fresh, raw milk**.

From The Prophetic Guidance In Relation to the Management of the Affairs of Health Is the Excellency and Blessings of Real, Pure, Fresh, Unprocessed Milk

From the absolute perfect guidance of the Sharee'ah of the Messenger (sallallaahu alayhi wasallam) is what it has brought regarding the nature and excellency of real milk – pure milk - milk as it was intended and placed in the creation by Allaah, the Most High.

Allaah, the Most High said, "**And verily! In the cattle, there is a lesson for you. We give you to drink of that which is in their bellies, from between excretions and blood, pure milk (*labanan khaalisan* لبنا خالصا); palatable to the drinkers**". (An-Nahl 16:66)

Allaah, the Most High, in this verse has spoken of "***labanan khaalisan*** لبنا خالصا" – pure milk. This is the description of the milk that is produced by cattle, fed on their natural diet (grass, shrubs and plants), "khaalisan" (pure) and this is its latent, inherent quality. *It was described as such prior to the invention of pasteurisation, homogenisation and refrigeration.*

It is not possible that cattle, left in the way that Allaah intended, and treated in the way Allaah intended (in terms of feeding and habitat), should produce milk that contains inherent danger and harm and should be spoken of as only having claimed benefits. This is simply not possible, *lofty and exonerated is Allaah from that*. Thousands of years of mankind's history and the Prophetic Sunnah bears witness to the falsehood of this assertion[4].

Fresh, Pure, Natural Milk Is the Most Beneficial of Drinks and Is In Agreement (Suitable) To the Fitrah

Ibn al-Qayyim mentions milk (fresh, raw, non-pasteurised, non-homogenised) as being from amongst the foods and medicines mentioned by the Prophet (sallallaahu alayhi wasallam). He says, "**Milk is at it's best when freshly milked** … the best kind is that which is intensely white, with a good odour, delicious to taste, with a slight sweetness, a moderate fattiness and light consistency, neither thin or thick, and that which is milked from **young healthy animals** of moderate flesh, **fed on good pasturage and water**." (Zaad al-Ma'aad 3/353).

This is the milk that I am speaking of, the milk that Allaah has made a blessing and a lesson for mankind, as it was placed in the creation.

Ibn al-Qayyim also said, "**Milk[5] in general is the most beneficial drink for the human body due to the nutritive and sanguineous elements contained in it, and its being habitual to the state of childhood, and its suitability for the original nature (fitrah)**. And in the two books of Saheeh, we find that that the Messenger of Allaah (sallallaahu alayhi wasallam) was offered a cup of wine and a cup of milk. He looked at them both and then took the milk. Then Jibreel (alaihis salaam) said, "Praise be to Allaah who has guided you to the fitrah (the original nature of man)…" (Zaad al-Ma'aad3/354).

Ibn al-Qayyim says, "Cow's milk nourishes the body, makes it fertile, productive. It releases the abdomen in moderation. It is the most moderate and excellent of all milks, between sheep's and goat's milk, as to its thinness, thickness and fattiness. In the Sunan, from the hadith of Abdullaah bin Mas'ood (marfu') [that the Prophet] said, "*See that you drink cow's milk for they ruminate upon all the herbage*"." (Zaad al-Ma'aad3/355)

[4] Aside from hygiene standard issues, it is in the abuse by men of such cattle in their diet and habitat that will no doubt have an negative impact on the quality and safety of what they produce. This is established by hard science, I have scientific papers on this issue dealing with the impact of cattle diet and habitat upon their health, milk quality and "pathogen" shedding. So in the natural way that cattle should be fed and left, it is not possible that Allaah would provide a food that contains inherent danger and harm.

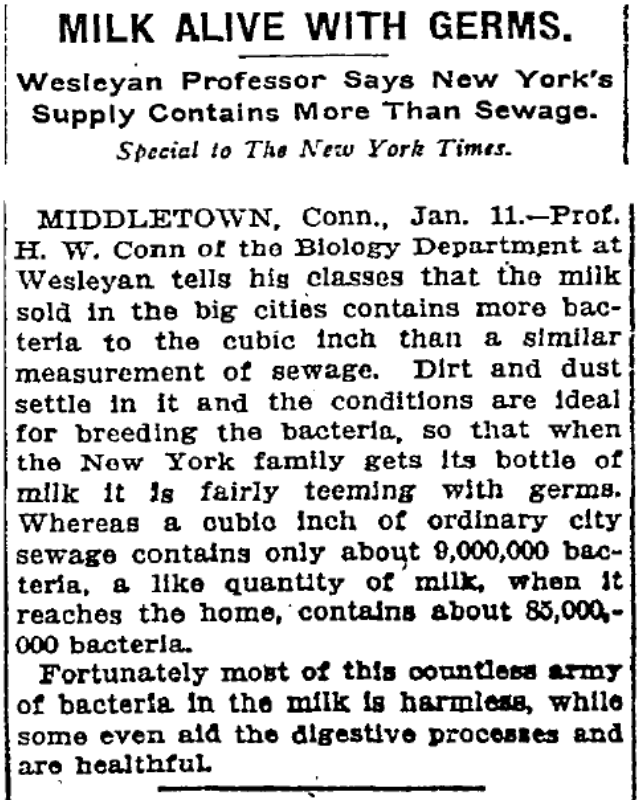
[5] That is, non-pasteurised, non-homogenised milk, Ibn al-Qayyim preceded these two artificial processes by about 500 years.

Clearly Ibn al-Qayyim is referring to fresh, raw, unprocessed, non-pasteurised, non-homogenised, natural milk –as it always has been in the creation - and stating clearly that it is the "***most beneficial drink for the human body***". This is the milk from cattle that ruminate on herbage and pasture. This milk is clearly qualified as such in the Sunnah, as is evident from the hadeeth quoted by Ibn al-Qayyim above. In other words, its beneficial properties are tied to what cattle eat. If anyone disputes that this milk, mentioned in the Qur'aan, or in the Sunnah, or by Ibn al-Qayyim, is raw, fresh, unprocessed, non-pasteurised, non-homogenised, natural milk – I would like to see the evidence for that, and I stand corrected on the issue.

Al-Qurtubi stated, "**Our Scholars said: And how can it not be as such[6] when it is the first thing by which a person is nourished and which causes the bodies to grow. For it is nutritious, devoid of harmful things (mafaasid), and it provides bodily support**". Al-Qurtubi is also describing the milk that is qualified in the Sunnah (as being from cattle fed on pasture and herbage), and states that this is devoid of harmful things.

Fresh, Pure, Raw Milk Is Not the Swill and Slop Milk of the 19th and early 20th centuries.

Our scholars here are speaking of fresh, pure, raw, unprocessed, non-pasteurised, non-homogenized, real milk, "***labanan khaalisan*** ***لبنا خالصا***". Milk was always taken like this prior to the industrialized mid to late 19th century. The 19th century was the era of modern mass-dairy production, also the era of filth and squalor in most industrialized nations. **The situation never arose before this time where raw milk might as well have been considered raw sewage.** To the right is a New York Times article dated 12th January 1908[7].



MILK ALIVE WITH GERMS.

Wesleyan Professor Says New York's Supply Contains More Than Sewage.

Special to The New York Times.

MIDDLETOWN, Conn., Jan. 11.—Prof. H. W. Conn of the Biology Department at Wesleyan tells his classes that the milk sold in the big cities contains more bacteria to the cubic inch than a similar measurement of sewage. Dirt and dust settle in it and the conditions are ideal for breeding the bacteria, so that when the New York family gets its bottle of milk it is fairly teeming with germs. Whereas a cubic inch of ordinary city sewage contains only about 9,000,000 bacteria, a like quantity of milk, when it reaches the home, contains about 85,000,000 bacteria.

Fortunately most of this countless army of bacteria in the milk is harmless, while some even aid the digestive processes and are healthful.

Milk (known as "swill" and "slop" milk) became the vehicle of transmission for many diseases. All this came down to the hygiene standards in society (the primary factor), what the cattle were fed, how they were kept, and by whom and how the milk was acquired, stored and transported and the very unscrupulous nature of the both the distilleries (that were using grains to produce whiskey, subsequently used as slop feed for cattle), the greed of dairies and their disdain for public safety.

[6] Referring to pure milk being the most nutritious of all foods. Al-Qurtubi brings the hadeeth narrated by Ibn 'Abbaas: "And when one of you is given milk to drink, then let him say, "O Allaah bless us therein, and give us increase in it", for indeed there is no food or drink that provides greater sufficiency than milk".

[7] Note that not all bacteria in milk are harmful. The majority are beneficial bacteria. Nevertheless, such large amounts (85 million per cubic centimetre) are not normal.

I refer you to an 1842 book by Robert Hartley, a landmark book, called "*An Historical, Scientific and Practical Essay on Milk as an Article of Human Sustenance, with a Consideration upon the Present Unnatural Methods of Producing It for the Supply of Large Cities*". Later, I will provide you actual scans of this book's content pages so you can see the reality of milk at that time and its reason and causes, and inshaa'Allaah this will give you a better insight into the realities out of which pasteurisation emerged and and deemed necessary as an urgent and protective measure, something I entirely agree with, given the nature of the milk being produced.

Given the above, I hope that by way of your statement, "*purported benefits*" you are not confusing the issue of the inherent qualities of a food that is a blessing and a sign from Allaah with purely environmental and historical issues of precedent for which man is to blame, and which were unique to a given era.

The Messenger Used to Drink Pure, Unprocessed, Raw Milk, Straight from the Animal

Anas bin Malik (radiallaahu anhu) narrated: Once Allaah's Messenger (sallallaahu alayhi wasallam) visited us in this house of ours and asked for something to drink. We milked one of our sheep and mixed it with water from this well of ours and gave it to him." (al-Bukharee, no. 2407).

And Abu Bakr (radiallaahu anhu) narrated, "While I was on my way, suddenly I saw a shepherd driving his sheep. I asked him whose servant he was. He replied that he was the servant of a man from the Quraish. Then he mentioned his name and I recognized him. I asked, "Do your sheep have some milk?" He replied in the affirmative. I said, "Are you going to milk for me?" He replied in the affirmative. I ordered him and he tied the legs of one of the sheep. Then I told him to clean the udder (teats) of dust and to remove dust off his hands. He removed the dust off his hands by clapping his hands. He then milked a little milk. I put the milk for Allah's Messenger in a pot and closed its mouth with a piece of cloth and poured water over it till it became cold. I took it to the Prophet and said, "Drink, O Messenger of Allaah!" He drank it till I was pleased". (al-Bukharee, no. 2281)

This is the practice not just of the Prophets, but of a large number of nations, societies and peoples who kept milch animals, and these are just a couple of examples of scores of narrations found in the Sunnah in this regard.

Nations and Societies For Thousands of Years Have Prospered and Attained Superior Health by Way of Real, Pure, Fresh (Non-Pasteurized, Non-Homogenized) Milk

The milk that is mentioned in all of these texts is that milk that is created in the bellies of cattle that are fed on what they naturally eat (grass, shrubs and plants), given sufficient water, and left in their natural habitat. This is the same milk which the same nations, peoples and societies have survived and thrived upon, taking it fresh from their cattle, and it being a source of their excellent health and freedom from the types of chronic illnesses we witness in contemporary societies. Had this not been the case, and if Allaah's blessing of fresh, pure, raw, natural milk had been inherently dangerous, it would have disappeared entirely from the diets of nations and societies.

I would like to corroborate this view by quoting from some specialists in the field of Pathology, providing evidence as part of congressional hearings and as expert witnesses in court cases relating to

fresh, pure, raw milk. In a congressional hearing regarding the Senate Bill 201 earlier this year, Dr. Theodore Beals MD[8]. National Director of Pathology, VA Hospitals[9] (retired), stated,

> "It is obvious but it needs to be stated: If [fresh] milk had been hazardous to the individuals and communities that consumed it, *the drinking of [fresh] milk would have disappeared centuries ago*"[10].

Dr. Beals in a court hearing connected to the same issue, acting as an expert witness stated,

> "If a food is unsafe for consumption, it is very quickly eliminated from the diet of cultures. And in fact history shows that the consumption of milk from domestic animals has persisted throughout history, and on the basis of that, I don't believe that there's any argument but that *the consumption of fresh milk is in fact safe*, confers *competitive advantage* to those that drink it."

I've quoted these statements to make what is otherwise a ***very obvious*** statement of fact and which exonerates Allaah, the Most High, from placing something in creation that is inherently dangerous to His creation. Again, we must distinguish between the food itself, and environmental factors affecting its quality and safety.

[8] Worked in Department of Epidemiology in the School of Public Health, licensed as a Medicinal Practitioner, board certified in Anatomic Pathology after five years specialized training, published over 70 articles in peer-reviewed journals, has published a book related to pathology, served for 31 years as a pathologist at a Medical Center and taught Pathology at the University of Michigan to graduates and medical students, and was eventually made Chief of Pathology at the Pathology and Laboratory Medicine Service in an Ann Arbor Medical Center. Later he served as the National Director of Pathology and Laboratory Services for the entire VA Medical Administration in the United States (which includes over a 100 medical centers across the US). He also served on the Scientific Advisory Board for the Armed Forces Institute of Pathology.

[9] This is a collection of over a hundred different medical centers in the US.

[10] You can view this footage on Youtube.

Real, Pure, Natural Milk Is a Remedy and a Cure For Every Disease According to the Sunnah

We hear often from the propagandists against the milk that Allaah placed in the creation, "*Raw milk advocates claim that unpasteurized milk cures or prevents disease, but no scientific evidence supports this notion*."

Contrary to the likes of these statements of ignorance, real, pure, fresh (living, and life-giving) milk is a cure for every disease according to the Prophetic statements. This alone should be sufficient to illustrate its benefit.

- Abdullaah Ibn Mas`ood (radiallaahu `anhu) narrates that the Messenger of Allaah (sallallaahu `alayhi wasallam) said, عليكم بألبان البقر فإنها ترم من كل الشجر و هو شفاء من كل داء "***Drink cow's milk, for indeed it ruminates on every herbage, and it is a cure for every disease***." Related by al-Haakim and declared Saheeh by Imaam al-Albaanee in *Saheeh al-Jaami' as-Sagheer (no.4059)*.

In this hadeeth the Messenger (sallallaahu alayhi wasallam) encouraged the drinking of cow's milk, linking it to the fact that cows ruminate from the best herbage (the natural situation). In other words, the nutritive and disease-curing element of cattle milk have been associated with the nature of what is consumed by cattle, which is grass, plants and shrubs. Ibn al-Qayyim alludes to this fact when he speaks of camel's milk and the nature of what it eats affecting the medicinal quality of the milk it produces.

The overwhelming majority of milk consumed by people today (at least in the developed nations) is milk from cattle fed on an unnatural diet, kept in an unnatural habitat. This, as you will know from study of dairy science, has a direct and extremely strong effect upon the health of the cow and therefore the quality of the milk produced. Thus, fresh, raw, pure milk from cattle fed on their natural diet is far superior to the majority of milk consumed today, which is simply inferior, unclean milk cleaned up for public consumption.

- From Ibn Mas'ood (radiallaahu `anhu) who narrates that the Messenger of Allaah (sallallaahu alayhi wasallam) said, تداووا بألبان البقر فإني أرجو أن يجعل الله فيها شفاء فإنها تأكل من كل الشجر "***Take cow's milk as (medicinal) treatment for indeed I hope that Allaah places a healing therein, for indeed it ruminates upon every herbage***". Related by at-Tabaraanee and declared Hasan by Imaam al-Albaanee in *Saheeh al-Jaami' as-Sagheer (no. 2929)*.

If there was no other response to those physicians and scientists who claim that natural, pure, fresh, raw milk has "no benefits", and take issue with raw, natural, fresh, milk as Allaah placed it in the creation, except for this hadeeth, it alone would have been sufficient. For this hadeeth commands with the use of cow's milk as medicinal treatment, and ties it's curative properties to the nature of what the cattle eat.

This one hadeeth - upon careful reflection – embodies the entirety of what is in this paper, and what is being advocated on HealthyMuslim.Com.

- From Taariq bin Shihaab who narrates that the Messenger of Allaah (sallallaahu alayhi wasallam) said, إن الله تعالى لم يضع داء إلا وضع له شفاء فعليكم بألبان البقر فإنها ترم من كل الشجر "***Indeed, Allaah the Most High, did not create a disease except that he created for it a cure, so upon you is cow's milk for indeed it ruminates upon every herbage***". Reported in the Musnad of Ahmad Ibn Hanbal and declared Saheeh by Imaam al-Albaanee in *Saheeh al-Jaami' as-Sagheer (no. 1808)*.

- From Abdullaah bin-Mas'ood who narrates that the Messenger of Allaah (sallallaahu alayhi wasallam) said, إن الله تعالى لم ينزل داء إلا أنزل له شفاء إلا الهرم فعليكم بألبان البقر فإنها ترم من كل شجر "***Indeed Allaah the Most High, did not send down a disease except that He sent down for it a cure, except death. So upon you is cow's milk, for indeed it ruminates upon every herbage***". Reported by al-Haakim and declared Saheeh by Imaam al-Albaanee in *Saheeh al-Jaami' as-Sagheer (no. 1810)*.

Confirmation of what I have explained above wa-lillaahil-hamd. These are specific commands from the Messenger (sallallaahu alayhi wasallam) to seek medicinal treatment through cow's milk with the explained reason that it ruminates upon every herbage (grass, shrubs, plants). Thus, the quality of the milk produced, depends on the quality of what cow's eat. Note also that the use of cow's milk as a cure has been explicitly tied to the statements that Allaah never sent down a disease except that He also sent its cure.

- Abdullaah Ibn Mas`ood (radiallaahu `anhu) also narrates that the Messenger of Allaah (sallallaahu `alayhi wasallam) said, عليكم بألبان البقر فإنها دواء و أسمانها فإنها شفاء و إياكم و لحومها فإن لحومها داء "***Drink cow's milk, for indeed it is a remedy, its butterfat[11] is a cure, but beware of its meat, for indeed its meat is disease***"[12]. Related by al-Haakim, Abu Nu'aym and Ibn as-Sunnee and Imaam al-Albaanee declared it Saheeh in *Saheeh al-Jaami' as-Sagheer (no. 4060)*.

- Suhaib (radiallaahu `anhu) narrates that the Messenger of Allaah (sallallaahu `alayhi wasallam) said, عليكم بألبان البقر فإنها شفاء و سمنها دواء و لحمها داء "***Drink cow's milk for indeed it is a cure, and its butterfat is a remedy and its meat is disease***". Related by Ibn as-Sunnee and Abu Nu'aym and declared Saheeh by Imaam al-Albaanee (rahimahullaah) in *Saheeh al-Jaami' as-Sagheer (no.4061)*.

[11] Referring to clarified butter, which is ghee, where milk solids are removed after gentle heating.

[12] As a clarification, the meaning of the ahaadeeth according to the scholars as it relates to the meat of the cow is that it is in reference to excessive consumption of such meat and does not mean an actual prohibition of it as such, as the Messenger (sallallaahu alayhi wasallam) sacrificed a cow for his wives on the farewell pilgrimage, as is related in Sunan Abu Dawud. As for its "disease" it is explained as follows: Since the cow eats voraciously from all sources and eats the good and bad, including dirt and filth, then its meat, in its composition, will contain the harmful elements it has been feeding on. As for the milk, then the milk only contains the good elements, since Allaah creates the milk from between the blood and excretion, and it is "pure milk". Thus the milk is a cure and healing, and the meat is disease, i.e. excessive consumption leads to disease. This explanation can be found from the quotes that al-Manaawee brings in his explanation of Suyootee's al-Jaami' us-Sagheer, and we will take some quotes from it further below.

- From Mulaykah bint ‘Amr that the Messenger (sallallaahu `alayhi wasallam) said, ألبان البقر شفاء وسمنها دواء و لحومها داء “***The milk of cows is a cure, its butterfat is a remedy and its meat is disease***”. Al-Mu’jam al-Kabeer of at-Tabaraanee and declared Saheeh bin Imaam al-Albaanee in *Saheeh al-Jaami’ as-Sagheer (no.1233).*

In these ahaadeeth both cows milk and its butterfat (clarified butter, ghee) have been described as a cure (shifaa) and a remedy (dawaa’, treatment). This milk, with this definition, which Allaah praised in His Book, describing it is “***khaalis***” and made as a lesson for mankind, and about which the Messenger stated “***is a cure for every disease***”, is **not** inherently dangerous nor harmful to mankind, and lofty and exalted is Allaah in that He should make it as such.

It is indeed as the Book of Allaah, the Sunnah of the Messenger (sallallaahu alayhi wasallam) and the scholars of Islaam have (collectively) stated, inherently good, devoid of harms, and a remedy and cure for illness and disease. It is pure and safe walillaahil-hamd, as indicated by the collective, empirical evidence found in the history of nations, societies and peoples for thousands of years. This milk, with this qualification will always be inherently good, devoid of harms, and a remedy and a cure, wherever it is found, by Allaah’s permission.

A question arises, which is that if this is the nature of cow’s milk and it’s properties, then why is there so much allergy and illness associated with milk? The answer to this question will be covered in detail and the affair will be come clear inshaa’Allaah.

Milk As A Cure and As Medicine From the Speech of The Messenger

From the abovementioned statements of the Messenger (sallallaahu alayhi wasallam) I want to outline what is explicitly in those ahaadeeth, whilst bearing in mind the verse in Surah an-Nahl (16:66), that makes mention of "***labanan khaalisan*** **لبنا خالصا**", pure milk.

- There is an explicit command to seek medicinal treatment by way of the milk of cows with the explicitly explained reason that it ruminates upon all types of herbage (grass, shrubs, plants)[13] – thus establishing that cow milk quality is determined by the nature of the food eaten. This determines rumen microbiology, and thus the efficacy and safety of the milk.

- In the two hadeeths that mention Allaah not placing a disease except that He has also placed for it a cure, the statements are followed by a command to drink cow's milk, and following that command is the explicitly stated reason that it ruminates upon all types of herbage (grass, shrubs, plants).

- In the abovementioned ahaadeeth clarified butter (ghee) has also been explicitly stated as being both a "shifaa" (cure) and a "dawaa" (remedy).

Al-Manaawee, in his "*Faid ul-Qadeer*", an explanation of as-Suyootee's "*Jaami' us-Sagheer*", which Imaam al-Albaanee (rahimahullaah) did a checking of, comments upon these ahaadeeth, so we will take some quotations from him in this regard commenting upon the series of ahaadeeth we have quoted earlier, and these are found under the letter "*'ayn*":

- "... meaning, that it gathers "from all of the herbage", meaning from that which is hot, dry and moist (in its nature) and thus its milk approaches balance (in its composition), and when it eats from all (of the types of herbage) then it has gathered together all benefit in its eating. And this eating is for Allaah, not for itself, for if it chose that which is liked over that which is disliked, its eating would have been for itself ..."

- "... meaning that it does not leave any tree, shrub, herbage except that it attaches to it (eating therefrom), thus its milk is composed of the strength-giving (nutritive elements) of the various shrubs and diverse plants and thus it is as if it is a drink [whose elements] have been brought together and cooked [in the stomach of the cow] and it (i.e. the milk) is a "cure for every disease".

Following on from all of this I say:

The milk that is qualified as follows and which I have previously defined as:

> *Milk taken from* ***healthy cows*** *that are* ***fed on herbage and pasture*** *(i.e. their natural food) allowed to* ***remain in their natural habitat****, acquired in* ***a hygienic setting****, and which has not been* ***fundamentally altered from its natural state*** *has* ***great benefits*** *as well as* ***inherent curative and medicinal properties*** *in its* ***raw, untreated, unprocessed state.***

I say that this milk is something that will always be available in all times and places where people keep cattle and this milk will always be <u>inherently safe, devoid of harms</u> as it has been for

[13] Whilst clarifying that seeking medicinal treatment is not waajib in the Sharee'ah.

thousands of years in the diets of many cultures, and it will always have many health benefits and medicinal qualities and curative powers (by Allaah's placement therein) – so long as the cattle from which this milk is obtained are left on their natural diet and in their natural habitat. This is the "*labanan khaalisan* لبنا خالصا" of the Qu'raan.

I say that this will always be the case, and milk will always be like this (with the above qualification), up until the hour is established – so long as there are found cattle, and milk is produced and obtained exactly as I have described.

It can be said that this is parallel to the issue of human breast milk. Raw human breast milk[14], provided the mother eats sensibly, is not inherently dangerous, and the nature of this breast milk has not changed for thousands of years. Breast milk has inherent immunity, as has the milk of cattle. This beneficial, protective breast milk will always be available. Mother's routinely express their milk and refrigerate it for later use. It has been proven that human breast milk can and does contain "pathogens". However, the inherent immunity in the milk takes care of this. Allaah's creation has not changed, so long as mankind does not disfigure and change it.

In short, what Allaah refers to as "***labanan khaalisan*** لبنا خالصا" in the Qur'aan has always been available, and will always be available, so long as it is from cattle fed on their natural diet in their natural habitat. Lofty, exalted and free is Allaah from that He should create something inherently harmful for mankind. As long as mankind does not depart from the fitrah as it relates to cattle, their diet, treatment and habitat, then that milk will always be safe and available, in all times and places, a bounty and a favour from Allaah. Environmental hygiene and sanitation issues are external to the inherent nature of the food itself and these issues impact upon all foods without exception and are controllable.

This is the central thesis upon which the rest of this paper is built upon. I invite anyone to refute or disprove this thesis, religiously, historically, or scientifically – I am open to correction on this issue.

[14] Which is now proven to contain "pathogens" contrary to what was thought for decades, that it was "sterile". The inherent protective effects ensure the safety of such milk.

Health and Medicinal Benefits of Real, Raw, Pure, Unprocessed, Fresh Natural, Living Milk

Prominent physicians such as Galen, Hippocrates, Pliny, Varro, and Anthimus, amongst many others, all recommended fresh, pure, living, natural, raw milk for numerous disease conditions. Hippocrates used it to treat tuberculosis.

The use of milk as medicine was pretty much a standard treatment amongst a large number of physicians during the 18th and 19th centuries. When pasteurisation became necessary, the knowledge and use of what was very popularly known across Europe and the US as "the milk cure", or the "the milk diet" was lost.

In this regard, it should be sufficient that Allaah, the Most High, has described what is under discussion as "***labanan khaalisan*** ***لبنا خالصا***", pure milk (an-Nahl 16:66), and it should be sufficient that the Messenger (sallallaahu alayhi wasallam) said, "***Drink cow's milk, for indeed it ruminates on every herbage, and it is a cure for every disease***". Further, the Prophet (sallallaahu alaihi wasallam) prescribed fresh camel milk (along with their urine) as a cure for an ailment that afflicted some people. All of this makes clear that there are indeed clear benefits for fresh, pure, raw, living milk.

It is not befitting that this most basic notion should be doubted, milk has always been, fresh, raw and natural.

Raw milk from cows in mass dairy production plants, given feed lot, distillery grains (used for alcohol fermentation), kept on cement ground and in unnatural conditions, injected with genetically engineered synthetic bovine growth hormone (in the US), sometimes surrounded by their own faeces (as they don't roam in the open), highly prone to and inevitably suffering from disease, filled up with antibiotics as a result, and having a lifespan four to five times shorter than normal – *is downright dangerous*. No one should **under any circumstances** drink this particular raw milk[15]. This milk must be pasteurised. This milk has no medicinal or curative properties. It is inferior quality milk cleaned up and treated for safe public consumption.

This is not the milk that I am speaking of. I am speaking of the milk mentioned in the Book and the Sunnah, as it was placed in the creation, and whose benefits have been enjoined by nations and societies for thousands of years due to its natural, living form.

Historical Books on Milk As A Cure For Many Diseases in History

Raw (natural, living) milk as medicine was documented and used throughout the middle ages, and was found in print during the 16th, 17th and 18th centuries. Here are some printed works on the subject[16]:

[15] Please note that a lot of instances of food poisoning that arise from this type of milk are often attributed to "raw milk", by people who have a bias against it. When food poisoning occurs from pasteurised milk (and cases are abundant and regular), it is often blamed upon "insufficient pasteurisation" and therefore attributed to "raw milk". Also in conventional dairies, where "*raw milk intended for pasteurisation*" accidentally mixes with milk already pasteurised, this would be blamed on contamination by "raw milk". Whilst this is correct, it nevertheless, fails to distinguish between the inferior "*raw milk intended for pasteurisation*" and "*raw milk intended for consumption*" in case reporting. Thus a picture is continuously portrayed of raw, natural, fresh, milk being inherently dangerous. Further, some bacteria are resistant to pasteurisation temperatures and can remain in pasteurised milk. You can find evidence of this in the scientific literature and I have covered this issue further in this paper.

[16] A Very Brief History of Milk as Medicine, Andrew Bernstein, 2001.

- Giovanni Costeo, "**De Facili Medicina per se et Lactis Usum**", (printed 1604) – use of milk as medicine.
- Johann Georg Griesel "**Tractatus Medicus de Cura Lactis in Arthride**", (printed 1681) – treatment of arthritis via the milk cure.
- William Stephens, "**Dolaeus upon the Cure of the Gout by Milk-Diet",** (printed 1742, London)
- Frederick Hoffman, "**A Treatise of the Extraordinary Virtues and Effects of Asses Milk in the Cure of Various Diseases, Particularly the Gout, Scurvy and Nervous Disorders**", (printed 1754, London).
- Samuel Ferris, "**A Dissertation on Milk**" (printed 1785, London).
- Philip Petit-Radel, "**Essay Sure le Lait**" (printed 1786, France) – an essay on milk.
- C. Vivante, "**Delia Cura Lattea**" (printed 1874, Italy) – on the milk cure.

Russian and German doctors popularised the cure of diseases by raw, fresh milk in the mid 1800s. A book called "**The Milk Cure**" was published in 1857 in Moscow by Dr. Inozemtseff who reported that he treated over a thousand patients.

Publications in the Edinburgh Medical Journal in the 19th Century

Another book called "**On the Milk Cure**" by a Phillip Karell was translated into English and an article based on it was published in the Edinburgh Medical Journal of August 1866. Karrell claimed to treat hundreds of cases of asthma, neuralgia, fluid retention (dropsy, oedema)[17], liver diseases and conditions of improper nutrition. There was an article published by John Tatum Banks, "**On the Curative Virtues of Milk**" published in the Edinburgh Medical Journal in 1867.

There was also a clinical lecture delivered by GW Balfour, "**On the treatment of diabetes by milk etc.**" a the Edinburgh Royal Infirmary which was later published in Edinburgh Medical Journal in 1870. Another clinical lecture was given by a G Johnson, "**Clinical Lecture on the Curative Influence of an Exclusive Milk Diet in Some Cases of Inflammation of the Bladder**", and this was published in the Lancet, 16th December 1876.

These papers refer to the curing of various forms of disease including chronic diarrhea, dysentery, cystitis, typhoid, Bright's disease (glomerulonephritis), and other bladder conditions through the milk-diet cure. All of this was published in the leading and most respected medical journal in England.

I refer you to an excellent short treatise that appeared in "Certified Milk Magazine" back in January 1929, written by a Dr. J. R. Crewe, titled, "**Real Milk Cures Many Diseases**". Dr Crewe used fresh, raw milk to cure diseases for a period of fifteen years.

Some Quotes from "Real Milk Cures Many Diseases" of Dr. J.R. Crewe

> "To cure disease we should seek to improve elimination, to make better blood and more blood, to build up the body resistance. The method used tends to accomplish these things. Blood conditions rapidly improve and the general condition and resistance is built up and recovery follows" … "**Milk resembles blood closely and is a useful agent for improving and making new and better blood**. Blood is the chief agent of metabolism. Milk is

[17] See later on the section dealing with the treatment of dropsy with raw, fresh, milk.

recognized in medical literature almost exclusively as a useful food and is admitted to be a complete food." …

Sidenote: Compare with Ibn al-Qayyim, "**And it [milk] is praiseworthy, good (mahmood), and it creates (gives birth to) good blood …**" (Zaad ul-Ma'aad). This only occurs with real fresh, living milk – not heat-treated milk where enzymatic activity is virtually destroyed, the good lactic acid bacteria (probiotic) are mostly wiped out, and immune strengthening components are diminished.

"…**The treatment is used in many chronic conditions but chiefly in tuberculosis, diseases of the nervous system, cardiovascular and renal conditions, hypertension, and in patients who are underweight, run-down, etc. Striking results are seen in diseases of the heart and kidneys and high blood pressure. In cases in which there is marked oedema[18], the results obtained are surprisingly marked. This is especially striking because so-called dropsy has never been treated with large quantities of fluid. With all medication withdrawn, one case lost twenty-six pounds in six days, huge edema disappearing from the abdomen and legs, with great relief to the patient. No cathartics or diuretics were given. This property of milk in edema has been noted in both cardiac and renal cases. Patients with cardiac disease respond splendidly without medication**..."

"…In patients who have been taking digitalis and other stimulants, the drugs are withdrawn. High blood pressure patients respond splendidly and the results in most instances are quite lasting. The treatment has been used successfully in obesity without other alimentation. One patient reduced from 325 pounds to 284 in two weeks, on four quarts of milk a day, while her blood pressure was reduced from 220 to 170."

"**Some extremely satisfying results have been obtained in a few cases of diabetics. When sick people are limited to a diet containing an excess of vitamins and all the elements necessary to growth and maintenance, which are available in milk, they recover rapidly without the use of drugs and without bringing to bear all the complicated weapons of modern medicine**." …"

"…**For more than 16 years I have conducted a small sanitarium where milk is used almost exclusively in the treatment of various diseases. The results have been so regularly satisfactory that I have naturally become enthusiastic and interested in this method of treating disease**. We used good Guernsey milk, equal to 700 calories to the quart. *Interestingly, diseases that have no similarity respond equally to this treatment*. **For instance, psoriasis clears up beautifully. The improvement in tuberculosis or nephritis is equally interesting but there is no similarity in these diseases**" …

"…The Arabs are said (Encyclopedia Britannica) to be the finest race, physically, in the world. Their diet consists mostly of milk and milk products with fruits and vegetables, and some meat."[19] ….

[18] Also known as "dropsy".

[19] Note, this situation is changing as the Arabs depart from their traditional diet to a Western one, and we are now seeing the fastest rates of obesity, diabetes and heart-disease being witnessed in the Arab lands.

> "…**The experience of seeing many cases of illness improve rapidly on a diet of raw milk has suggested more and more the feeling <u>that much of modern disease is due to an increasing departure from simple methods of preparing plain foods</u>. The treatment of various diseases over a period of 18 years with a practically exclusive milk diet has convinced me personally that <u>the most important single factor in the cause of disease and in the resistance to disease is food</u>. I have seen so many instances of the rapid and marked response to this form of treatment that nothing could make me believe this is not so**."

Donkin and Tyson on Curative Milk and Milk Treatment of Disease

An article in the medical journal London Lancet published by an American physician called A. S. Donkin in 1876. Titled, "**The Curative Influence of an Exclusive Milk Diet**". Donkin stated that diabetes is cured by sufficient quantities of fresh milk.

A Professor James Tyson recommended the use of fresh, natural milk for diabetes and gastric disturbances noting this in the Journal of the American Medical Association in 1884. He stated that continued use of this milk cures kidney stones, and published a paper titled, "**Milk Treatment of Disease**".

Dr. Charles Porter, "Milk Diet as a Remedy for Chronic Illness"

One of the best books on the subject is that of Charles Porter MD, , "**Milk Diet as a Remedy for Chronic Illness**" written in 1905 (a published, printed copy, updated 13th 1926 edition of which is in my possession). Porter treated around 18,000 people over a period of just under 40 years, exclusively with fresh, pure milk in the form of a milk diet. He wrote,

> "**What is required is good, clean milk as it comes from the cow, without the removal or addition of any substance whatsoever. Boiled, sterilized or pasteurized milk, or milk artificially preserved in any way, can not be used for this treatment. <u>*The live cells in the milk must remain alive or there can be no 'milk cure'*</u>.**"[20]

Dr. Porter and others knew the difference between real milk and heated, denatured milk. While we frequently have studies today claiming no apparent difference in nutritive elements of fresh, raw and pasteurised milk, the reality is in fact quite different. There is a definite and measurable compositional, physiological and immunological difference between the two – and this is established in studies I will quote later inshaa'Allaah.

From the ailments that Porter reported having consistently good results in around 40 years of experience are heart and kidney disease, brain and nerve disorders, paralysis, colitis, irritable bowel syndrome, gastritis, chronic poisoning due to mercury, lead, arsenic and other toxic medicines used at the time, ulcerations in various parts and locations of the body, skin diseases, pellagra, asthma, rheumatism, anemia, ulceration of the bowels, gout, impotence, goiter, hay fever, malaria, reproductive disorders, low and high blood pressure and diabetes mellitus amongst many many others.

[20] The question arises here "what is it that gives milk it's "life" and makes it "living"?" and this is covered in what is to follow in this paper.

Porter stated in the preface to a later edition, "*Diabetes can now definitely be added to the list of diseases cured by the milk diet*" and this was in relation to fermented, soured milk in which most of the lactose has been converted to lactic acid.

Porter said,

> "**A course of four weeks should ordinarily be sufficient to cure any of the following diseases: Nervous prostration, general debility, autointoxification, mild skin troubles, such as pimples, eczema, sallowness, wrinkles, etc., simple anemia, catarrh, biliousness, ringing in the ears, pleurisy, constipation, dyspepsia, indigestion, asthma, hay fever, piles, insomnia, ulcer of the stomach, colitis, or ulceration of the bowels, goiter, malaria, arterioscerosis (hard arteries), neuralgia, neurasthenia, acidity of the stomach, chronic appendicitis, arthritis, urticaria or hives, cystitis, carbuncles, diarrhea or dysentery, dilation of stomach, gastritis, gout, impotence, neuritis, lumbago, sciatica, migraine, leucorrhea, enlargement of prostate gland, tobacco, morphine and cocaine habits, gallstones, and liver disorders, rheumatism, kidney disease, and the first stage of consumption [tuberculosis].**"

This information and much more of which I don't have the time quote indicates that in the 19th century it was well known and established in Russia, Germany, England, across Europe, and all across America, that fresh, raw, pure milk can cure chronic diseases with relative ease. *These are real cures, and not mere treatment of symptoms of that disease*.

"The Miracle of Milk", Bernarr MacFadden

This is another useful book, not as extensive as Dr. Porters, but useful. It was published in 1923, and I have a copy of the book. MacFadden quotes contemporaries of his time such as German Professor Bauer, "*It is an indisputable fact that in certain disease a methodological use of milk cure gives results such as can be obtained by no other treatment*."

And also Weir Mitchell whom Porter considered to be the greatest American physician of his time in chronic diseases, he quotes from Mitchell, "*It is difficult to treat any of these cases without a resort at some time more or less to the use of milk*." The book reveals the extent to which fresh, raw, clean milk was used for curing chronic diseases in that time, in Europe and America.

Macfadden says,

> "**Among the many disorders successfully treated are nervous troubles of all sorts – including insomnia, neuralgia, neuritis, headache and migraine, nervous prostration and nerve irritability; also general debility, and stomach and intestinal indigestion, and their resulting autointoxification; ulcer of the stomach and intestines, acid stomach, and dilation of the stomach; prolapse of the stomach, intestines, kidneys, or uterus; pimples, boils, carbuncles, sallow, blotchy complexion, eczema, dandruff, anemia, biliousness, catarrh of the air passages or of the digestive tract, constipation, chronic diarrhea, and dysentery, asthma, hay fever, hardening of the arteries, piles, chronic appendicitis, rheumatism, arthritis and lumbago, hives, ovarian trouble and leucorrhea, impotence, liver trouble and gallstones, Bright's disease and diabetes, tuberculosis in the early stages, and narcotic habits of all kinds. Also, in abnormal**

> **blood pressure conditions, whether too low or too high, the milk diet works almost miraculously**."

Macfadden quotes from numerous individuals in his time, who speak of the curative power inherent in milk, their use and recommendation of it – as does Dr. Porter in his book.

Fresh Living Milk, Asthma and Allergies

Dr. Porter says,

> "**Asthma is easily curable previous to the time that actual breaking down of lung tissue takes place, and after that I know of nothing that will give more relief than the milk diet.** Old cases of asthma, with chronic bronchitis, and emphysema look, and I suppose feel, like the most miserable people in the world. But there is always a great improvement on the milk cure, especially if they break away from their depressant medicines – a thing they are very loathe to do. **I made no distinction between the different forms of asthma, as usually classified: Cardiac, renal, peptic, thymic, nocturnal or various forms of hay fever; the greatest possible benefit for all of them is obtained on the milk diet**."

Here are some research papers. The first paper involves a study of almost 15,000 children from five different European countries.

- Waser, M., K. B. Michels, et al. (2007). "**Inverse association of farm milk consumption with asthma and allergy in rural and suburban populations across Europe**." *Clin Exp Allergy 37(5): 661-670*. "***Farm milk consumption ever in life showed a statistically significant inverse association with asthma ... Our results indicate that consumption of farm milk may offer protection against asthma and allergy***. A deepened understanding of the relevant protective components of farm milk and a better insight into the biological mechanisms underlying this association are warranted as a basis for the development of a safe product for prevention."

- Perkin MR, Strachan DP. **Which aspects of the farming lifestyle explain the inverse association with childhood allergy?** *J Allergy Clin Immunol. 2006 Jun;117(6):1374-81*. "BACKGROUND: Farmers' children have a reduced prevalence of allergic disorders. The specific protective environmental factors responsible are not yet identified. OBJECTIVE: We sought to determine whether farmers' children in the rural county of Shropshire, England, have a reduced risk of atopy and, if so, to identify the factors responsible. CONCLUSION: ***Unpasteurized milk consumption was the exposure mediating the protective effect on skin prick test positivity. The effect was independent of farming status and present with consumption of infrequent amounts of unpasteurized milk***. CLINICAL IMPLICATIONS: Unpasteurized milk might be a modifiable influence on allergic sensitization in children."

These papers establish that exposure to unpasteurised (i.e. fresh, natural, pure, raw milk) even occasionally is associated with a statistically significant reduction in asthma and allergy.

On the other hand, we see that "cow's milk" is associated with debilitating allergies in children numbering in the millions. The reality is that it is "pasteurised cow's milk" that is responsible not "cow's milk" as Allaah placed it in the creation. Early exposure, even if it is only in a few instances,

can lead to autoimmune responses against pasteurised cow's milk in susceptible children. The actual causes are most likely related to reactions to changes in the structures of milk proteins due to heating of the milk and also to antibiotic residues that remain in the milk. Pesticides and other residues are also frequently found in such milk from the "commercial feed" that cattle are given in conventional dairies. Here is a study highlighting that herbicide residues can be found in pasteurised milk and butter in a European country.

- Tekel J, Farkas P, Schultzová K, Kovacicová J, Szokolay A. Food Research Institute, Bratislava, Czechoslovakia. **Analysis of triazine herbicides residues in butter and pasteurized milk**. *Z Lebensm Unters Forsch. 1988 Apr;186(4):319-22*. A method has been developed for the determination of atrazine, cyanazine, prometryn, simazine, and terbutryn residues in butter. The residues were extracted from the matrix with a mixture of petroleum ether/methanol (3 + 1), and from the separated water-methanol phase extraction was carried out with chloroform. The extract was cleaned up on an alumina column. Capillary glass liquid chromatography using a 15 m x 0.32 mm glass capillary column coated with OV-1 and an alcali flame ionization detector were employed for the analysis of the residues. The analyses were evaluated by the internal standard method, using metribuzin as the internal standard. The recovery of the method was 68.7%-79.8% for the individual herbicides under study at the fortification level of 0.1 mg.kg-1 and 79.2%-91.9% at the fortification level of 0.02 mg.kg-1. The determination limit of the method was 0.005 mg.kg-1. When centrifuging full milk, residues of triazines were partitioned between the water and fat phases, whereby 17%-82% of the residues were transferred to the milk fat. Samples of commercial butter were analysed and found to contain 0.005-0.023 mg.kg-1 atrazine.

All of this is besides the completely nasty and unnatural diet that dairy cattle are kept alive on which in itself has a great deal of harm attached to it. All of these factors together can lead to allergies, asthma and upper-respiratory problems. And I forgot to mention the pus that remains after white blood cells are destroyed, and some of which carries through into the end product. As much as 400 million to 750 million cells of pus per litre are allowed by legal standards in European and US milk respectively. This milk contains pus – dead white cells – as well as debris from the destroyed bacteria that remain the milk (they are never removed) - and likewise the *enterotoxins* released by "pathogenic" bacteria upon heat shock remain in the milk too[21].

The "Raw Milk" Cure and the Prophetic Hadeeth

I could give you numerous illustrations of the benefits of fresh, raw, pure milk, and write pages and page and pages on the subject. I want to provide just a glimpse of what people are denying when they say that raw milk only has claimed benefits, and also to illustrate the superiority of the Prophetic Medicine over all else.

Dr. Porter says in his "Milk Diet as a Remedy for Chronic Illness",

> "**Nothing can equal milk in curing dropsy[22]"**

And he routinely cured people of dropsy. Porter says,

[21] See later on Staph. Aureus enterotoxin food poisoning from pasteurised milk.
[22] Would be referred to as edema today, which is fluid retention, especially in the feet and legs. This fluid retention is due to some other impairment in bodily function, sometimes involving the heart and kidney.

> "In dropsical effusions there is always plenty of blood fluid, but of such a character that the hyperemia set up to repel disease only makes the tissues water-logged. **Place such a case on the milk diet, under proper conditions, and you will find that the dropsy is rapidly cured**." And he also said, "Some of the more severe forms of heart disease are complicated by dropsy of the feet and ankles, and other parts. **Although perhaps of months' standing, this dropsy always disappears in a few days on the milk and rest**. Rest alone often relieves these cases, but rest without milk will not cure them. **Regarding dropsy, of any part of the body, from whatever cause, I have never heard of a failure of this treatment to cure it**."

And Dr. J. R. Crewe says in his excellent essay, "**Real Milk Cures Many Diseases**", alluding to the curing of dropsy through fresh, natural milk,

> "…The treatment is used in many chronic conditions but chiefly in tuberculosis, diseases of the nervous system, cardiovascular and renal conditions, hypertension, and in patients who are underweight, run-down, etc. Striking results are seen in diseases of the heart and kidneys and high blood pressure. In cases in which there is marked edema, the results obtained are surprisingly marked. This is especially striking because **so-called dropsy** has never been treated with large quantities of fluid. With all medication withdrawn, one case lost twenty-six pounds in six days, huge edema disappearing from the abdomen and legs, with great relief to the patient. No cathartics or diuretics were given. **This property of milk in edema has been noted in both cardiac and renal cases. Patients with cardiac disease respond splendidly without medication**...".

Those people who came from `Urayna and `Ukal to the Prophet (sallallaahu alayhi wasallam) and complained of an illness, *which was actually dropsy as indicated in Saheeh Muslim*, as pointed out by Ibn al-Qayyim[23], were directed by the Prophet (sallallaahu alayhi wasallam) to take fresh camel's milk (along with its urine) as a result of which they were cured. Ibn al-Qayyim says,

> "**The medicines needed for its treatment are the 'drawing medicines' which contain a moderate loosening power and produce a flow according to need**. These qualities are present in the urine and milk of camels. Therefore, the Prophet (sallallaahu alayhi wasallam) ordered them to drink these substances. For the milk of the camel contains power to cleanse and soften, it is diuretic and emollient and opens obstructions, especially when the camels pasture mostly on artemesia, and achillea, camomile, anthemis, and lemon-grass and other plant-medicines useful for dropsy… al-Israili[24] said, "…**therefore when fresh (i.e. the milk) it is the most appropriate milk for moistening the liver, for opening its obstructions, and dissolving foods that are difficult to digest. It is especially beneficial for dropsy whilst it is still warm, straight from the udder** …" … The author of al-Qaanoon (Ibn Seenaa)[25] said, "Know that the milk of a camel is a beneficial medicine, for it contains gentle power to cleanse and special characteristics. This milk is of extreme benefit; if man were to live on it instead of water and food, he would be cured…" (Zaad al-Ma'aad 4/43).

[23] He says, "The indication that their illness was dropys is given in Muslim's narrative of this hadeeth …"
[24] He was a well known Jewish physician from Cairo from around the 10th century CE, Ishaq ibn Sulayman al-Israili, whom Ibn al-Qayyim quotes a few times in his book.
[25] This is Ibn al-Qayyim quoting Ibn Seenaa and not me. Ibn Seenaa was a mulhid, kaafir, that wrote on the subject of medicine.

Macfadden says in "The Miracle of Milk",

> "**How the Milk Treatment Affects Dropsy. People who suffer from dropsy need not hesitate for a moment in adopting the milk treatment**. For, notwithstanding the apparent absurdity of adding three or four quarts of fluid to a system that seems to be already suffering from a superabundance of it, **the dropsical condition quite uniformly yields**. The quantity of urine voided immensely exceeds the quantity of milk ingested, proving that the milk definitely excites a freer elimination from the kidneys as it does from the skin and bowels. **Dropsy is usually associated with heart or kidney disease, or local obstruction to the circulation**. In a case of heart disease the milk aids in reducing the inflammation or abnormality of the heart itself, or at least it greatly reduces the toxic elements in the blood which aggravate the existing organic lesion. **It also relaxes the capillaries of the skin, which not only reduces the work required by the heart in pumping the blood through these capillaries, but also increases skin elimination: this helps the excess of fluid to escape through the skin**. Not only this, but the large amount of fluid of the milk which enters the blood reduces kidney congestion because of the diluted urine; and the large quantities of urine passed will contain much of the edematous fluid, as the diluted blood will take up some of this fluid, which is heavier than the blood of the milk diet patient, in order to maintain its normal degree of separation. If the dropsy is due to kidney disease, the remaining active tissues of the kidneys are able to pass off larger quantities of fluid because they are handling a more diluted fluid. **In addition, the circulation is greatly improved and this aids in carrying fluid to the kidneys, and the kidney inflammation is allowed to subside because of the bland fluid passing through the kidneys**. In this case also the skin activity is increased and this eliminative organ carries off larger quantities of fluid."

He is saying the same thing as Ibn al-Qayyim (rahimahullaah) and is alluding to the "drawing" effect of the milk as well as its effect of increase in "flow" in the body.

Fresh, Raw Milk Was Used to Cure Tuberculosis

Ibn al-Qayyim says, regarding drinking fresh milk from pasture fed cattle, "… **it benefits the bronchi and lungs and is beneficial for sufferers of tuberculosis**". (Zaad al-Ma'aad 3/353).

In the thirteenth edition of Porter's boook, "**Milk Diet as a Remedy for Chronic Disease**", he writes under the chapter called "Consumption (Tuberculosis)",

> "Previous to 1905 my practice of the milk cure was principally among **patients suffering with tuberculosis**…"

He continues,

> "Just as soon as a consumptive [tuberculosis sufferer] has sufficient blood to prevent the wasting of the tissues, the loss in weight stops, and on a further increase of the nutritive fluids, the healthy cells are so strengthened as to prevent any extension of the disease. Next follows in natural order the recovery of the affected cells, or the development of new ones, and the elimination or absorption of encapsulation of the germs."

And he goes on to describe what he experiences in his patients as they go through the healing crisis and the cavities clear.

> "After another period of time the cavity may decrease in size. I have observed cavities as large as a sugar bowl become cleared out and firm walls formed around them and years after have noticed a sinking in of the chest walls and almost complete obliteration of the cavities with normal lung tissue around them."

It is ironic, that whilst human tuberculosis was being spread by "slop milk", *doctors like Dr. Porter were actually curing people from tuberculosis (often caught via the milk supply) by certified fresh raw milk*[26] in the early 20th century. Human tuberculosis was spread via the medium of milk and affected lots of people. Tuberculosis sufferers handling the milk and involved in dairy production and processing were a big factor. I will cover this in more detail further on in this paper. But let it be known that raw, fresh, clean, natural, living milk was used to treat and cure sufferers of tuberculosis numbering in the thousands at the turn of the last century, whilst the inferior, contaminated raw swill milk was the vehicle of many diseases, including tuberculosis.

Ibn al-Qayyim said,

> "**Milk is at it's best when freshly milked** … the best kind is that which is intensely white, with a good odour, delicious to taste, with a slight sweetness, a moderate fattiness and light consistency, neither thin or thick, and that which is milked from **young healthy animals** of moderate flesh, **fed on good pasturage and water**"

And it is about this milk that he says is good for sufferers of tuberculosis and other ailments. Dr. Porter says,

> "**What is required is good, clean milk as it comes from the cow, without the removal or addition of any substance whatsoever. Boiled, sterilized or pasteurized milk, or milk artificially preserved in any way, can not be used for this treatment. *The live cells in the milk must remain alive or there can be no 'milk cure'***."

The Fresh, Raw, Curative Milk and the Placebo Effect

Dr. Porter in his "*Milk Diet As A Remedy For Chronic Disease*" makes an interesting observation from his experience in treating tens of thousands of patients with fresh, raw, natural milk,

> "Chapter: **Psychology of the Milk Cure**. I am glad to say there is no "suggestion" or faith cure about the milk diet treatment. You put something in and you get something in return for it every time. I have had patients who took the treatment because friends urged them to, but without the least faith in it, except that they thought "milk wouldn't hurt them", and these people have made as good a cure as others who had perfect confidence in the method. All my patients will bear with me out in the statement that no psychological influence has been exerted. The milk diet treatment is a simple thing, and within any person's reach…"

[26] "Certified fresh raw milk was the result of the efforts of doctors and physicians who were opposed to the pasteurisation of the milk supply. This is covered in more detail later.

These cures are not due to the placebo effect, but have an established underlying biochemical and physiological basis – which will be covered in what is to follow inshaa'Allaah. When we consider that the Messenger (sallallaahu alayhi wasallam) said, "Drink cow's milk for it ruminates upon every herbage and it is a cure from every disease" – we can see that the basis for the cure is alluded to in the hadeeth itself – the nature of what the cow ruminates upon. Thus, the placebo effect – namely that healing is tied ***only*** to the anticipation of a cure and the positive psychology of the patient – is discounted, both by the religious text and by empirical, scientific evidence.

Intelligent, Well-Read, Open-Minded People Know the Realities

Fresh, pure, raw, living milk, "***labanan khaalisan*** **لبنا خالصا**", therefore, had successfully been used as a therapeutic and health-restoring medicine, prior to, and during the advent of modern mass dairy production – and is known through mountains of empirical evidence which collectively is an acceptable standard of proof. Regular consumption of such milk helps to build strong, good blood and a very robust and strong immune system as a result of which numerous allergies, ailments and chronic illnesses will be cured by Allaah's permission.

This knowledge of the milk cure had been lost and buried until now. There is a growing realisation of this amongst well-read and savvy people all across the US, the UK and in Europe, and in all these areas demand for fresh, pure, raw milk is actually growing – despite all the incessant propaganda against it. This is why many news reports keep appearing again and again describing this phenomenon. They just simply can't understand why people – despite all the government scare stories – are rushing towards the fresh, pure, raw milk. Clearly they are experiencing something different than what they are being told and these are not isolated experiences, they number in the tens of thousands, with a very consistent and shared same experience.

Raw milk making news in New England

Dairy Foods, March, 2008

E-MAIL PRINT LINK

The Boston Globe ran an article late last month outlining the ongoing controversy about consumption of raw milk, with a headline that read "More Dairies Go Raw."

The article contained the usual US FDA warnings that drinking unpasteurized milk is "like playing Russian roulette with your health," balanced against the enthusiasm of Raw milk advocates who say that pasteurization destroys good bacteria along with the bad.

It went on to say that dairies are selling more raw milk than they were five years ago, according to the Northeast Organic Farming Association, which claims to receive calls weekly from consumers trying to find it.

Cricket Creek Farm in Williamstown, for example, is primarily a cheese-making operation, but it began selling unpasteurized milk a year ago because customers kept asking for it.

It also cited researchers at the Institute of Social and Preventive Medicine at the University of Basel in Switzerland, where nearly 15,000 children ages 5 to 15 in Austria, the Netherlands, Switzerland, Sweden and Germany were observed from 2001 to 2004. The study, sponsored by the European Union and published in 2007, found that children who drank raw milk had a lower incidence of asthma and allergies.

The article also noted that raw milk has been debated in California recently. The state passed a bill late last year effectively banning the sale of raw milk, but lawmakers are now poised to repeal that bill.

The reason is that people are finding that their kids allergies disappear in days or weeks, and their own chronic ailments are disappearing – all after the failure of conventional treatments and use of medicinal drugs for years. And alhamdulillaah, I have brothers telling me huge differences in their own health (stating that their "life has been turned around") and huge differences in the immunity and allergies of their children. This is aside from the mountains of accumulating testimonies coming from consumers of fresh, raw milk from pasture fed cattle from different countries amongst the non-Muslims in general – all of whom have seen dramatic effects of the real, living fresh milk upon themselves and their children's allergies – and how can this not be so, when this is milk as Allaah placed it in the creation and as it had always been.

This is just testimony to the fact that the relationship between the Prophetic medicine and the medicine of the physicians (whether past or contemporary) is as flimsy and tenuous as the relationship between the medicine of the physicians and that of the wandering village healers and the *ajaa'iz* , and it is an exoneration of the saying of Allaah, Most High, "***labanan khaalisan*** **لبنا خالصا**", and of the saying of the Messenger, "… ***for it is a cure for every disease***" and an illustration of the ignorance of the one who said, "*It has yet to be demonstrated that raw milk has any beneficial health effects*…" and those who said "*a review of the literature found no scientific study which demonstrates medical or health benefits of raw milk*" and of anyone who questions the Prophetic medicine, knowingly or unknowingly with similar such statements.

This is only a small glimpse of the research on all the various issues related to the benefits and superiority of fresh, living milk, "***labanan khaalisan*** **لبنا خالصا**", the curative milk of the Sunnah, *right down to the molecular level* – and it is in veneration of Allaah, the Most High, in veneration of His verses, and in veneration of His Ruboobiyyah and His favours and bounties upon the creation, in veneration of His Tawheed, in support of the one who spoke without desire, "***Seek medicinal (treatment) with cow's milk…***" "… ***for it is a cure for every disease***". It shows the error of those who state, "*It has yet to be demonstrated that raw milk has any beneficial health effects*". That which they are upon compares little to the Prophetic Medicine[27].

Bernarr Macfadden has some excellent, and pertinent words from 80 years ago,

> It seems strange, in a way, that anything so simple and so lacking in mystery as milk should effect cures with such uniformity, and in grave disorders that have resisted the efforts of the most skilful medical men, armed with the most heterogeneous assortment of drugs and poisons, and that it should be prescribed or even appreciated by so few physicians as it is. Yet, such is the case. By a means so simple that even a school boy could carry it out, thousands of people all over the country are now curing themselves of grave ailments—particularly of the chronic type – many of which have been pronounced incurable by eminent physicians.
> (*The Miracle of Milk, 1923*).

As this knowledge has now been revived, thousands of people are today likewise, by Allaah's permission, being cured of long term chronic illnesses and doing away with the inferior "*symptoms management*" medications that compared to what the Prophetic Medicine has brought – are greatly and vastly inferior – masking symptoms and prolonging the actual disease, and giving birth to long term side effects which evolve into diseases in their own right.

Fine Words By Ibn al-Qayyim

Ibn al-Qayyim said at the *very beginning* of his book,

[27] Having said this, this does not negate the great advances of modern medicine specifically in surgical techniques, burn treatment, trauma, accident and emergency room treatments and related affairs. These have provided an immense amount of value only denied and rejected by the ignorant and foolish. The same cannot be honestly said for chronic illness, however.

> "These are some useful chapters on the guidance of the Prophet (sallallaahu alayhi wasallam) concerning the medicine which he used, was treated with, or recommended for others[28]. We shall elucidate what it contains of wisdom which is not accessible to the intellects of the greatest of physicians and that the ascription of their medicine to it (the Prophetic Medicine) is like the ascription of the medicine of the *ajaa'iz* to their (the physicians') medicine." (Zaad ul-Ma'aad 4/5).

Indeed he spoke the truth at the beginning. He then stated at the *very end* of his book,

> "… and that the relationship of the scientist's to the medicine of the Prophet (sallallaahu alayhi wasallam) is less than the relationship of old wives' medicine to theirs" (Zaad al-Ma'aad 3/379).

Indeed he spoke the truth at the end. He continued straight after this to say,

> "And the affair is even more than what we have mentioned, and far greater than what he have already described, but in what we have mentioned is simply an indication of what is still behind it. If anyone is not given by Alllaah the perception to distinguish (in this affair), then let him know what there is [of difference] between the power strengthened by way of revelation from Allaah, the (types of) knowledge which Allaah has bestowed upon the Prophets, and the understandings and insights that Allaah has favoured them with – and between what is with others" (Zaad al-Ma'aad 3/379).

I say that all of this is already established, namely the superiority of the knowledge and understandings, insights of the Prophet (sallallaahu alayhi wasallam) in his medicine when compared to what is with others – in the issue of fresh, pure, living milk as a cure for every disease.

Ibn al-Qayyim also said,

> "Were the servant to be granted thorough familiarity with the Book of Allaah and the Sunnah of His Messenger, and full understanding concerning the texts and their requirements, he would need no further writings and would be able to derive and deduce all the sound sciences therefrom. (Zaad al-Ma'aad 3/379).

I say that this applies to the issue of health, disease and medicine in general, inclusive of the fresh, pure, real, living milk about which the Messenger (sallallaahu alayhi wasallam said, "*Take cow's milk as (medicinal) treatment …*" " … *for it is a cure for every disease*". Thus if effort was put into supporting the production of a fresh, clean, pure, milk supply in the context of modern society, which has been proven to be possible, and is being done by farms in the developed world, in the millions of gallons and billions of servings, over decades in time, then this would a positive thing for public health.

He also said,

> "The medicine of the followers of the Prophet is more sound and more beneficial than that of any others. Thus the medicine of the followers of the Seal and Master and Leader of the prophets, Muhammad bin 'Abdullaah, (sallallaahu alayhi wasallam) is the most perfect

[28] Amongst which was pure, fresh, raw, living, unprocessed milk from pasture fed, healthy cows and likewise from camels for treatment of ailments.

> medicine, the soundest and the most beneficial. This will only be recognised by one who knows both the medicine of other people and that of the followers of the Prophet (sallallaahu alayhi wasallam) and then compares them, whereupon the difference will become clear to him". (Zaad al-Ma'aad 3/380)

By Allaah he spoke the truth again, and indeed it is as clear as daylight for the one who puts in the effort to research such matters meticulously. The difference between the Prophetic Medicine and that of others is manifestly clear walillaahil-hamd.

Having said all of the above, I am not impervious to the issue of safety and hygiene and even if we accept all of the above regarding fresh, raw milk's curative properties from a religious, scientific and historical perspective, it does not mean that precautions and verification should not be taken in accessing such milk in a modern context. Indeed, they should and must. And that is precisely what I am advocating, and which can be clearly found on HealthyMuslim.Com in the various articles currently published.

More dairies go raw

The Boston Globe

Drinkers say unpasteurized milk contains good bacteria

Raymond and Pamela Robinson, owners of a once-conventional dairy in Hardwick, shrank the herd, put all of the cows out to pasture, and transitioned to organic production of raw milk. (Yoon S. Byun/Globe Staff)

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By Darry Madden
Globe Correspondent / February 23, 2008

Jill Ebbott, a holistic health counselor in Brookline, buys 8 gallons of unpasteurized milk a week for her household of three people, and she pours a splash in the bowls that her three dogs eat from. She says a year of drinking raw milk has cleared up her husband's allergies.

"He suffered tree pollen allergies for 21 years," Ebbott said. "In the spring, he was swollen and oozing and had to wear mittens to bed so he didn't scratch himself too much. After 13 months on raw milk, his gut was rebalanced to such a degree that he was healed."

The US Food and Drug Administration warns on its website that drinking unpasteurized milk is "like playing Russian roulette with your health," but Ebbott is part of a growing number of people who reject the long-held belief that pasteurized milk is better for you. People who prefer raw milk say that pasteurization - the process of heating milk to kill bacteria - destroys good bacteria along with the bad.

Massachusetts is among 28 states in which raw milk can be sold for human consumption, and in the past two years the number of dairies licensed to sell it here has gone from 12 to 23. Dairies are selling more raw milk than they were five years ago, according to the Northeast Organic Farming Association, which says it receives calls weekly from consumers trying to find it.

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Despite economy, consumers go to great lengths for raw milk

Most farmers still keep herd-share deals quiet, but consumer demand is high.

By Ben Sutherly
Staff Writer

Wednesday, December 31, 2008

The highly secretive business of supplying raw, unpasteurized milk to consumers continues to expand, despite the sour economy.

Dairy farmers like Tim Wightman of Darke County, who supplies milk from five Milking Shorthorns to 157 shareholders in local towns such as Yellow Springs, Kettering and Beavercreek, said demand for fluid milk remains strong, though consumers are making more cream and butter themselves to cut costs.

"We've got some people making serious concessions in the rest of their lives to get these products," said Wightman, 47, whose Yore Farm near Arcanum began operating in March 2007.

Wightman said consumers of his herd's milk range from home-schooled families to professionals at Wright-Patterson Air Force Base.

At least 500,000 U.S. residents, including dairy farmers, drink raw milk, said Sally Fallon Morell, president of the Weston A. Price Foundation, a Washington, D.C.-based nonprofit that advocates for raw milk and other foods it deems "nutrient-dense."

At least five dairy farms in Montgomery, Darke and Butler counties are sources of raw milk for Dayton-area consumers, said Jim Roberts of Dayton, who heads the local Weston A. Price chapter.

Photos

Tim Wightman pours fresh raw milk onto a filter during a milking session on his farm near Arcanum. Story focuses on a business trend story on the growing demand for raw, unpasteurized milk. The sale of raw milk is illegal in Ohio, but Wightman supplies milk to consumers by way of herd-share agreements, through which consumers purchase shares of the herd. Wightman's shareholders run the gamut, from home-school moms seeking a nutritional product for their child to professionals at Wright-Patterson Air Force Base. Click to enlarge

Raw milk sales rocket

Oct 21 2007 by Andrew Dagnell, Wales On Sunday

IT might sound udderly unbelievable, but the latest food fad to hit Wales is... RAW milk.

Straight-from-the-cow, unpasteurised milk is regularly drunk by more than 100,000 Californians and is equally popular in New York.

Now the craze is hitting our shores with farm shops in Wales are reporting a sharp increases in sales.

Advocates of raw milk, which is sold in green- topped bottles, claim that it is high in immune-boosting nutrients and disease-fighting antibodies.

Steve Oultram, who owns Newbridge Farm Shop in Ewloe, said that his family had been selling raw milk for more than 50 years, but had noticed that it had become more popular recently.

He said: "There's no doubt that the demand for raw milk is increasing all the time as more people are made aware of it. We have people coming here from considerable distances, not just from Wales, but from as far as Aberdeen and Brighton. We've even started sending it out through mail order because of the demand."

And Mr Oultram said some of his customers had used the milk to help them combat illnesses.

"One person who used to come to us had quite an advanced cancer. She said that the milk was helping so much that she wasn't having to take as much medicine," he said. "And another guy has been buying it for his son who has bad eczema, and he's said that it's made a tremendous difference."

But it's not just raw milk that is becoming ever more popular – raw cheeses are on the up too.

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Testimonial: Demonstrative of the Superiority of the Prophetic Medicine Over That of the Physicians, Doctors and Scientists

The following is the experiences of a brother and health problems he has been facing recently. Comments in the footnotes are mine just for clarification.

Testimony and Personal Experience

As Salaamu Alaikum

I am 34 years old and am a father of 5, I have had diabetes and "high cholesterol" for almost 10 years, 5 months back I suffered a heart attack. I had an angioplasty and was found to have a 90% blocked artery, which was unblocked by a metal stint.

I have been on prescription medicine for almost 10 years to control the diabetes and high cholesterol including statins (lipitor) and metformin.

After the attack the cardiologist and the endocrinologist who were the best private practitioners in the city increased my doses of Lipitor to 80mg per day and my metformin and added blood pressure medicine and aspirin for blood thinning etc, coupled with their nutritional advice, which as usual, was to have a low fat diet. I was having to take almost 8 tablets daily.

After my heart attack I discovered the **HealthyMuslim.Com** website and also started my independent research on my conditions and the medication that I was on.

I discovered from information I was led to as a result of **HealthyMuslim.Com** that statins have a very small marginal effect along with many negative effects and can cause severe muscle and nerve damage which I was experiencing already. The consultants were adamant that the main threat to my heart and life was the high lipid profile which could only be controlled by high statin intake.

Subsequently through the independent research I found firmly established evidence that high cholesterol in and of itself was not a main factor in atherosclerosis (building up of plaque in the artery walls leading to heart attack).

So I stopped taking statins and started a low carbohydrate diet and got rid of the low fat diet[29] and started using ghee[30] instead of vegetable oils for cooking and natural organic

[29] L. A. CORR. Guy's and St. Thomas' Hospitals. M. F. OLIVER. National Heart and Lung Institute. London, U.K. **The low fat/low cholesterol diet is ineffective**. *European Heart Journal (1997) 18, 18-22*. "**Conclusions**. The commonly-held belief that the best diet for prevention of coronary heart disease is a low saturated fat, low cholesterol diet is not supported by the available evidence from clinical trials. In primary prevention, such diets do not reduce the risk of myocardial infarction or coronary or all-cause mortality. Cost-benefit analyses of the extensive primary prevention programmes, which are at present vigorously supported by Governments, Health Departments and health educationalists, are urgently required. Similarly, diets focused exclusively on reduction of saturated fats and cholesterol are relatively ineffective for secondary prevention and should be abandoned".

[30] Clarified butter, where the milk solids are removed by gentle heating. Abdullaah Ibn Mas`ood (radiallaahu `anhu) also narrates that the Messenger of Allaah (sallallaahu `alayhi wasallam) said "***Drink cow's milk, for indeed it is a remedy, its samn (clarified butter) is a cure (shifaa), but beware of its meat, for indeed its meat is***

products where we could, and also we started to drink only fresh raw camels milk which was not boiled or treated in any way except filtered by cloth at home (research in camels milk shows that it regulates insulin).

I also started on numerous vitamins and nutrient supplements which aid the heart and insulin performance and strengthen these organs, such as;

- Omega-3 Fatty Acids
- Chromium
- Flax seed oil
- Vitamin C
- B Vitamins
- Magnesium
- Selenium
- Folic acid

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disease". Related by al-Haakim, Abu Nu'aym and Ibn as-Sunnee and Imaam al-Albaanee declared it Saheeh in *Saheeh al-Jaami' as-Sagheer (no. 4060)*.

Contrary to the dogma of the last 30 years, saturated fats are not the causative factor of heart disease. One hundred years ago, diabetes was more or less unheard of, likewise heart disease, **despite diets being very high in saturated fats**. In fact cultures with diets with high levels of saturated fat intake never had problems with heart disease. In modern societies, these diseases emerged as a result of *trans-fats* in the diet, and the use of refined polyunsaturated vegetable oils. As people continued their intake of *trans-fats* these diseases turned epidemic. Unfortunately, flawed advice leads people to consume more trans-fats, in the name of fleeing from saturated fats. There is no *clinical evidence* tying saturated fats from the diet to the primary causes of heart disease.

Its trans-fats and refined and hydrolysed vegetable oils, margarines, and heated milk proteins in pasteurised, homogenised milk (amongst other elements of milk), and oxidization of polyunsaturated fats (whether natural or as a result of cooking and preparatory processes), excess omega-6's in the diet, and a gross deficiency of Vitamin C in the body that are doing the damage. Further, studies correlating fats in general with heart disease **never investigate into cooking methods** – which have a profound influence on the effects of the food on health and disease. This is a fundamental flaw in most studies that claim to investigate relationship of fats to heart disease. There is no *clinical evidence* tying saturated fats in diet to primary causes of heart disease.

Gary P. Zaloga, MD, Kevin A. Harvey, MS, William Stillwell, PhD and Rafat Siddiqui, PhD. **Trans Fatty Acids and Coronary Heart Disease**. Methodist Research Institute of Clarian Health Partners, Indiana University School of Medicine, and Department of Biology of Indiana University Purdue University at Indianapolis, Indianapolis, Indiana. *Nutrition in Clinical Practice, Vol. 21, No. 5, 505-512 (2006)*. Epidemiologic evidence has linked trans fatty acids (TFAs) in the diet to coronary heart disease in human populations. It has been estimated that dietary TFAs from partially hydrogenated oils may be responsible for between 30,000 and 100,000 premature coronary deaths per year in the United States. Although it is known that TFAs increase low-density lipoprotein (LDL) cholesterol levels and decrease high-density lipoprotein (HDL) cholesterol levels (markers of coronary heart disease), there is little known about the mechanisms by which TFAs actually function at the cellular level. It is unknown what levels of TFAs are clinically significant and it is unclear how TFAs are associated with cardiac arrhythmias or sudden cardiac death. We hypothesize that TFAs affect membrane structure, thus altering enzymatic pathways that may subsequently induce cardiac arrhythmias and sudden death.

Nicole M. de Roos, Evert G. Schouten and Martijn B. Katan. **Consumption of a Solid Fat Rich in Lauric Acid Results in a More Favorable Serum Lipid Profile in Healthy Men and Women than Consumption of a Solid Fat Rich in trans-Fatty Acids**. *Journal of Nutrition. 2001;131:242-245*. "Solid fats are used in food manufacturing to provide texture and firmness to foods. Such fats are rich in either saturated or trans-fatty acids, both of which increase the risk of coronary heart disease. Epidemiological and experimental studies suggest that trans-fatty acids increase risk more than do saturates because they lower serum high density lipoprotein (HDL) cholesterol. However, there appear to be differences between saturates in their effect on HDL cholesterol. We investigated whether the consumption of a solid fat rich in lauric acid (C12:0) would result in a more favorable blood lipid profile than the consumption of a solid fat rich in trans-fatty acids...Consumption of a solid fat rich in lauric acid gives a more favorable serum lipoprotein pattern than consumption of partially hydrogenated soybean oil rich in trans-fatty acids. Thus, solid fats rich in lauric acids, such as tropical fats, appear to be preferable to trans-fats in food manufacturing, where hard fats are indispensable".

I started taking a mixture of seeds, flax seed, sunflower seed and pumpkin seed[31], and more raw food intake such as fruit and vegetables.

I have been on this program for 3 months now, and my muscles cramps have gone, my body is physically much stronger, I have reduced the diabetes medication and my sugar levels are well under control and I can work out longer without muscle pain lasting for days, which it did previously when I was on the statin program.

My skin colour and complexion has improved, my immune system is noticeably stronger. I used to have nerve problems in my neck and arms and hands, which has improved (nerve damage is a side effect of statin intake). My digestion has improved and my sleeping pattern is better.

My children started on the raw, untreated camel's milk. I have 4 daughters and a son. One of my daughters suffered from chronic eczema and my son continuously suffered from asthma and infections that led to croup[32], that would send him to hospital for a steroid jab at least once every few months. Since starting the raw milk, my daughter's eczema has gone and my boy has not had any croup episodes. His asthma has noticeably improved[33].

The children have much higher levels of energy. There skin has improved and my wife says she notices that their immune system is stronger and that they are dealing with the infections much better, with more ease and *without* the use of medication. We live in Madinah and we have seasonal epidemics during Ramadan and Hajj due to influx of millions of pilgrims.

My son virtually could not live without the traditional dairy milk and he would drink it morning, noon and night. Since the change over to raw camel's milk he has lost his croup problem and his immune system and resilience to infections is far better.

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[31] http://www.healthymuslim.com/?zgbcn

[32] Definition: Croup is an infection of the voice box and windpipe. It is often mild, and most children soon recover. In some cases severe breathing difficulties develop. About 1 in 10 children with croup are admitted to hospital, usually for a short time until symptoms ease. A steroid medicine is usually prescribed to ease symptoms.

[33] Waser, M., K. B. Michels, et al. (2007). "**Inverse association of farm milk consumption with asthma and allergy in rural and suburban populations across Europe**." *Clin Exp Allergy 37(5): 661-670*. "***Farm milk consumption ever in life showed a statistically significant inverse association with asthma ... Our results indicate that consumption of farm milk may offer protection against asthma and allergy***. A deepened understanding of the relevant protective components of farm milk and a better insight into the biological mechanisms underlying this association are warranted as a basis for the development of a safe product for prevention."

Perkin MR, Strachan DP. **Which aspects of the farming lifestyle explain the inverse association with childhood allergy?** *J Allergy Clin Immunol. 2006 Jun;117(6):1374-81*. "BACKGROUND: Farmers' children have a reduced prevalence of allergic disorders. The specific protective environmental factors responsible are not yet identified. OBJECTIVE: We sought to determine whether farmers' children in the rural county of Shropshire, England, have a reduced risk of atopy and, if so, to identify the factors responsible. CONCLUSION: ***Unpasteurized milk consumption was the exposure mediating the protective effect on skin prick test positivity. The effect was independent of farming status and present with consumption of infrequent amounts of unpasteurized milk***. CLINICAL IMPLICATIONS: Unpasteurized milk might be a modifiable influence on allergic sensitization in children."

> I have used *the best consultants in the world* for my conditions and none of these consultants were able to give me the simple advice to take certain nutrients and vitamins to *strengthen my body*. All they ever did was just prescribe more pharmaceutical medicines, especially statins. Without exception, they all told me that I would be on these for life.
>
> […]. From my entire experience, the most that can be said about their medicine was that it only suppresses symptoms via drugs that in the long run damage you even further, never addressing the true underlying causes of the disease. Thus, symptoms are masked, but the disease remains in effect. In fact, such medications, as I know from my experience, lead to other diseases which then require even more medication[34].
>
> I feel that if I had the information I have now 10 years ago I would have avoided the heart attack. I very strongly believe that it was the medication that led to the inevitable heart attack since the initial underlying problems were not really addressed and the cumulative effects of the medication over many long years contributed to my ill-health, leaving me vulnerable to severe illness, of which a heart attack was the consequence.
>
> I was always lead to believe that I should be on a low fat diet to keep the lipid profile down, and to avoid eggs and full fat milk. I have since discovered that this is not true in light of scientific evidence that is now readily available for anyone who bothers to research it.
>
> In conclusion, I am much healthier stronger and in better control of my diabetes and heart condition and I strongly feel and know that the problems are reversing. My children are healthier, more alert, stronger and I have seen their health problems disappear due to regular consumption of raw milk and changes in diet.
>
> This experience has convinced me that the Prophet's medicine is far simpler, better, less expensive, yet more effective than the medicine I and my children had been given, considering that I had the best private healthcare, the top cardiologists and endocrinologists seeing to me.
>
> May Allah reward you with good for your excellent advice and guidance.

This brother is not alone. There are thousands like him, from all over the world who are having the same experiences with respect to diseases and allergies.

More Testimonials

For the record, I would like to quote more testimonials. These testimonials are abundant and widespread and can be found from zealous consumers of raw milk, from families with young children, from old people well into their eighties and nineties, and sufferers of chronic and debilitating diseases.

[34] I should clarify in case there is any misunderstanding that in terms of the variety of types of surgery, trauma, and accident and emergency treatments, modern medicine has made leaps and bounds and made significant reduction to human suffering. Thus things like emergency heart surgery, or burn treatments, and fixing of broken bones and the likes are amazingly efficient. However, in other areas such as chronic illnesses, it is unfortunately not the case.

The following testimonials are selected from hundreds that were written in response to a measure being taken by a state authority in trying to restrict sales of raw milk from a particular farm, and also from submissions to raw milk producing farms by regular customers.

Disclaimer: I do not know any of the people providing the testimonials below in person, and thus from an *isnaad* point of view cannot state with certainty the veracity of claims made. However, given the fact that this is in relation to something that the Sunnah has explicitly spoken about (the curative property of fresh, raw milk), then a certain level of trust can be safely placed in the generality of what is found in the testimonials as a whole, especially considering that the cures being stated are also a matter of documented historical record (refer to the likes of Dr. Crewe, Dr. Porter, and Macfadden and others). From my own personal experience with my daughter getting bouts of eczema with pasteurised cow's milk but not from fresh raw milk, I know that much of what is in these testimonials can be readily believed. In addition, I also have minutes and transcripts of meetings and discussions taking place between, for example, people in Wales and the local authorities that incorporate testimonials from regular consumers of raw, natural milk in support of the availability of raw milk as an element of consumer choice. Collectively, all the testimonials provide details of similar experiences and effects, and the fact that raw, unpasteurised milk is shown to be inversely associated with allergies and asthma in published scientific research gives support to this. So despite the problem in the chains of narration and issues of veracity, I don't think that these testimonials can be dismissed easily in terms of the generality of what they contain. Therefore, a certain level of trust in what is presented below is justified and warranted.

These testimonials are from within the past few years. Please note that there may be a lot of typos and spelling mistakes in these testimonials. The purpose in bringing these testimonials is to let you have a glimpse of what people are experience from real, pure, natural milk.

No More Need for Antibiotics

> Our family has been drinking milk fresh from the farm for over 5 years. Never has our health been more vibrant! My 3 young children are rarely sick even when exposed to other children who are sick at school and at the local YMCA nursery. People don't believe it when I tell them that since starting them on raw milk, my three children have NEVER taken antibiotics for any ailment. Why? Because they don't need them. When my kids get sick, they are over it in a day or so and bounce right back with no pharmaceutical crutch of any kind. Seeing is believing. Don't buy the propaganda about raw milk. Try it and see the difference yourself! *Sara, Tampa, Florida.*

Raw Milk Cures Asthma

> Raw milk cured my asthma!! Fourteen years ago while pregnant with my third child I developed what they called adult onset asthma. We ate what we thought a healthful diet, mostly organic unprocessed stuff. I wouldn't use meds being pregnant and then nursing. I learned my triggers (mostly non-organic dairy) and used different natural herbal remedies and had a great deal of relief. However as the years went on it became worse and worse (partly because I started using a lot of 'organic' convenience, read that junk, food) we were using low temp pasturized organic milk and I craved anything dairy. We were looking for a source for raw without much luck. By this time I was having very serious attacks nightly (that was about two years ago). Then we heard of a farmer that had organic pastured raw

milk. The next Saturday we drove out and bought a gallon to sample. This is where the drama begins! We arrived home. I drank a huge glass and began choking and gagging, bringing up stingy and hardened mucus, some of it looked like beads of tapioca, when I finally stopped retching this stuff up I felt lighter in my chest. This happened two more times over the next twelve hours. I HAVE NOT HAD AN ATTACK SINCE THAT DAY, NOT EVEN A WHEEZE! Praise the Lord, the maker and giver of raw milk! *Amy Beatty, Plant City, Florida.*

Raw Milk Removes Allergy, Infections and Illness

For years my family drank low fat pasturized milk and soy milk not realizing the damaging effects this had. All of us consistenly had colds, allergies, and digestive problems. I experienced hair loss which I believe was from the soy. I discovered the Weston Price Foundation about 5 years ago and we've been drinking raw milk ever since. We experience very little sickness now. At work I am usually the only one that doesn't get the latest cold/flu. I used to have many sinus infections and now the occasional allergy or sinus flareup only lasts a day or two and usually goes away by itself. My children don't have colds anymore. My son's dentist always comments on how healthy his teeth are (and he's a teenager with braces)! My hairstylist always comments on how full and healthy my hair is. Once, when traveling I contracted a stomach "bug" and couldn't keep any solid or liquid food down. When I got home I quickly went for the raw milk and it was the only thing that I could tolerate. I drank raw milk exclusively for three days and had instant relief. The turnaround was amazing! I feel that our overall health has improved by drinking raw milk and we will never go back to the pasteurized stuff. *Lori, Florida*.

Raw Milk Removes Abdominal Cramps and Gas Problem

My husband had severe abdomenal cramps and gas before raw milk. He took tums every day. He drank Lactose free milk thinking he was lactose intolerant, didn't help. He started drinking raw milk/cheese/ cream in 2002 and now never has a gas pain or cramp. There are no tums in our medicine cabinet. *Diane Land, Florida*.

Raw Milk Consumption Leads to Superior Health in Family

I was given 3 doses of antibiotics one right after the other during childbirth because I tested positive for strep B. Afterwards, I struggled for a year with yeast problems for which the doctor prescribed me drugs over and over again. Right after I would stop taking the drugs, the problem would come right back. It became very obvious that the conventional route wasn't helping me so I completely stopped taking the medicine and read books to try to help myself. By changing my diet (to exclude white flour, sugar, mushrooms, etc), I was able to fix my problem almost immediately. This experience completely opened my eyes to the importance of food and good health.

I became further interested in nutrition because ALMOST OF THE KIDS IN OUR NEIGHBORHOOD ARE UNHEALTHY, HAVE SOME SORT OF HEALTH/BEHAVIOR PROBLEM, AND MANY OF THEM TAKE MEDICATION DAILY. ADD, Allergies, asthma, epilepsy, hypoglycemia, constant colds, etc. I kept asking myself why there are so many sick people/kids around us and couldn't help but feel there was a cause. I researched on the internet and found that the typical American diet is

desperately lacking in nutrients. Our first change was to drink raw milk. Our health was not in bad shape to begin with, but I watched our immunity improve over the course of year and watched everybody else catch colds and go on antibiotics while we might get the sniffles for a day. The improvement in our health was so obvious that we started improving our diet in other ways as well, eating a diet similar to what the Weston A. Price organization promotes. While we used to go on antibiotics once a year or so, maybe more, we don't even get sick anymore since we started with raw milk which was approximately three and a half years ago. The only time we have felt at all under the weather is when we've been on vacation and didn't have access to our super food, most importantly, raw milk. I am absolutely sure that I've been lucky enough to find the secret to good health and I hope the same for those folks who keep buying what commercials and mainstream Americans say are healthy and keep going to doctors who've got their prescription pads out. *Michelle, Tampa, Florida.*

Raw Milk Cures Allergies and Chronic Hives

My 6 year old daughter has severe food allergies, dermatographism and chronic hives that are heat induced. Dermatographism is when she has such a high histamine load in her skin that a mere wipe of a napkin or an itched area will release massive histamines causing hives. She was homeschooled due to this problem in Kindergarten. I had read before that farm fresh milk from pastured cows has been known to help allergies and asthma, so our family tried it. That was over a year ago and her reactivity and dermatographism has drastically been reduced. She has not had heat induced hives in 6 months (this is August in Florida). Our life has so dramatically changed. She is actually out in the heat playing and going to school like any normal child. After seeing the results in my own family I could never buy store bought milk again. Her doctors are amazed too. *Debbie, Tampa.*

Raw Milk Cures Allergies, and Banishes Need for Medications

When I started using raw milk in August of 2005, my younger son was taking Zyrtec and Singulair for his allergies. Although those medicines helped, he still had low level symptoms, such as persistent stuffiness. Within 30 days of his starting on raw milk, the symptoms had ceased, so we took him off the medications; he has been off them ever since. *Ladd Tomlin, Gainesville,, Florida.*

Raw, Pure Milk Completely Cures Ear Infections and Wheezing – Inferior and Profit-Motive Driven "Symptoms Management" Medications Made Redundant

I first heard of raw milk from a friend after mentioning my son's problems with ear infections. He had reached what they termed "the limit" — so many ear infections within a certain time period that, once reached, they start considering putting tubes in and conducting extensive hearing tests. Diagnosed as a borderline asthmatic, he was also on Albuterol periodically for wheezing. Having read all the information my friend sent, it seemed raw milk could only help. And indeed it has.

Within two weeks of cutting out all pasteurized dairy products and only using raw milk, the ear infections and the wheezing have cleared up and never returned. I can only wonder why so few people seem to know about the power of raw dairy products, and just how often unnecessary medication is prescribed. I only know from my own experience how

much medication we went through in a few short years. We really appreciate your dedication to producing such wonderful dairy. *Tamsin Carlson.*

Raw Milk Treats Arthritis – "Symptoms Management" Medication Unnecessary

Just a testimony of raw milk's healthy advantage: My pastor's mom was taking Motrin every night for arthritis. She has been drinking raw milk every day for several weeks, and now she sleeps Motrin-free! Isn't that fantastic? Also her left knee had bothered her for years, and now the pain is practically nonexistent. Just thought you would like this good news." P.S. Thanks, *Ronette.*

Raw Milk and Raw Milk Based Products Completely Heal Bladder Infections, Eczema and Early Onset Arthritis

Bladder infections, eczema, early onset of arthritis. First 2 problems since teens, arthritis for 6 years. For bladder infections, antibiotics worked, but problem always came back. For eczema, used topical steroid cream called Halog, and semi-worked but did not cure the underlying problem, for arthritis, hadn't tried anything.For all three the time and energy spent was a lot, for the antibiotics and Halog cream, oh hundreds of dollars. Raw milk, raw cream, raw butter and raw milk kefir[35] and yogurt cleared up all three problems completely. The results are permanent. Raw dairy is a super health food and should never be kept back from the public access. *Shawn Dady, Brentwood, TN, USA.*

Raw Milk Helps Family Health Problems

We began drinking raw milk in 1984, we had "adopted" our 10-year-old nephew and he had health, dental, and learning problems. We gave him all the raw milk he wanted to drink, and fresh food from the farm (grass-fed beef, lamb, poultry, and eggs) he was failing at school when we changed his diet, and he went on to graduate on the honor roll. Not bad for a child that had a third grade reading level in 5th grade! My husband used to suffer terrible bouts of IBS and indigestion. These have disappeared with his consumption of at least a quart of raw Jersey cow milk daily, plus raw milk butter. I have had an uneventful menopause, and we enjoy good health, good bones, and vitality. I believe we owe much of that health to raw dairy products. Sincerely, *Cindy Dutcher.*

Raw, Pure Milk Helps Develop Healthy Children

A few years ago my 2nd oldest child, Olivia, was struggling with illness after illness. She had strep nearly a dozen times in one year. She was pale, weak and the lymph nodes in her neck were up to 2 inches in diameter. We met with numerous Dr.s and even a surgeon. They were going to remove my 6 year old's nodes and biopsy them. We were terrified! When medicine didn't seem to supply answers we sought out natural alternatives. That is what started our quest for REAL milk (and food). Olivia is turning 8 next month. No strep, no flu, no Dr. visits. In fact my Pediatrician has called several times to make sure we haven't left his practice!! I have 4 children and am thrilled to report that they are all thriving and healthy. My 2 year old has never known commercial milk. She hasn't had the

[35] "Kefir" – yes strange name indeed – is **a type of yoghurt made from raw milk**, and is made by using a starter culture (kefir), placing in raw milk and leaving for 24 hours at room temperature. It is similar to "laban", the sour milk drink, that is found in the Middle East.

ear infections, RSV, flu, intestinal distress, etc that plagued her older siblings. My 6-year-old son, who was labeled "failure to thrive", is GROWING by leaps and bounds. The Dr had him on pediasure shakes for years and conducted swallow studies and therapy sessions to understand his insufficient growth. We stopped the chemical filled shakes and started REAL milk and he has grown 6 inches and put on 8 pounds. I credit raw dairy for the health of my children. Milk, butter, kefir...ALL instrumental in their welfare. The evidence of success is not only in their change of health but crystal clear when viewing our insurances flexible spending allowance. Our 1600.00 balance for 2006— - still there.

No More Allergies and Illness with Raw Goat's Milk

Hi All, We are not part of the family farm Co-op but HIGHLY recommend the use of raw milk and other products. We milk our 5 goats and love the health benefits we get from using the raw milk. It is the best form of calcium you can put in your body. This was one of the best choices we could of made I suffered all my life with allergies and asthma. Not any more and my children are extremely healthy we have no need to go to the doctor. Our diet is as close to nature as possible, we eat almost all organic and it is so worth it.... My Passion is to help others have the same health benefits we have been able to have. —God Bless, *Kelly.*

Raw Milk Helps Cure Ear Infections and Produce Healthier Teeth

Since my late teenage years I have suffered from bouts of irritable bowel. I visited doctors and no one could help me. They said to take drugs for the rest of my life. I started drinking raw milk 2 years ago once I read Dr. Mercola's email recommending raw milk. It has helped me tremendously. I wish I would have known years ago. The health of my kids has improved tremendously also. They suffered from frequent ear infections and Eustachian tube blockage resulting in repeated inserting of ear tubes. Their teeth were so decayed, they had many teeth pulled. Since drinking raw milk, the ear infections don't occur anymore and the only problems with their teeth are the ones that were worked on previously. No new problems! I've spent years trying to figure out how to help them and finally found it - raw milk!!!! —*Kcaurdy.*

Anaphylactic Reactions to Pasteurised Milk But Not to Raw Milk

My daughter has anaphylactic reactions to any cow dairy products, but can have all raw goat dairy products. This has been a huge step in improving her overall health. She is now off allergy shots! Without raw dairy, she would lose an important protein and vitamin source in her already restricted diet.

Illness, Allergies and Stomach Cramp Associated with Pasteurized Milk Is Not Associated with Raw, Pure Milk

I was raised on pasteurized milk and I have to say that I was not a healthy child. I suffered from every illness that came through town as well as severe stomachaches that came weekly and lasted 2-3 days and kept me from attending school. I also suffered chronic sinus infections, allergies and bronchitis that persisted into my 20's until someone suggested that I stop consuming dairy products. It took me an entire year to detoxify my body from the dairy and it was not pretty. My skin was gray and peaked and I had large red

welts that looked like acne on my face and neck as my body worked to cleanse itself. I discharged mucous nonstop for a whole year. I went for 10 years after that without consuming any dairy products. Three years ago, I gave birth to my only daughter. When she was 2, I noticed that her teeth were showing decay and I began to research possible causes, that is when I found the Westin Price Foundation and I learned about the benefits of raw milk. I wondered if this was something that I would be able to drink. I found a local farm and gave it a try. We have been drinking this real milk for 6 months and not only did we not get sick but my body had absolutely no troubles digesting or processing this milk. No stomachaches, no sinus infections, no allergies, no bronchitis, no mucous. I realized then that my body didn't have a problem with cow's milk; it had a problem with pasteurized cow's milk.

No Bloating With Raw Milk

I have known for years that I have been lactose intolerant with conventional dairy products. This was not severe but when I would use a conventional dairy product I would bloat and have an overall uncomfortable feeling. I have been blessed to be able to utilize the raw dairy for over three years now and am happy to say that I go through at least one gallon of milk, one quart of cream and one brick of cheese per week with no unpleasant reactions to the raw dairy. There is nothing better than using high quality dairy with the full compliment of the seven enzymes naturally occurring within the product to help with the digestion and absorption of the vitamins and minerals[36]. This does not happen with conventional dairy! *Glen*.

Raw Milk Provides Superior Health and Lessens Allergies

My oldest daughter was the only one of my four daughters who could actually handle store bought milk, although she had repeated ear infections as a baby. The other three always vomited store bought milk since infancy, yogurt was no exception. I was constantly worried that they were not getting enough calcium, and I was eventually told to give them raw milk. I was very skeptical, how could this be, milk is milk, right? However, my second oldest daughter milked a cow on a field trip, drank it and LOVED it. Not only did she NOT get sick, she raved and raved over how delicious it was! She was 7 years old at the time and it has taken me 5 years to find Family Farms Coop! From the first time I brought raw milk home, in the spring/summer of 2006— my family drank it up. Our monthly 6-gallon purchase is usually gone in 8 days! This past fall no one in our family got a cold, pneumonia, or flu which has been an annual event in our house. My allergies, and that of my second daughter, were also lessoned this past fall. We are all healthier, happier, stronger individuals. Even my husband, who has not tolerated milk his whole life loves this milk and can easily digest it. My only disappointment is that I can no longer get fresh raw milk every two weeks because of this "situation". We look forward to our monthly delivery with great anticipation. I urge government officials to not take our right to choose away. We have freedoms in this country, and the right to choose wholesome foods for

[36] This is a great point made by this raw milk consumer. Milk, walillaahil-hamd, not only contains nutritive elements, but also the enzymes needed to digest those elements. As pasteurisation destroys almost entirely, those enzymes, problems in milk digestion will occur, leading to such problems as bloating, gas, allergies and so on. Milk is a living thing, it has life in the form of lactic acid bacteria and activity in the form of enzymes. Pasteurisation essentially wipes it all out.

personal consumption is one of the many things that make our country great. Please don't let the dairy lobby destroy this wonderful option. *Karen.*

Raw Milk Treats Cold-Induced Asthma in Child

I have a son who at three was diagnosed with "cold induced asthma". Every few weeks he would get a cold and congestion with heavy mucus. We were told by our doctor (a D.O.) to take him off regular store bought milk (which he loved). Within two days he started sleeping through the night (finally) and the coughing was gone. Several years later when he was about seven we were still dealing with occasional asthma attacks and some allergies. He had taken swimming lessons and a month and a half later he still had a cough (allergy to chlorine). We were going on vacation (a Canadian fly-in trip) staying in a cabin with no electricity, so we couldn't use his nebulizer. We were concerned that if an allergy or cold set in (and he already was coughing every night) that we could be in trouble. While we were picking up our yearly supply of organic meat from a farmer in MN we were offered "raw milk" from their home supply. We loved the taste and the idea that it was "alive". They gave us a gallon to take home. Within two days my son's cough was gone and never returned. Within a short time we located Family Farms Coop as a source of raw milk. We have been purchasing from them for several years. We have seen less colds and my son is now able to drink all the milk he wants with much less colds or asthma attacks than before. In fact most of time his asthma medicine expires rather than gets used. Without this choice of being able to purchase what we believe to be a healthy alternative (with no additives or hormones) we would be at a loss. —*Michelle & John Baumgartner, Palatine, IL.*

No More Eczema Due to Raw Milk

We have enjoyed and appreciated the quality of food from the farm, on many levels. Based on our research and choice for healthy living, the fresh, local raw dairy has been wonderful. The taste if far superior and the health benefits are obvious. For example, our 5-year-old son has severe eczema. It was recommended that he try raw milk, and within a week his condition cleared up, while all other treatments failed. We also are firm believers in organic foods. We totally appreciate the power to choose milk from animals that have been raised on natural greens and have not been injected with antibiotics and growth hormones. In addition we are supporters of local farms both animal and produce... Feel free to contact me at anytime with questions or further comments. —Thank you, *Kelly McDermott, Whitmore Lake, MI.*

Allergic To Pasteurized Milk But Not Raw

As a park ranger, I thoroughly appreciate the many laws and regulations set forth by our government to protect and safeguard our society at large. Like most folks I've encountered, both professionally and personally, I do not appreciate governmental legislation that is intrusive and unmerited into my life's liberties. The issue of regulated raw healthy milk, I believe, is one such liberty. Please allow me to explain...

I was born an asthmatic child with many allergies. One of the allergies I endured was a reaction to store bought pasteurized milk. As I grew older, I became more and more unable to tolerate it. The typical problems many suffered I too endured, included stomach pains

and gases, diarrhea, as well as would cause breathing/wheezing difficulties. Not surprisingly, I discontinued all milk from my diet. Two years ago, I reluctantly tried this new healthy natural milk. In other words, non-pasteurized, raw milk... I was more than skeptical. Though I finally tried it. To my amazement, the milk was rich and delicious with no side affects of the previously mentioned pasteurized milk. Wow! I thought. I must be cured. So I then, again, tried the commercial pasteurized milk. Big Mistake! I was not cured. It was quite simple and clear...Pasteurized Milk; very disturbing allergic reactions - Natural Raw Milk; no allergic reactions. I am not a chemist or a biologist. I cannot explain how this occurs. I can only testify it does occur.

This may seem like a very small insignificant detail in life. But, you see... my six-year-old son, Silas, has the same allergic reactions to pasteurized milk and no such reactions to the healthy natural raw milk. And my Silas, is no small insignificant detail in life. The Hebron Family/Family Farms Co-op is our family's only known resource for this valuable commodity. It would be a shame and a unnecessary hardship to hinder the Hebron Family's much needed and appreciated raw unpasteurized milk business. — Sincerely, *The Plom Family, Milan, MI.*

Revitalized with Superior Health Due to Cures and Healing with Raw Milk

I have been drinking your fresh raw milk and eating your fresh meats since the end of last February 2006. In this time many amazing things have happened. I have lost weight, gained energy and seen a remarkable revitalization of my body. I am 53 years of age and pass for far younger. For the first time in my life, my fine thick 'stringy' hair has body. It finally looks like hair. That would have been so nice to have as a young adult. My fingernails grow faster than ever, which means that I am healthy and well nourished. I also have a beautiful complexion thanks to the milk.

Of course there are the miraculous cures in my medical history as well. As a baby, I developed a lazy left eye at about six weeks of age. The problem has been there through out my life. One of the first things that I noticed after drinking the milking was that my left eye improved and functioned better. It was becoming a more usable eye. What a difference my life might have been if, I could have drank this milk as a baby or if my mother had drank it while pregnant. Maybe I wouldn't have had the problem, as I would have had sufficient vitamin A to form and develop. My kidneys are functioning better and my body is no longer retaining all the water, that it did – a common female problem as we age. My blood pressure is back to normal.

For many years, I have had severe asthma with up $400/mo of medications. The problem has gone partially thanks to the raw milk alleviating my allergies and partially to the elimination from my diet of a chemical food, Diet Pepsi. A phosphoric acid blend sweetened with FDA approved sweeteners, Aspartame and Acesulfame-K. I am known to fall at times due to orthopedic challenges from old injuries sustained in an auto accident some 30 years ago. The amazing thing now, is that the bruises are gone in about a week compared to months before I started drinking raw milk. My body is finally getting the vitamins A, B, and C along with fresh enzymes that it desperately needs to repair itself.

How might my recovery from the near fatal car crash have been hastened if this wonderful raw milk had been easily accessible to consume? ...we Americans need to respect these

animals and allow them lush green pastures to nurture their bodies. They in turn will help us win the war against the chemical food supply.— Sincerely, *Patricia Buchanan, Registered Professional Chemical Engineer, State of Texas, License number #78995, West Chicago IL*.

Raw Milk Causes Allergies to Disappear

Raw milk contains enzymes which make milk digestible. When you pasteurize milk you destroy the enzymes. This is why so many people have trouble digesting milk. When the law requiring the pasteurization of milk was passed, the technology and hygienic standards were not what they are today. We have been consuming raw milk for the past 6 months and many of our allergies have disappeared and our family's health has improved. Farmers have been drinking raw milk for eons with no ill effect. A third of the states currently allow the sale of raw milk without any problems... Yours for a healthy tomorrow, *Leonard and Rona Krause.*

Raw Milk Puts and End to Bloating, Cramping, and Constipation

To Whom It May concern, I would like to give my testimony on how raw milk has helped me. Prior to drinking raw milk, I would experience abdominal crampings, bloating and constipation when I would drink pasteurized milk. Since I have been drinking raw milk, I don't experience any discomfort what so ever and it has regulated my intestinal system as well. I also have fibrocystic breast tissues and since I have been drinking raw milk, the fibrous tissues have also disappeared. The raw milk taste better than the pasteurized milk sold in the store. We are very thankful for Richard and Annette for making raw milk available to us to buy. This is a free country and therefore it is wrong to prohibit selling raw milk to those who want to buy them. It is the healthiest & delicious form of milk we have ever tasted. We support small local farms who care about people's well being and we appreciate their dedication. —Sincerely, *Vangie Rivera.*

Raw, Pure Milk Heals Stiff Lower Back Problem

I have been drinking raw milk for over three years now. I noticed over time that the general stiffness, especially in my lower back, began to disappear. I was amazed and so grateful. Organic, pasture raised, raw are the words that describe the foods I eat. It's the small local farms that make these foods available to me. Thank God for these farmers for we will not survive without them. — *Suzanne Smucker.*

Raw Milk's Role In Making Children Healthiest They Have Ever Been

My children, ages 10, 7 and 4, are the healthiest they've ever been since our family switched to raw milk three years ago. The youngest one, who has drunk more raw milk relative to her lifespan, has had far fewer ear infections than her elder two siblings did during their early years. All three children are robust and rarely go to the doctor beyond their annual checkups. I've noticed that I experience fewer yeast infections than I did while drinking pasteurized milk. Beyond the health benefits, which are numerous, our family enjoys other benefits as well. We have a personal relationship with "our" farmer and know that we are helping to directly support a local family farm. We know that our food has been produced by people who care deeply about the land and the animals with which they

work. We are proud to support a local food system rather than a distant agribusiness corporation which sees us only as "consumers," not fellow human beings. As a citizen of the United States of America, I take my right to choose what I put in my body seriously. I hope that the state and national departments of agriculture also respect that freedom. — *Shana Milkiee, Ann Arbor, MI 48103.*

Raw Milk – No More Allergies

The products we purchase ... are pure, great tasting and most importantly do not have added hormones, preservatives or additives which means better health for us. We no longer have milk allergies because all the enzymes in the milk are still there which greatly aids in its digestion and assimilation in the body. We believe in supporting local farmers because of the positive effect it has on our local economy, and for the fair competition it provides to larger retailers to maintain high quality products... Sincerely, *Duane and Mary Stirnemann.*

Raw Milk and the Commodotization of the Food Supply

I have been ordering raw dairy products from Family Farms' Cooperative for some time now and I am very grateful for the quality product they provide. I am of the opinion that over the last century and beyond, big business and government have had an extremely negative effect on the quality of food that arrives at our table. However well intentioned the efforts might have been the outcome is that we are eating food tainted with chemicals, and processed in such a way that the nutritional elements the body depends upon to keep itself healthy, have been, at the very least, impaired.

As an American citizen I demand the right to place into my body the kinds and types of foods I see fit, without the interference of state or federal government. I fear we have all become too complacent with the commoditization of our food supply as brought about by big business' interest in the bottom line. Pasteurization is a tool that turns a living gallon of milk with finite shelf life into a dead, bar-coded, pale, chalky, shadow of its former self.

This manipulation is what transforms food into a commodity for sake of the shelf life it provides. I never cease to be amazed at the expiration dates on a carton of pasteurized milk, which is clearly a biologically dead substance as it can sit on the shelf for such a long period of time before souring. If small local farms like Family Farms' Cooperative, are not allowed to deliver what has been a human staple since time began what will become of us? I believe we will be much more than diminished we will lose one of our last links to natural nutrition and that simply cannot be allowed to happen.

This is important! I have been indoctrinated into the general cultural beliefs about pasteurization that we all share, additional research and an open mind have changed my opinion in these matters. I think it fair to say that the general populace has grown up accepting these notions without ever really checking into the matters for themselves. I know the general population fears raw milk and they are free to not drink it, please allow me the freedom to continue drinking it as I see fit.

If nothing else, if State laws can allow the trafficking of tobacco and alcohol, substances that are clearly counter-productive to health, than surely raw milk can be given a pass. Sincerely, *Scott LaFond, Royal Oak, MI.*

Raw Milk Leads to a Healthier Baby

One of our daughters experienced what appeared to be a chronic vaginal yeast infection and continued irritability from the time she was weaned at 9 months of age. She was our most peaceful baby, but from the time of weaning from breast feeding her personality seemed to change almost immediately and soon after she began to have frequent yeast infections.

We had put her on a casein-based formula and it never occurred to us nor our physician that she was lactose intolerant. Her constant irritability was a challenge to us all. At two years old we tried options to milk, like soy and rice milk, (all of which she did not like). After that we gave her store bought milk and just assumed our very happy, peaceful little girl was just a difficult child who needed lots of special attention, which we lovingly gave her. By the age of five she began to tell us throughout the day, especially after meals that she had a stomach ache. It finally occurred to us she had an allergy to some particular food and I began testing her out with milk.

We took her off of all dairy products and within 24 hrs she was no longer complaining about stomachaches. She began to smile more and "lightened up" -to our delight! That same week, a friend told us about raw milk, the importance of consuming the enzymes whole and unbroken, and it's wonderful affects on the body, especially the gut. She told us about Family Farms Coop and the next week we signed up to obtain our milk through the Cow Share Program.

Upon introducing raw milk to her diet we noticed only good things happening with her. She consumed 3-4 cups daily with no stomachaches. Within two weeks we noticed constant rose in her cheeks and 18 months later she has not had a yeast infection (with the exception of one incident after having ice cream at Dairy Queen). She is healthy and we are amazed at what a happy and content child she has become. Honestly, we noticed what appeared to be a major personality change after putting her on the raw milk. Obviously, we know now that it wasn't a personality change, but the fact she was no longer in constant discomfort. You can see that for this reason alone we want to continue to have access to raw milk. However, our entire family consumes raw milk now as part of our diet and we are very pleased with its nutritional effects on us all.

In the last year and a half we have also discovered in Richard Hebron and Family Farms Cooperative farmers with tremendous integrity to whom we are deeply grateful. Not only their milk, but their meat and eggs are of the highest quality, the likes of which we have not found in any grocery store.

It would be most unfortunate, if through an unjust law, we would lose our right to obtain raw dairy products of such excellent quality. Furthermore, we consider this an infringement on our rights to choose to do business with such upright and professional farmers. Would that all persons in commerce operated with such integrity. —Respectfully Yours, *Francisco D.S Gavrilides, Susan A. I. Gavrilides, Ypsilanti MI.*

Raw Milk Heals Ulcerative Colitis

About 3 years ago, my 11 year old daughter started having health issues. It took a whole year of degrading health to find a diagnosis of ulcerative colitis. After following the advice of traditional doctors and some very potent prescription drugs for another year and seeing no improvement and even further degrading health even after dosage increases, and culminating the year with a blood transfusion for her, my husband and I decided to pursue another path. She only weighed 75 lbs now... I started searching for a natural way to heal ulcerate colitis.. One food kept coming up repeatedly, raw milk. I was intrigued. I researched the milk industry, starting with the removal of hormones and antibiotics, as the Oberweise Dairy is famous for, I then learned of the damage the whole pasteurizing and homogenizing process does for the once healthy milk product.

Could processed milk be causing my daughter's illness causing her to be lactose intolerant? Causing her intestine to not function or absorb food properly? Processing milk turns it into an allergen. We have been drinking raw milk for nearly 2 years now. To this day, her health issues immediately reverse to a flare-up (bloody diarrhea) when she has store bought milk. This raw milk has done wonders in providing a start in the healing process of her intestines.

I read that doctors in the olden days ... fed patients with this trouble a diet of a gallon of milk a day and total healing occurred. She is 14 now, she has been prescription drug free for over a year. We are still in the process of restoring her health. She only weighs 80 lbs. and needs to gain about 20 more... My family of 7 has been healthier since we have started drinking the raw milk. Less colds and flu and faster recoveries when a germ does get through. *Donna French, Elgin IL.*

Family's Health Improves After Disregarding FDA and Media Advice on Raw Milk

I became interested in the ill effects of pasteurization when my infants had difficulty digesting milk based formula's and again when my older son developed skin rashes that the Dr. told me was a result of a milk allergy. Pasteurization destroys valuable enzymes, diminishes vitamin content, denatures fragile milk proteins, virtually destroys B6 and B12 and kills beneficial bacteria.

Pasteurization is associated with allergies, tooth decay, colic in infants, growth problems, ear infections in children, osteoporosis, arthritis etc.... My first two children that have been raised on hormone laden, pasteurized milk had problems with recurrent ear infections, milk allergies, skin rashes, and colic. Since we have disregarded much of the FDA and media instructions as to what is healthy for our families, our family's health has improved tremendously. We haven't had to go to the Dr. for illness in 3-4 years. In fact I can't even remember taking my now 4 year old, 3 year old, and 18 month old in for any MD visits other than yearly check ups which bring reports of good health. My 18 month old who has been raised completely on raw milk has been the most healthy and contented baby I have had. It is a wonderful feeling to know, that as a mother, I am providing the best food for my family in raw milk, organic meats, and organic fruits and vegetables.

We visited a dairy in Indiana for a family field trip a few months ago. This dairy farm provided milk for Deans and boasted some 40,000+ cows for milking. I saw these cows live in no more than a 20 foot stall with little exercise, no direct sunshine, and fed some brown mixture of food that contained soy and various other "health foods." The dairy farm claimed that their cows were not given growth hormones but that their milk was mixed with milk from farms who do inject their cows with hormones.

What a relief I felt knowing that my family drinks milk from cows that walk in the sunshine, graze in green pastures, and eat the greens of the earth, the way God intended our food to be...natural and pure with the greatest health benefits for mankind. —Sincerely, *Mary Seguin Des Plaines, Illinois.*

Raw Milk is Highest Quality Milk

No credible expert would even consider making the argument that pasteurized milk is nutritionally superior to clean raw milk. A knowledgeable mother would never heat her breast milk before feeding her children, and when young calves were fed pasteurized cow's milk, they did not thrive and often died before maturity. Several years ago, we deliberately sought out a local source of clean, pasture-fed raw cows milk, the healthiest type of cow's milk that we are aware of. At Family Farms Cooperative, our search ended, and we have consistently consumed clean raw milk of the highest quality ever since. —*The Kavanaugh Family, Chicago, Illinois.*

Pakistani Can't Do Without Raw Milk

I am from Pakistan and cannot drink milk from the store. Raw milk is the only milk I can drink, without raw milk my life would be empty. I also work as a police officer in a busy town. When I drink raw milk I feel more alert, and [???]. I also don't get sick anymore. Raw milk has helped me in my every day life. I feel I need raw milk! *Adeel M. Afridi, Naperville, IL* [transcribed from photocopy of original handwritten form].

Raw Milk Leads to Better Skin

I have noticed that when eating raw organic dairy my skin has cleared up, and my overall skin health has been good. Also when eating raw dairy I never had any problems with my digestive system. My experience from eating raw dairy has been nothing but good to my health. —*Carl Bentall, McHenry, IL* [transcribed from photocopy of original handwritten form]

Raw Milk Cures Case of Hypothyroidism

Through raw dairy I've experienced dramatic increase in my health. In the summer of 2005 I was diagnosed with severe hypothyroidism, I used raw dairy as a way to regain my health. Almost a year later I am almost off of all my prescription medications and haven't felt this good in years. As a matter of fact I completed the 2006 Ford Ironman Triathlon in October using raw food for training food with very good results. —*Lou Johnson Prospect Hts, IL* [transcribed from photocopy of original handwritten form]

Raw, Pure Milk Treatment in Child with Cerebral Palsy

I have a daughter who was diagnosed with cerebral palsy about a year ago and all I can remember is many doctors & specialist telling me that Alekza's condition was never going to change (improve). Thank God I've always been a fighter and I never give up when I am struck w/a challenge. To make a long story short, Alekza has improved dramatically since she's been consuming Raw Dairy products and organic foods. No drug or therapy can have such a positive change in such little time. —*Monica LedezmaVilg, Lakewood, IL* [transcribed from photocopy of original handwritten form]

Raw Dairy "Returns Life" To Severely Sick Individual

Raw dairy is important in my life, and my family's. I was bed ridden for a little over a year. When I started raw dairy I was actually able to get out of bed. I am now 8 months into getting healthier. I feel great & I am off all my Prescription medicine. My diabetes, high blood pressure, liver damage, kidney damage meningitis has all ceased & I don't need medication for anything. Raw dairy has given me my life back, without it I'm sure I'd be gone by now. — *Renee Bentall McHenry, IL* [transcribed from photocopy of original handwritten form]

No More Muscle and Joint Pain with Raw Dairy

Since I've been consuming raw dairy, my health has improved dramatically. I have osteoporosis and am allergic to the medication the doctor prescribed. I feel so much better physically since I've been enjoying raw dairy. I no longer have muscle and joint pain. I have read where raw dairy has reversed osteoporosis; that's what I'm aiming for. —*Susan Musyynsky, Winfield, IL* [transcribed from photocopy of original handwritten form]

Raw Milk Improves Asthma

I have adult onset asthma after being exposed to many patients smoking in the mental institutions and prisons where I worked as an RN for many years. This year I had the wonderful fortune of being able to buy raw milk and grass-fed meat. You cannot imagine the difference in my breathing. I can take a very deep breath without struggling. At my checkup this year my Dr. was very impressed with my improvement. "What have you been doing to have such a good oxygen saturation?" The only thing different is raw milk, true grass-fed milk and organic food. —*Susan E. Roelofs, RN, Ypsilanti, Mich. 48197* [transcribed from photocopy of original handwritten form]

Ten Years on Raw Milk, No Negative Experiences

To whom it may concern: Our family has been consuming raw milk on a daily basis since 1996. We have owned shares of a cow or shares in a herd with six different farmers over the course of those ten years, for several years driving 1½ hours each way in order to obtain this wonderful source of nutrition. We've raised three healthy young men (currently ages 18, 15, and 9) with not a single negative experience of any kind with the milk. We have been members of Family Farms co-operative since they began in Ann Arbor. I

believe that the right of consumers to choose what goes into their bodies is a very basic right, and that farmers must be allowed to reach their markets in such a way as to keep family farms alive. I myself and many of my friends will go to many lengths to make this relationship with farmers work. Please work with us instead of against a perfectly legitimate form of commerce. And a superior form of nutrition! — [signed] *Carolyn A Hejkal, Carolyn and Steve Hejkal, Ann Arbor, MI* [transcribed from photocopy of original handwritten form]

Raw Milk Heals Asthma, Hay Fever, Gout Attacks

Both my children were diagnosed with asthma. We had the requisite inhalers, regular antibiotics, the 2 AM steam showers, etc., during my trusting-FDA phase, and my husband had bad hay fever every spring and suffered from gout attacks. Since we started a nourishing traditional diet, including raw milk, these symptoms have vanished in my kids--you should see the muscles on those boys!--and are greatly reduced in my husband. He has less stiffness in his joints, no reflux issues and no more gout attacks. Over three years, I have lost 35 pounds. The "H" in one son's AD/HD disappeared in months. I like to say that a calm has descended on our house. --*Mary Blair McMorran, Broomfield, Colorado*.

Raw Milk Heals Asthma and Allergies

I have had asthma and allergies ever since I can remember. Took oral cortisone as a child many times. Have been on steroid and bronchial inhalers since they were invented. As an adult, symptoms became systemic lupus, which I completely overcame by cutting out sugar and pasteurized dairy products. But guess what? After I started on raw goat milk, I have been completely off asthma meds and peak flow is still the same! I never thought that would be possible. And we have been having one of the worst allergy seasons ever. I can't thank you enough! The freedom is wonderful, much less how much money I will save by not ever going to the pharmacy! *Audrey Hacker. Lincoln, Arkansas.*

Raw Milk Heals Osteoporosis and Arthritis

I recently met an expert on pasteurization who casually mentioned that the process destroys 34 enzymes in milk. As one of the great many people lost to the dairy industry as a customer because of alternative practitioner advice that I had "lactose intolerance," I wondered whether the destruction of the lactase enzyme might be significant in my store-bought milk.

I started drinking quantities of fresh raw milk and had no signs of indigestion nor the mucus I used to get. My wife had both kinds of milk in the fridge for some months and I found if I had just a little of the pasteurized stuff, within an hour the mucus returned. Then I realized that an arthritic joint at the base of one of my big toes--an old injury site which had gotten so bad my orthopaedic surgeon wanted to fuse the joint to alleviate the pain--had majorly improved. The range of movement deficit which had caused me to limp during the last ten years was almost rectified and the pain gone. This previously swollen joint also reduced in size back to normal.

I am a test group of one, however there were no other variables in my life except the addition to my diet of one-half to one pint each day of fresh Jersey milk for about three

months. My doctors can't believe you can reverse arthritis[37], but I just did, through sheer inadvertence, not any placebo effect or wishful thinking. All of the above makes me wonder whether it is pasteurization and the destruction of enzymes that has led to the current plague of arthritis and osteoporosis, because the calcium in processed milk is less assimilable. *Arthur Bruce. Somerset, UK.*

[37] Most doctors believe a lot of conditions can't be cured … and thus, sufferers must remain on "symptoms-management" medications.

The Benefits of Fresh, Pure Milk Are Known From Its Natural (non-Denatured) Composition

This is from the most obvious of facts, that which does not even need reflecting upon, considering that Allaah referred to fresh, pure milk as "***labanan khaalisan*** **لبنا خالصا**". As there was no such thing as pasteurisation or homogenisation or refrigeration or the arising of circumstances forcing the need to "process" milk, then references to milk in the revelation and in the words of our past scholars refer to real, fresh natural, living, raw milk, as it has always been in the creation.

This milk has clear benefits over treated, processed milk. An entire book could be written on this subject alone when looking at the biochemistry and physiology of fresh, raw, unprocessed milk and its superiority over treated, processed milk. This fact was acknowledged by pasteurisation scientists at the turn of the century, and there is much available in terms of literature even from that time regarding the superiority of real milk over the processed milk. They frequently used the terms "pure milk" for fresh, pure raw milk, and "slop or swill milk" for milk coming from the "brewery dairies" that was responsible for the spread of disease. They also refer to pasteurised milk as "cooked milk", and this is not a term that I have invented.

Fresh, Raw Milk Gives Birth To Good Strong Blood

Ibn al-Qayyim says,

> "**And it [milk] is praiseworthy, good (mahmood), and it creates (gives birth to) good blood** …". (Zaad al-Ma'aad 3/353).

Ibn al-Qayyim mentions milk (fresh, raw, non-pasteurised, non-homogenised) as being from amongst the foods and medicines mentioned by the Prophet (sallallaahu alayhi wasallam). He says,

> "**Milk is at it's best when freshly milked** … the best kind is that which is intensely white, with a good odour, delicious to taste, with a slight sweetness, a moderate fattiness and light consistency, neither thin or thick, and that which is milked from **young healthy animals** of moderate flesh, **fed on good pasturage and water**." (Zaad al-Ma'aad 3/353).

Ibn al-Qayyim also said,

> "**Milk in general is the most beneficial drink for the human body due to the nutritive and sanguineous[38] elements contained in it, and its being habitual to the state of childhood, and its suitability for the original nature (fitrah)**. (Zaad al-Ma'aad3/354).

Ibn al-Qayyim and many before him before him, such as Hippocrates, knew that pure, fresh, real milk replenishes and rejuvenates the blood. Cow's milk, is the only food known to be extremely highly comparable to human blood in both its compositional and physiological aspects. It is virtually the same.

Bernarr MacFadden in his 1923 book (of which I have a printed copy), "**The Miracle of Milk**", says,

> "To answer the question, "How does milk cure?" **we need to know only that it furnishes elements necessary to make new blood.** Milk is one of the most easily digested and

[38] i.e. pertaining to blood.

> assimilated foods, containing ample amounts of substances required for the growth of tissues and organs and the repair of worn-out cells."

Dr J.R. Crewe in his 1929 book, "Real Milk Cures Many Diseases" writes,

> **"Milk resembles blood closely and is a useful agent for improving and making new and better blood. Blood is the chief agent of metabolism."**

Dr Charles Porter, in numerous parts of his book, "**The Milk Diet as a Remedy for Chronic Disease**" explains that the underlying curative feature of milk is its creation of plenty of new blood and this blood "works the cure". He also says,

> "**New and healthy blood is necessary to perform cures; old blood, stagnant blood, impure blood (from improper foods), no matter how much of it there may be, is ineffective**."

He also says,

> "**But more than all other things combined is the wonderful influence of the new blood made so freely on the milk**."

This is why Dr. Porter said,

> "**What is required is good, clean milk as it comes from the cow, without the removal or addition of any substance whatsoever. Boiled, sterilized or pasteurized milk, or milk artificially preserved in any way, can not be used for this treatment. The live cells in the milk must remain alive or there can be no 'milk cure'**."

Milk, when it is fresh, raw and natural is ***living milk***. It has life and is "life-giving" so to speak. Thus, we can now proceed to illustrate in some detail the observation by Ibn al-Qayyim, Dr. Porter , Dr. Crewe and others that milk helps created new and good blood.

The Nutritional, Physiological and Immunological Components Very Strongly Represented in Fresh, Raw Milk

The following is a summary of the elements of milk composition (a fair portion of which is either destroyed, denatured or depleted with heat treatment above 60-70°C):

Immunoglobins

- Immunoglobins (antibodies) IgA, IgG, IgM, IgE, IgD. These come directly from the cow's blood and they offer what is called a "passive immunity", which is immunity received from an outside source.
- Immunoglobins are responsible for activating the "complement" system in the body. The complement system is a biochemical cascade that helps to clear "pathogen"s from the body.
- Immunoglobins activate macrophages, these are phagocytic immune cells.

Thus there is an inherent immunity in the milk that becomes passive immunity in the human body. This combats disease by strengthening the immune system. This includes Lactoferrin, Lysozyme and the Lactoperoxidase system.

Enzymes and Enzyme Inhibitors

- Enzymes including galactase, peroxidates, catalase, amylase, lipase, lactase and phosphatase and this is only a partial list. Note that the almost all enzymes are denatured irreversibly at a temperature of over 60°C. With that, most of the benefit of milk has gone, because it is these enzymes in the milk that help to digest it. The counter response that the body's own enzymes can digest the nutrients in the milk, though this true – is one that is made based upon ignorance of the body's "enzyme potential" – this is an altogether subject that can't be opened up here.

- Trypsin inhibitor – this allows immunoglobins to resist proteolytic digestion in the stomach. Immunoglobins can therefore pass into the intestine where they activate the immune system. The intestine actually makes up at least 70% of the entire body's immune system (in combination with bacteria). Thus, the antibody portion of the milk is not denatured by digestive enzymes in the stomach due to the presence of protease inhibitors.

Growth Factors

- Growth factors, IgF-1 and IgF-2. These are natural growth factors and they activate DNA synthesis, thus rebuilding parts of the body in need of that. IgF-1 stimulates bone formation, cartilage cells, muscle cells, skeletal muscle satellite cells, fibroblasts, gonadal cells, tissue repair and nerve regeneration. Bovine milk is a great source of these growth factors.

- IgF-1 mediates many, but not all of the growth-promoting effects of Growth Hormone (GH).

Leucocytes

- Leucocytes (white blood cells), eliminate antigens from blood (pasteurisation turns them into pus, which then has to be removed by a process called "clarification"). Europe allows 400 million cells of pus per litre, whereas America allows up to 700 million cells of pus per litre in milk for consumption.

Antibacterial Factors: Lactoferrin

- Lactoferrin is an anti-microbial substance and as it is an iron-binding substance it deprives microbes of the free iron they need to grow. Lactoferrin also has a direct bacteriocidal effect outside of its iron-deprivation effect.

Note that lactoferrin is degraded during pasteurisation at the normal pH of milk which is around neutral (pH 7). To prevent denaturation of lactoferrin, a more acidic pH has to be maintained. This obviously can't be done in milk that will ultimately be consumed.

Here are some research papers on the antibacterial effects of lactoferrin:

- Bellamy, W., Takase, M., Yamauchi, K., Wakabayashi, H., Kawase, K., Tomita, M., 1992. **Identification of the bactericidal domain of lactoferrin**. *Biochimica et Biophysica Acta*

1121, 130-136. "We report the existence of a previously unknown antimicrobial domain near the N-terminus of lactoferrin in a region distinct from its iron-binding sites. A single active peptide representing this domain was isolated following gastric pepsin cleavage of human lactoferrin, and bovine lactoferrin, and sequenced by automated Edman degradation. The antimicrobial sequence was found to consist mainly of a loop of 18 amino acid residues formed by a disulfide bond between cysteine residues 20 and 37 of human lactoferrin, or 19 and 36 of bovine lactoferrin. Synthetic analogs of this region similarly exhibited potent antibacterial properties. The active peptide of bovine lactoferrin was more potent than that of human lactoferrin having effectiveness against various Gram-negative and Gram-positive bacteria at concentrations between 0.3 microM and 3.0 microM, depending on the target strain. The effect of the isolated domain was lethal causing a rapid loss of colony-forming capability. Our studies suggest this domain is the structural region responsible for the bacterial properties of lactoferrin".

There are lots of other studies on this too, I will mention only the papers for now for reference only. Note that most of this activity of lactoferrin is lost as a result of heat treatment at the normal pH of milk.

- Britigan, B.E., Serody, J.S., Cohen, M.S., 1994. **The role of lactoferrin as an anti-inflammatory molecule**. *Adv Exp Med Biol. 357:143-156.*

- Cornish, J., et al, 2004. **Lactoferrin is a potent regulator of bone cell activity and increases bone formation in vivo**. *Endocrinology 145(9):4366-74*.

- Ikeda, M., et al, 1998. **Lactoferrin markedly inhibits hepatitis C virus infection in cultured human hepatocytes**. *Biochem. Biophys. Res. Commun. 215:744-749*.

- Jones, E.M., Smart, A., Bloomberg, G., Burgess, L.,Millar, M. R.,1994. **Lactoferricin, a new antimicrobial peptide**. *J. Appl. Bacteriol. 77:208-214*.

- Swart PJ, Kuipers EM, Smit C et al, 1998. **Lactoferrin. Antiviral activity of lactoferrin**. *Adv Exp Med Biol 4434:205-13*.

- Zimecki, M., Wlaszczyk, A., Cheneau, P., et al, 1998. **Immunoregulatory effects of a nutritional preparation containing bovine lactoferrin taken orally by healthy individuals**. *Arch Immunol Ther Exp (Warcz). 46:231-240*.

- Zimecki, M., Mazurier, J., Machnicki, M., Wieczorek, Z., Montreuil, J., Spik, G., 1991. **Immunostimulatory activity of lactoferrin and maturation of CD4-, CD8-murine thymocytes**. *Immunology Letters 30:119-123*.

Antibacterial Factors: Lactoperoxidase

- Lactoperoxidase (the LP-s system) is a glycoprotein also demonstrating antibacterial activity. Cow milk contains 20 times more of this than human milk. Studies demonstrate that "pathogenic" bacteria are held at bay (and destroyed) by milks LP-s system. For your information, WHO has conducted a detailed study on the use of the LP-s system in order to preserve fresh milk without refrigeration in developing countries due to its bacteriocidal and bacteriostatic properties. I have the full research document and report of the technical meeting in 2005. There are also plenty of research papers published in this regard too.

Here is a quote from the Codex Alimentarius Commission's "*Guidelines for the Preservation of Raw Milk by Use of the Lactoperoxidase System (CAC/GL 13-1991)*":

> 2.1 **The lactoperoxidase/thiocyanate/hydrogen peroxide system is an indigenous antibacterial system in milk and human saliva. The enzyme lactoperoxidase is present in bovine and buffalo milk in relatively high concentrations**. It can oxidise thiocyanate ions in the presence of hydrogen peroxide. By this reaction, thiocyanate is converted into hypothiocyanous acid (HOSCN). At the pH of milk HOSCN is dissociated and exists mainly in the form of hypothiocyanate ions (OSCN-). This agent reacts specifically with free sulphydryl groups, thereby inactivating several vital metabolic bacterial enzymes, consequently blocking their metabolism and ability to multiply. As milk proteins contain very few sulphydryl groups and those that are present are relatively inaccessible to OSCN- (masked), the reaction of this compound is in milk quite specific and is directed against the bacteria present in the milk. 2.2 **The effect against bacteria is both species and strain dependent. Against a mixed raw milk flora, dominated by mesophilic bacteria, the effect is bacteriostatic (predominantly inhibitory). Against some gramnegative bacteria, i.e. pseudomonads, Escherichia coli, the effect is bactericidal**.

There is so much research on lactoperoxidase now, we could go into hundreds of papers, so I won't bother quoting any more.

Proteins, Carbohydrates and Others

- Lysozymes also have antibacterial activity.
- Transferrin, along with Lactoferrin convey iron essential to haemoglobin formation.
- Serum Albumin – a large complex protein that performs numerous vital functions in the body, including binding and transport.
- Conjugated Linoleic Acid, that has tremendous health benefits.
- Numerous vitamins and minerals
- Kininogen – a protein that is broken down by trypsin to release materials that have an ability to contract smooth muscle. Smooth muscle cells are found throughout the body and they push material through tubes, such as blood vessels, the intestine, respiratory passages, alimentary canal etc. This aids blood circulation.
- Carbohydrates such as lactose, galactose.
- Casein (most proteins in milk) and numerous other proteins related to folic acid and vitamin B-12 fixing, and glycoproteins.

Other Components

Aside from the above, there are also B-lymphocytes, Macrophages, Neutrophils, T-lymphocytes, Mucins, Oligosaccharides, and Fibronectin all displaying antibacterial activity – and are destroyed, denatured or depleted upon pasteurisation.

All of this is by no means and exhaustive treatment of what milk contains. We have yet to cover the beneficial bacteria in milk (see below).

Fresh, raw, pure milk (from grass fed cows) is the only food **which in its natural non-denatured state** is very highly comparable to blood in terms of both composition and physiological significance.

-- Milk is quite literally blood serum with all the same components.

Its just a different colour and has a sweet taste. It's components are all essentially from the blood of the cattle, just as Allaah has stated in His Book.

As far back as the early 1900s, knowledge of the inferiority of pasteurised milk was well-established, and it was the belief mainly of doctors and physicians who set up committees and associations to effect **a naturally clean milk supply** (fresh, raw, natural, clean milk) rather than **an artificially clean milk supply** (dirty, inferior, low quality milk cleaned up by pasteurisation)[39].

Lactic Acid Bacteria Are Integral and Fundamental to the Human Immune System

Lactic acid bacteria found abundantly in pure milk give raw, natural, living milk one of its most powerful immune elements. There are lots of different species of these bacteria and we will bring numerous research papers that touch upon this in what follows later.

However, for now, I want to just quote an excellent review paper by R. Herich and M. Levkut titled, "**Lactic acid bacteria, probiotics and immune system**" *Vet. Med. – Czech, 47, 2002 (6): 169–180.* This gives an excellent overview of the integral and fundamental nature of lactic acid bacteria to the human immune system.

> **ABSTRACT:** Mucous membranes of the body are in direct contact with the outside environment and they are colonised by a large number of different bacteria. **Through mucous membranes, the organism is in permanent contact with different antigens. Mucous surfaces are protected by many defence mechanisms that ensure a permanent and effective protection.** They include the production of secretory IgA, the production of mucus, cytoprotective peptides, defensins etc. Indigenous microflora markedly affects the structure of the host mucous, its function, and the development of the whole immune system. Protective microflora prevents pathogens from adhering by competition for substrates and places of adhesion, and they simultaneously produce antibacterial substances and stimulate the production of specific antibodies and mucus. The early colonisation of the gut with living micro-organisms is important for the development of the gut protection barrier. The number of immune and epithelial cells increases. **Probiotic micro-organisms including lactic acid bacteria (LAB) positively influence the composition of the gut microflora; they stimulate the production of secretory IgA; they affect the targeted transportation of the luminal antigens to Peyer's patches and they increase the production of IFN-γ. LAB stimulate the activity of non-specific and specific immune cells**. These properties of the LAB depend on the particular species or strain of bacteria. These singularities are probably determined by differences in the cell wall composition. LAB belong to a group of beneficially acting bacteria and they are able to eliminate damage to the gut microenvironment; they stimulate local and systemic immune responses and they maintain the integrity of the gut wall.

And the conclusion:

[39] This is covered in some detail later in this paper.

> **Conclusion:** Different mechanisms could influence the composition of the micro-organisms that colonise the digestive tract. The two important are: antagonism among bacteria and local immunity. **Disturbances in the ecological balance in the gut lead to the growth of harmful bacteria** and to their possible translocation to internal organs, which induces disease. Beneficially acting bacteria positively influence the immune system of the host. The protection of the mucous membranes is ensured through local immunity defence mechanisms. Their development is dependent on the direct contact of the host with antigens from the outside environment. The indigenous microflora joins in immune exclusion and protects the host from the adhesion of pathogens through competition for substrates and places of adhesion. These bacteria produce antibacterial substances and they stimulate the production of specific antibodies. LAB is one of the groups of bacteria that occur physiologically in the digestive tract of mammals. These bacteria influence the distribution and the numbers of lymphoid cells in lymphatic tissues associated with the gut, ensure the balance in the composition of the gut microflora, and through their activity are able to maintain the integrity of the gut mucous membrane.

This, as I said, is a very good paper, and there is something in it that relates to the understanding of disease that I don't want to open up here, it's a book on its own – but the authors have made a good statement. All I will say for now is that Louis Pasteur was a lying, deceiving, plagiarising, thieving, *kadhdhaabun ashirr* … that's a book on its own … and he is touted as "the father of modern medicine".

Some more papers, the first is on research into Lactic acid bacteria strains responsible for immunostimulation (stimulation of immune response):

- Perdigón G, Fuller R, Raya R. **Lactic acid bacteria and their effect on the immune system**. *Curr Issues Intest Microbiol. 2001 Mar;2(1):27-42*. "Lactic acid bacteria (LAB) are present in the intestine of most animals. The beneficial role played by these microorganisms in the humans and other animals, including the effect on the immune system, has been extensively reported. They are present in many foods and are frequently used as probiotics to improve some biological functions in the host. The activation of the systemic and secretory immune response by LAB requires many complex interactions among the different constituents of the intestinal ecosystem (microflora, epithelial cells and immune cells). Through different mechanisms they send signals to activate immune cells. Thus the knowledge of the normal intestinal microflora, the contribution of LAB and their role in the numerous functions in the digestive tract as well as the functioning of the mucosal immune system form the basis for the study and selection of a probiotic strain with immunostimulatory properties. In the selection of LAB by their immunostimulatory capacity it helps to know not only the effect which they have on the mucosal immune system, but the specific use to which these oral vaccine vectors are being put. Although there are reports of the protection of animals and humans against diseases such as microbial infections and cancer, more work remains to be done on the factors affecting the design of oral vaccine vectors and the use of LAB for therapeutic purposes".

- Takahashi, T. **Stimulation of the Immune System by Lactic Acid Bacteria**. *Biosci Microflora Vol.20 No.1 Pages 1-8 (2001)*. "Probiotic bacteria are important functional foods capable of improving consumer health. Although most probiotic bacteria are derived from human intestinal flora, they are not indigenous to all individuals. It is very likely that probiotic bacteria are seen as exogenous or foreign antigens by the gut immune system. In research on orally administered lactic acid bacteria, it was found that serum antibody responses were induced not only against the whole bacterial cell, but also against cytoplasmic components.

> Mucosal immune responses were induced against cytoplasmic antigens and may be of relevance in the development of mucosal vaccines using lactic acid bacteria. These bacteria also exert an adjuvant effect on the mucosal IgA response against not only pathogenic organisms, but also dietary antigens. Furthermore, they enhance systemic immune responses such as phagocytic activity and serum antibody production. These biological responses have been shown in human studies and have formed the basis for oral bacteriotherapy with probiotic bacteria. Since the immunopotentiating activity of lactic acid bacteria is strain-dependent, it is important that special efforts be directed to selection criteria used for the identification of biologically active strains with probiotic function".

The above papers establish that **fresh, natural, raw milk has life, it is a living food**, and that the live elements of the milk provide much of the benefit acquired by its drinkers. These living elements produce vitamins and enzymes in the gut that both aid digestion and stimulates and modulates immune activity.

We hear so much about what are called "probiotics" these days – well the reality is that the essence of what are called "probiotics" are naturally in milk before they are cooked and wiped out by pasteurisation. It is easy to see why those who consume fresh, raw, natural milk do not suffer from allergies, asthma, eczema and other such ailments. Conversely, pasteurisation wipes out, almost entirely, these good lactic acid bacteria, making it inert and pretty much lifeless – and pasteurised milk is tied to these very ailments, allergies and atopies.

Raw, natural, pure milk is living. Pasteurised milk is inert and essentially dead. Raw milk, when left at room temperature will curdle, go sour and still emain edible, because it is still living and it is undergoing fermentation due to the bacteria. Pasteurised milk will rot and putrefy because it is dead, and it cannot be consumed as it is dangerous. ***The dead is not equal to the living*** …

Heating milk will cause destruction of most of the enzymatic activity, lead to malformation of proteins and varying levels of depletion in its nutritive elements and wiping out of almost all the lactic acid bacteria. All of this makes milk more difficult to digest, as well as leading to the loss of the beneficial elements of fresh, raw, natural milk.

Research in the Early 20th Century Indicating Effect of Pasteurisation Upon Milk's Inherent Physiology and Immunity

In the early part of the 20th century, knowledge of the inferiority of pasteurised milk was already present. Doctors were the most vocal against it (see a later section on this). This just a sample of what can be found in the literature from that time.

- Fresh, natural, pure milk provides a greater resistance to tuberculosis in children compared to pasteurised milk. To fully understand this you will need to read further regarding "certified raw milk" which came about as a result of Henry L. Coit, a doctor, who led other doctors to push for a naturally clean milk supply. This led to "certified raw milk" which ultimately came from cattle tested for tuberculosis and was produced in high standards of hygiene. In research conducted at that time, certified raw milk proved superior to pasteurised milk in preventing tuberculosis in children.

- Hess, A.F. **Infantile Scurvy, A Study of Its Pathogenesis**. *Am. J. Dis. Child. November 1917.* "Although pasteurised milk is to be recommended on account of the security which it affords

against infection, we should realise that it is an incomplete food. Unless an antiscorbutic such as orange juice, … or potato water is added, infants will develop scurvy on this diet …"

- Hess, A.F. **Recent Advances in Knowledge of Scurvy and the Antiscorbutic Vitamin**. *JAMA, April 23 1932*. "This illustrates the futility of pasteurisation of milk to prevent infection from diseases the cows may sometimes have, such as undulant fever. The infant is then made subject to the common infectious diseases, and deaths from these common diseases are not attributed, as they should be, to the defective nature of the milk".

- The Lancet, May 8th 1937, states that raw milk in the diet leads to less tooth decay. "Dr. Evelyn Sprawson of the London Hospital has recently stated that in certain institutions, children who were brought up on raw milk (as opposed to pasteurised milk) had perfect teeth and no decay. Whether this was due actually to the milk being unheated, or possibly to some other, quite different and so far unrecognised cause, we cannot yet say; but we may be sure of one thing, that the result is so striking and unusual that it will undoubtedly be made the subject of further enquiry".

- Pasteurisation destroys Vitamin A

- Pasteurisation destroys Vitamin B Complex partially. "Pasteurisation of the milk destroys about 38% of the B complex according to Dutcher and his associates …" *Obstretics and Gynecology, 29.5:759 May 1934*. "Mattick and Golding, "**Relative value of Raw and Heated Milk in Nutrition**", in the Lancet (220:662-667) reported some preliminary experiments which indicated that pasteurisation destroys some of the dietetic value of milk, including partial destruction of Vitamin B1. These same workers found the raw milk to be considerably superior to sterilized milk in nutritive value".

- Pasteurisation destroys up to 50% of Vitamin C. – something well established back then, lots of research on it.

Pasteurisation Destroys the Inherent Immunity in Cow's Milk

A great study showing the effect of standard pasteurisation (72°C for 15 seconds**)** upon the bactericidal activity of raw cow's milk. Note the statement, "*The activity was reduced at lower temperatures…; by heating the milk at 72°C for 15 seconds (pasteurisation)…*"

- PITT W. M., HARDEN T. J., HULL R. R. **Antibacterial activity of raw milk against Listeria monocytogenes**. *Australian Journal of Dairy Technology 1999, vol. 54, no2, pp. 90-93*. ***Raw bovine milk was shown to contain anti-Listeria monocytogenes activity***. L. monocytogenes inoculated into raw milk at 37°C to give an initial bacterial concentration of approximately 10,000 cfu/mL multiplied at a reduced rate for approximately 12 hours **and then rapidly lost viability**. **Fifty-six hours after the inoculation of raw milk, no viable cells of L. monocytogenes were detectable**. **The anti-Listeria system was most active in raw milk incubated at 37°C. The activity was reduced at lower temperatures of 25°C, 7°C and 4°C; by heating the milk at 72°C for 15 seconds (pasteurisation); and by storing the milk at 4°C for 4 to 6 days**. ***These preliminary results require further study to elucidate the mechanism of anti-Listeria activity in raw milk and also to determine the role of antimicrobial systems in the control of pathogenic and spoilage micro-organisms in milk products***.

Raw Milk Has Natural Anti-Food Poisoning Properties

Research from the University of Lincoln, United Kingdom on the use of lactic-acid bacteria from raw milk used to inhibit "pathogens" in foods from MedicalNewsToday[40]:

> "Eating Feta cheese made from raw milk in small seaside tavernas when you are on holiday in Greece could be a good way to combat food poisoning, according to researchers speaking today (Thursday 3 April 2008) at the Society for General Microbiology's 162nd meeting being held this week at the Edinburgh International Conference Centre.
>
> "**We were able to isolate lactic acid bacteria found in raw sheep milk from small farms in Macedonia, northern Greece. Several of these friendly bacteria naturally produce antibiotics that killed off dangerous food-poisoning bacteria like Listeria**," says Panagiotis Chanos, a researcher from the University of Lincoln. "Interestingly, we identified these friendly bacteria as enterococci, more commonly recognised as virulent and/or antibiotic resistant bacteria in hospitals. We found some strains could produce up to three different natural substances to fight different food pathogens."
>
> We hope that this work will lead to ways of fighting foodborne pathogens, using the naturally produced compounds called bacteriocins made by other bacteria," says Mr Chanos. "We discovered that all the useful strains of bacteria that produced bacteriocins were able to grow in extreme conditions resembling those commonly found in foods, including the low temperatures found in our refrigerators and the salty conditions found in some cheese." Instead of putting additives and synthetic preservatives in foods, the scientists hope they can harness the properties of the useful bacteria to use them as micro-allies against disease-causing bacteria like Listeria... It is known that enterococci in general may have the same properties as good gut bacteria. We hope our bacteria possess these properties too, so they could colonise our small intestine and fight Listeria from within the body," says Panagiotis Chanos. "If we can ensure the safety of these useful bacteria, they could guard us humans by killing foodborne pathogens,"
>
> The researchers hope to minimise the use of 'not-so-friendly' synthetic preservatives in foods by replacing them with naturally produced bacteriocins, which may open up new opportunities for organic food production."[41]

These lactic acid bacteria are naturally in the milk – they offer natural immunity. This really highlights a point that will be demonstrated later in this paper when we look at the movement of Henry L. Coit MD, and the doctors with him, who fought for a "naturally clean, pure milk supply" as opposed to an "artificially clean milk supply". This point is that if this is the nature of raw, natural milk and it contains all these inherent immune systems to protect it from harmful bacteria, why then was there so much disease transmitted through the medium of milk in the 19th and 20th centuries. The answer to this question will become clear inshaa'Allaah when we look at the nature of the milk supply in those times in detail.

[40] http://www.medicalnewstoday.com/articles/102689.php
[41] See "**Feta cheese made from raw milk has natural anti food-poisoning properties"** (3 April 2008) at http://www.sgm.ac.uk/news/releases/MTNG.0308.PC.1.cfm

More on the Lactoperoxidase System in Raw Milk

Another study below on the Lactoperoxidase system in milk.

- Eyassu Seifu, E. M. Buys, E. F. Donkin and I. M. Petzer. **Antibacterial activity of the lactoperoxidase system against food-borne pathogens in Saanen and South African Indigenous goat milk**. *Food Control Volume 15, Issue 6, September 2004, Pages 447-452*. The effect of the lactoperoxidase (LP) system on the growth and survival of Escherichia coli, Staphylococcus aureus, Listeria monocytogenes and Brucella melitensis was determined in goat milk samples kept at 30 °C for 6 h. **The LP system exhibited a bactericidal effect against L. monocytogenes and Br. melitensis both in Saanen and Indigenous goat milks. The LP system was bactericidal against S. aureus in Saanen goat milk and bacteriostatic against S. aureus in Indigenous goat milk. However, the LP system was bacteriostatic against E. coli both in Saanen and Indigenous goat milks. The results of this study suggest the potential of the LP system to control the growth of food-borne pathogens in goat milk**.

Lactic Acid Bacteria That Are Mostly Wiped Out By Pasteurisation Are Bactericidal, They Release Bacteriocins That Inhibit "Pathogenic" Bacteria

- RODRIGUEZ E., GONZALEZ B., GAYA P., NUNEZ M., MEDINA M. **Diversity of bacteriocins produced by lactic acid bacteria isolated from raw milk**. *International Dairy Journal 2000, vol. 10, no1-2, pp. 7-15*. Bacteriocin-producing lactic acid bacteria were isolated from 298 samples of raw ewes', goats' or cows' milk. Eighty-two bacteriocin producers were phenotypically and genotypically identified as L. lactis subsp. lactis (59 isolates), L. lactis subsp. cremoris (2 isolates), L. lactis subsp. lactis biovar diacetylactis (6 isolates), E. faecalis (7 isolates), E. faecium (1 isolate), L. paracasei subsp. paracasei (4 isolates), L. plantarum (1 isolate) and Leuconostoc spp. (2 isolates). By means of PCR-techniques, nisin was characterized in 39 of the 67 bacteriocin-producing lactococci and lacticin 481 in 23 isolates, some of which presented antilisterial activity. Enterocin AS-48 was produced by four enterococcal isolates. Four non-identified bacteriocins produced by 16 isolates showed a broad inhibitory spectrum. Nisin-producing lactic acid bacteria were the most abundant, but lacticin 481-producing lactococci and AS-48-producing enterococci were found at relatively high rates.

The above study is simply highlighting the diversity of *bacteriocins* produced by the good lactic-acid bacteria in raw milk which kill off "pathogenic" and competing bacteria. Bacteriocins are naturally occurring antibiotics released by lactic acid bacteria. It's a way of pushing out the other bacteria and outgrowing them.

Pasteurisation pretty much wipes out the lactic acid bacteria and only a small amount remain. Along with that, a huge part of milk's inherent immunity destroyed. These bacteriocins are the subject of much study in food safety, particularly in their use in inhibiting Listeria Moncytogenes.

- Garcia, E., De Paz, M., Gaya, P., Medina, M. Nuñez, E., 1997. **Inhibition of Listeria innocua in Machengo cheese by bacteriocin producing Enterococcus faecalis INIA 4**, *Milchwissenschaft, 52, 667 - 670*.

- Farias, M.E., Nuñez de Kairuz, M., Sesma, F., Palacios, J., de Ruiz Holgado, A.P., Oliver, G., 1999. **Inhibition of Listeria monocytogenes by the bacteriocin enterocin CRL35 during goat cheese making**, *Milchwissenschaft, 54, 30 - 32*.

- Panagiotis Chanos & D. Ross Williams. Department of Forensic and Biomedical Sciences, University of Lincoln. ***Isolation and characterization of anti-Listeria bacteriocin producing lactic acid bacteria and their bacteriocins from raw milk***. *162nd Society of General Microbiology (SGM) Meeting Edinburgh International Conference Centre April 2008.*

It is fair to assume that the effects of heat on human milk will prove very similar to those on the milk of cattle in general, especially as it relates to enzymes and physiological components, and especially considering there is an extremely high degree of molecular similarity between human and bovine milk components in particular.

These similarities are well established in the literature. This can be investigated and established and is a study on its how. However, for now, I want to quote a few studies showing the effect of heat upon the biochemical aspects of raw milk in general.

The Lancet: Randomised Controlled Trials on Raw Human Milk

I refer you to a study published in the Lancet on Saturday 17th November 1984, I have a photocopy of that paper with me.

- Narayanan, I. Prakash, K. Murthy, N.S. Gujral, V.V. **Randomised Controlled Trial of Effect of Raw and Pasteurised Human Milk and of Formula Supplements on Incidence of Neonatal Infection**. *The Lancet, Saturday 17th November 1984, pp. 1111-1113.*

In their results they state that the inherent protective mechanisms in milk, and the specific agents responsible for giving milk this quality are thermolabile (destroyed by heat). They state that

> "… *prevention of infection seems to depend on the integrity of such systems*".

They also state,

> "*Although after heating, human milk seemed to have a protective effect when given without supplements, the concentration of these anti-infective factors must have been less than in raw milk, since infection rates were lowest only when all the feeds consisted of human milk*".

They also state,

> "*Raw milk has immunological advantages which have been demonstrated in vitro and in vivo by controlled studies. Ideally in a developing country collection of milk should be closely supervised to minimise contamination. It should be handled carefully and it should be administered raw as soon as possible*…"

They also stated,

> "*This study suggests that although the major protective factors in human milk are thermolabile, they are not totally destroyed by holder pasteurisation*[42]*. However, we are now testing whether a lower temperature and shorter holding time (56°C for 15 min) gives adequate killing of micro-organisms and is less destructive of the anti-infective factors – IgA, lactoferrin, and lysozyme*".

The Journal of Pediatrics: Influence of Heat Treatment of Human Milk on Some Of Its Protective Constituents

I have a copy of this paper.

- Ford JE, Law BA, Marshall VM, Reiter B. **Influence of the heat treatment of human milk on some of its protective constituents**. *J Pediatr. 1977 Jan;90(1):29-35*. "Human milk was subjected to heat treatments of graded severity and examined for its content of immunoglobulins, lactoferrin, lysozyme, vitamin B12-and folate-binder proteins, and lactoperoxidase. Holder pasteurization (62.5degrees C 30 minutes) reduced the IgA titer by 20%, and destroyed the small content of IgM and most of the lactoferrin. Lysozyme was stable to this treatment, but with an increase in temperature there was progressive destruction, to near 100% at 100degrees C. The same was broadly true of the capacity of milk to bind folic acid and potect it against bacterial uptake; with vitamin B12 the binder was more labile at 75degrees C than at 100degrees C. The milk contained no detectable lactoperoxidase".

In this study they establish the depletion of activity in IgA, destruction of IgM, destruction of most of the lactoferrin, destruction of lysozyme at the natural pH of milk (they were testing at pH 4.5), the depletion of vitamin-binding capacity of the heated milk (B12 and folic acid)

I want to quote some passages from this study because they are **very revealing and appropriate to our discussion**. Even though this is in relation to human milk, the observations still apply, since the affective factor is heat treatment.

They state,

> "*Certainly the maternal milk confers special protection against many pathogenic bacteria and viruses by virtue of its content of immune antibodies. It also contains a variety of non-specific factors that strongly and selectively influence the growth of different microorganisms in vitro and may play an important part in the nutrition of the infant and in protecting against infection. These "non-specific" factors include the iron-binding protein, lactoferrin, the proteins that bind vitamin B12 and folate, and lysozyme and lactoperoxidase*".

They also state,

> "*Most pediatricians would take the view that heat denaturation of the protective proteins in milk is undesirable, but that in the practical situation it is unavoidable. They may be well correct in this view, and certainly it would be irresponsible to advocate the feeding of raw milk without stringent control of its bacteriologic quality*".

[42] Note, this is milk heated to 62.5°C for 30 minutes and is called "holding pasteurisation" – and thus is less than that standard 71.7°C which would have a more pronounced effect in destroying enzymes and immunity elements.

And also,

> "*But we may reasonably wonder whether any heat treatment that is adequate to ensure sterility in milk taken and stored under sanitary conditions might not actually increase the risk of enteric infection in the infant. Even in breast-fed infants the milk contain bacteria, presumably derived from the mother's nipples and fingers, and it might well be that with careful hygiene in the collection and storage of donor milk, the bacterial count could be maintained with acceptable limits*…".

They say at the end,

> "…*But some such attempt to provide a "Grade A" quality of milk for feeding raw to weak and premature babies might be practicable, and it is clearly important to establish whether it would be beneficial*".

Now, even though this study is in relation to human milk, my point in mentioning this study and the quotes from it are for the following points:

- Fresh, clean, natural milk from cows fed on pasture, acquired in compliance with state and national legal requirements relating to bacterial and cell counts has clear and undeniable benefits over heat treated, inferior quality milk. One beneficial element is the natural immunity in the milk.
- The challenges they speak of relating to breast milk are the same as it relates to cow milk. They speak of the desirability to use "Grade A" standards of milk production to collect and use raw milk and to do research to establish whether this would be beneficial. As it relates to cow's milk, it is already established and proven that "pathogen" free milk can be produced in the tens of millions of gallons over many long years, with tens of thousands of consumers, without a single proven case of food-poisoning. I will speak more on this later.
- They allude to the fact that raw milk ***can be advocated in the presence of strict bacteriological quality***. This is already possible, and was being done over a hundred years ago, and is being done today, walillaahil-hamd, with respect to cow's milk, where strict bacteriological quality is ensured by routine compulsory testing.

Effect of Pasteurisation on Bactericidal Activity of Human Milk

- D. Silvestre, P. Ruiz, C. Martínez-Costa, A. Plaza, and M. C. López. **Effect of Pasteurization on the Bactericidal Capacity of Human Milk**. *Journal of Human Lactation 2008;24:371*."The use of human milk in milk banks requires thermal processing to eliminate microbiological hazards. An evaluation is made of the stability of overall human milk bactericidal capacity following 2 modalities of thermal pasteurization: 63°C/30 minutes and 75°C/15 seconds. Ten milk samples (mature milk) were analyzed. In each sample, the effect of both thermal treatments on bactericidal capacity against Escherichia coli was evaluated in relation to the capacity of fresh milk (control). All the samples analyzed possessed bactericidal capacity. **Human milk pasteurization induced a significant loss of this capacity that was more pronounced after high-temperature treatment than after low-temperature processing**. Untreated milk, low-pasteurized milk, and high-pasteurized milk yielded a reduction in E. coli growth of 70.10%, 52.27%, and 36.39%, respectively. In conclusion, human milk possesses antimicrobial activity that is lost in part as a result of thermal processing.

Such bactericidal capacity is, moreover, better preserved by low-temperature, long-time pasteurization."

Effect of Pasteurisation on Raw Camel Milk

- Rihab Awad Hassan, Ibtisam E.M. El Zubeir and S.A. Babiker. **Effect of Pasteurization of Raw Camel Milk and Storage Temperature on the Chemical Composition of Fermented Camel Milk**. *International Journal of Dairy Science 2 (2): 166-171, 2007*. "The present study was carried out to investigate the effect of pasteurization and storage conditions on the chemical composition of fermented camel milk (Gariss). The Gariss which was used as a starter culture consisted of 2.65% fat, 3.13% protein, 0.51% ash, 7.37% total solids and 2.49% acidity. It had pH value of 3.8. The non pasteurized Gariss samples were found to attain high level of total solids, fat, protein and ash than the pasteurized fermented milk at the beginning of the storage period. Moreover, fat and protein, acidity and pH of the processed Gariss were found to show significant differences ($p < 0.05$) in pasteurized samples that stored at 25°C. Also the mean levels of ash revealed significant differences ($p < 0.05$) due to the pasteurization. Pasteurized and not pasteurized fermented camel samples both were found to withstand the storage conditions up to 243 h. **The present study indicated that the chemical composition was affected by pasteurization and storage conditions (temperatures and storage periods)**."

All of this evidence shows that raw milk from any animal will undergo changes – during pasteurisation – to its composition, biochemistry and structural integrity at the molecular level in relation to at least proteins and enzymes. Even small and subtle changes are sufficient to cause milk to lose its natural, inherent, dynamic properties and as a result lose its curative power, and instead be rendered into something that potentially brings about long term harm that may not be readily detectable, due to the subtlety in the underlying biochemistry. This will be covered later in which we will demonstrate the association of pasteurised milk in diseases such as heart disease, diabetes, asthma and allergies.

General Issues on Metabolic Availability

There is a great difference in compositional and physiological significance between pasteurised and fresh, raw, pure milk. Fresh, living milk is 100% metabolically available. Its proteins are 100% metabolically available, as are all its vitamins and its minerals. Its enzymes are 100% metabolically available and all lactic acid bacteria are available (destroyed in pasteurised milk)[43]. This metabolic availability is not available at the same level in pasteurised milk, due to varying degrees of denaturisation, depletion and destruction.

When milk is cooked at varying temperatures (62.7°C for 30 minutes in the storage vat and. 71.7°C for 15 seconds for pasteurisation – standard procedures for pasteurised milk), it loses a huge amount of its life. Enzyme activity alone is reduced to 10% of its original. At least half of its inherent immunity (made up of antibodies, white blood cells, lactoperoxidase, lactoferrin, lysozyme, complement system) is destroyed. Milk has just lost its physiological power. Add to this the depletion of its nutritive elements.

This is why Charles Porter said,

[43] Note the big push for "probiotics" these days and their great health benefits. These type of bacteria are already there in fresh, pure milk, but are mostly wiped out after pasteurisation.

> "**What is required is good, clean milk as it comes from the cow, without the removal or addition of any substance whatsoever. Boiled, sterilized or pasteurized milk, or milk artificially preserved in any way, can not be used for this treatment. The live cells in the milk must remain alive or there can be no 'milk cure'**."

Although casein is fairly heat resistant, other milk proteins such as whey are significantly affected by pasteurisation, as are lactalbumin and lactoglobulin. Lysine, histidine and tyrosine are affected, altering the availability of the protein as a whole. At least 30% of albumin proteins are rendered insoluble. Whey protein degradation is officially recognised in dairy science literature. I strongly believe that malformed milk proteins (amongst other factors in pasteurised milk) are responsible for allergies caused by autoimmune responses in children.

Most of the enzymes are denatured irreversibly. Raw milk has great health benefits precisely because it is a living food. This issue of enzymes is actually the greatest discussion point of the health benefits of fresh, pure milk, It is even greater than the issue of nutrients (vitamins, minerals), even though it is not commonly discussed. Pasteurisation kills off almost entirely this enzyme activity. It renders what is essentially a living, dynamic food, into a cooked, dead food. This has consequences on the digestibility of the milk. It is precisely as a result of the killing of this enzymatic activity that creates health complications in some people.

In pasteurised milk there is no lipase to break down fats, its destroyed. The resulting rancidity in pasteurised, homogenised milk's fat content and its indigestibility is now being linked in scientific research to heart disease. No phosphatase for calcium absorption. The complete absence of phosphatase is the standard test to measure successful pasteurisation of milk. Complete destruction of phosphatase is the goal behind pasteurisation, when it is not detectable, it is accepted as an indicator of successful pasteurisation.

- International Dairy Federation. 1991. **Alkaline phosphatase test as a measure of correct pasteurization**. *Bull. Int. Dairy Fed. 262:32-35*.

So that's entirely gone and along with it, the ability to efficiently absorb calcium from the milk. I have scientific research papers proving that consumption of milk (for calcium) *does not* have association with decreased risk of osteoporosis.

Depletion or absence of galactase for milk sugar digestion. Depletion or absence of diastase, or any peroxidase. All this is hard science. Real milk has gone from having life to being pretty much dead.

The lactic acid bacteria, the good bacteria, that keep the bad bacteria out, are mostly wiped out. This is why pasteurised milk will rot if left at 24 hours, whereas real, pure milk will simply curdle and turn sour – and remain perfectly edible. It is a self-protecting mechanism. It's also the reason why pasteurised milk is highly prone to contamination due to the loss of immunity. Pasteurised milk is an extremely dangerous substance which if contaminated will have extremely serious implications for large numbers of people. I refer you to an outbreak in Chicago in the 1980s involving close to 200,000 people, and an outbreak in 1979 involving 3500 school children in the Luton, Dunstable area in the UK – all from pasteurised milk. I will cover this later, inshaa'Allaah, in this paper.

The killing of all bacteria means that no lactase enzyme can be produced (it does not exist naturally in milk), thus giving rise to "lactose-intolerance" to some people. In reality its not "lactose-intolerance",

its "pasteurised milk-intolerance". People who are said to be lactose intolerant do not tend to suffer the same problems with raw milk from grass-fed cows.

Pus that is created by the cooking of leucocytes (white blood cells) has to be removed by a process of clarification, but cannot be entirely removed. Even the process of removing it (centrifugation) does more damage to the overall quality of milk and integrity to molecular structure of its components. Breakdown of dead bacteria debris leads to release of histamine - tied to allergies. These leukocytes which are macrophages have phagocytic activity and act against Staphylococci, E. coli and Candida albicans. All that activity is unfortunately wiped out and turned to pus. US and EU regulations allow pasteurised milk to have up to 750,000 and 400,000 pus cells per cubic centimetre of finished product respectively (that's between 400 to 700 million per litre). Your average person is drinking a lot of pus cells in their milk.

Processed milk does not provide the same ability as natural, living milk since its compositional nature and physiological activity is denatured and mostly destroyed. Enzymes are irreversibly denatured above 60°C. Proteins are also denatured. The components giving strength to the blood after absorption through the small intestine are also mostly destroyed.

Raw milk left at room temperature will curdle due to the lactic acid bacteria (good bacteria) proliferating, knocking out other harmful bacteria and its inherent immune defence will destroy any "pathogens" or bad bacteria[44] whereas pasteurised milk (which is dead milk) will *rot and putrefy* whilst being infested and overrun with "pathogenic" bacteria when left at room temperature[45].

So here is another clear benefit. The nutritional, compositional and physiological superiority of real, fresh, pure, unprocessed milk compared to treated, processed milk.

Expert Witness Testimony Regarding Raw Milk and Pasteurised Milk

The following is from a court hearing[46] which involved two expert witnesses that spoke about raw and pasteurized milk, the differences between them, food safety protocols and testing procedures in relation to milk.

Just so that we know who are we are hearing fromm these are brief resumes of the expert witnesses. These individuals are far better qualified than general practitioners (doctors, physicians) to speak on the very specific matters of dairy microbiology:

Dr Ron Hull: PhD in Microbiology, thesis on bacterial antibiotics called colicins produced by E.Coli of interest today in food systems and medical health. Postdoctoral fellow in Pathology at Stanford Medical Center, worked on cancer research involving the E.Coli model. Worked as a research scientist for Commonwealth Scientific Industrial Research Organization that researches and develops rural

[44] There are research papers in this regard establishing the bacteriocidal effect of Lactoperoxidase in raw milk upon campylobacter at both cooling and room temperatures, the effect being more pronounced at room temperature.

[45] Because the inherent immunity has been destroyed in milk, you will often find that the most serious, deadliest, large-scale outbreaks of food poisoning in history have been from pasteurised milk as I shall illustrate by giving the example of 180,000 affected people in a single outbreak in the US. As inherent immunity has been destroyed in cooked milk there is a serious risk of post-pasteurisation contamination and in cases where heat-resistant and acid-resistant bacteria actually survive pasteurisation.

[46] In California, US, in April of 2008. I have the full transcript of the entire session, and it was made available on HealthyMuslim.Com – from the angle of "ask the people of knowledge" as it relates to the worldly affairs.

industries in Australia including the dairy industry. After five years he became the head of the dairy microbiology section within the division of food science, and worked for twenty years in total for the organization. His work was related to medical pathology, spoilage and pathogenic bacteria in dairy microbiology. Australia and New Zealand contribute to more than half of all international trade in dairy products, and Dr. Hull is involved in an organization that oversees the very high level of technology needed to meet those markets and the meeting of microbiological standards for such foods. Dr. Hull then became a microbiology consultant to the dairy industry, and also serves on government regulation committees.

Dr. Theodore Beals: Worked in Department of Epidemiology in the School of Public Health, licensed as a Medicinal Practitioner, board certified in Anatomic Pathology after five years specialized training, published over 70 articles in peer-reviewed journals, has published a book related to pathology, served for 31 years as a pathologist at a Medical Center and taught Pathology at the University of Michigan to graduates and medical students, and was eventually made Chief of Pathology at the Pathology and Laboratory Medicine Service in an Ann Arbor Medical Center. Later he served as the National Director of Pathology and Laboratory Services for the entire VA Medical Administration in the United States (which includes over a 100 medical centers across the US). He also served on the Scientific Advisory Board for the Armed Forces Institute of Pathology.

First from Dr. Beals:

> **Question:** Okay. Dr. Beals, based on your background, education, training, your experience, do you have an opinion to a reasonable degree of scientific certainty whether milk that is unpasteurized is safe for human consumption?
>
> **Dr. Beals:** My opinion is that it is, and historically it's been shown clearly that it is. Pasteurization was only introduced in about 1900. And the history of human consumption of milk goes back well before recorded history. And as a matter of fact, in recorded history we know that the domestication of animals for the purpose of providing fluid milk for human consumption is present in almost all civilizations across the world. And recorded history and historians have well documented the fact that this consumption of milk was in fact very advantageous to civilization. It was advantageous for cultures that migrated because they were able to take domestic animals with them and have a continuous supply of fluid milk. And it's well recorded also in history that the ability to take domestic animals that provided fresh milk with armies as they moved across the country was a distinct advantage to them.
>
> If a food is unsafe for consumption, it is very quickly eliminated from the diet of cultures. And in fact history shows that the consumption of milk from domestic animals has persisted throughout history, and on the basis of that, I don't believe that there's any argument but that the consumption of fresh milk is in fact safe, confers competitive advantage to those that drink it.

Later in the same session ...

> **Question:** Do you have an opinion about whether or not milk must be free from bacteria in order to be safe for human consumption?
>
> **Dr. Beals:** And the answer to that is that it does not need to be free of bacteria.

Later ...

Question: You said that scientists need to know how do pathogens -- how do pathogens get into milk, and my question is: Which is more likely to have a pathogen in it? Some raw, fresh, unprocessed milk that has good bacteria in it or pasteurized milk where all the bacteria has been killed?

Dr. Beals: Pasteurized milk where the beneficial bacteria have been killed.

And now from Dr. Ronald Hull:

Question: Have you published research on that subject?

Dr. Hull: Yes, I have. If Listeria, for example, is inoculated into raw milk, then they're killed actively by the raw milk's natural antimicrobial systems.

Question: Did you say killed?

Dr. Hull: Killed, yes.

Question: How much time does it take before the Listeria is killed?

Dr. Hull: If you inoculate 10,000 Listeria into raw milk, then in 48 hours they're all killed. That's at body temperature.

Question: Was that research published in a peer review journal?

Dr. Hull: Yes, it was.

Further in the same session ...

Question: Dr. Hull, let's describe milk a little bit.

Dr. Hull: Yes.

Question: Is all milk the same?

Dr. Hull: No, definitely not.

Question: What types of milk are there?

Dr. Hull: Well, there is raw milk. Raw market milk, I'll describe first, is a living food. And on the other hand we have pasteurized milk, which is a cooked -- I would describe it as a dead food. The raw market milk is living just as you and I are living because it contains a number of live components. The first one -- the first component is the competitive flora, which are the same microorganisms that live inside of our intestinal tract when we're healthy. It's the same flora that's used to make cheese and yogurt. That competitive flora competes out other pathogens. And we use that in commercial production. We have

available to us now strains of lactic acid bacteria for use in specific ferments which will kill all of the pathogens which can exist in that particular product. So that's highly developed science. And not only is it science, but it's in commercial practice.

Question: What's the second component?

Dr. Hull: The second component is what nature provided in milk from the mammal, and that again we refer to as innate immunity. Innate immunity consists of several components, at least five or six components. There are probably more, but for today we'll just discuss a few of them. The first one is raw milk contains white cells, which if you like are the --

MS. RUUD: I'm sorry?

THE WITNESS [Dr. Hull]: Contains white cells -- sorry if I didn't say it clearly -- which are the same cells that our immune system, our innate immune system, uses to combat infection. That same system is in milk and operating when it's drawn from a cow. We then have a subset of enzyme systems which are destined to kill pathogens which get into milk. And just to mention five of those systems, there's the complement system, which I'll just mention the temperature of inactivation as we go. The complement works with the white cells. It's inactivated at temperatures -- I'm going to use Celsius here -- 56 degrees Celsius. I apologize. We have been using Celsius now for about 35 years, and I have difficulty converting back to Fahrenheit. Although I did learn Fahrenheit at school. So we have complement, which is inactivated at 56 degrees, which is way below body temperature. So it's just a little above body temperature. Body temperature is 37 degrees, just for reference. The second element is the lactoperoxidase system, which is inactivated at 82 degrees centigrade. And the third one is lactoferrin, which is inactivated at about 95 degrees centigrade, which is nearly boiling. And the last one, last enzyme, survives boiling.

So if we look at pasteurized milk, the white cells are killed, the complement system is killed, but the other three remain active. So we've essentially killed off half of the innate immunity in milk.

Question: And innate immunity, that's the second component of raw milk that makes it a living food.

Dr. Hull: That makes it a living food. The third component is --

Question: Let me get a question on the record. What's the third component?

Dr. Hull: Thank you. The third component is a group of enzymes which digest the milk. Milk consists of fat, proteins, carbohydrates, and minerals. They're in a very complex state in milk, very concentrated form, and very difficult to digest without those enzymes. Those enzymes there are specifically to digest each of those components down into smaller molecules. Those smaller molecules are the things that we absorb when we drink milk. They're also the nutrients for the competitive flora, the number one living system in milk. So the natural enzymes in milk actually foster the protective flora in milk. And so the three work together. But in pasteurized milk, or cooked milk if you like, those systems are essentially dead.

So the two milks are very different. One is a living food. And I've brought an apple up with me. This is a living food. When we cook it, it's a dead food. And raw milk is like the apple. Cooked, the pasteurized milk is like the apple strudel. And food safety issues with these two products are very different.

Later in the session ...

Question: Well, let's talk about the difference, then, between a glass of pasteurized milk and a glass of unpasteurized raw milk.

Dr. Hull: Yes.

Question: If you set those two milks out and let them sit at room temperature, what happens to them after a certain period of time?

Dr. Hull: Thank you. If we set raw milk, which is the living food, aside at room temperature, it will curdle, and that product is perfectly safe to drink. If you set it aside at body temperature, in other words, if you carry it around in your pocket or sit it next to the stove at body temperature, it will also curdle or sour, and that product is perfectly safe to drink. It will not make you sick. In contrast, if you set aside pasteurized milk at room temperature or body temperature, it will spoil and putrefy, and if you do drink it, it will make you sick. In fact it may make you very sick. So the two products have a quite different behavior if just left at room temperature or body temperature. Now, the same thing happens when we drink those products. One turns to a sour yogurt-type product; the other one putrefies. And I think the two products are quite different in that respect.

Later ...

Question: Does raw milk with a built-in immunity system, then?

Dr. Hull: Yes, it does.

Question: And because of that immunity system, can raw milk be subjected to a less, quote, clean environment?

Dr. Hull: Yes, definitely. And that's part of the reason I brought this apple here. I can leave this apple sitting around for I don't know how many weeks in California, but certainly at home an apple or orange can sit on the kitchen table or outside for many days and still be fine to eat. Not a health hazard, not a food safety issue. But if we cook that product, then we cannot do that. We have to protect it from contamination, from infection, from the environment because it has no longer living immunity in the apple.

The aim of the above was to established from “the people of knowledge” in the worldly sense, on the subject of the nature of raw milk and pasteurised milk and the differences in their inherent immunity and the effects of pasteurisation upon the living nature of milk. This is to support whatever I have mentioned of evidences prior to this.

Fresh, Raw, Pure Milk Has Life and is Living, Heat-Treated, Pasteurised Milk is Inert, Lifeless and Essentially Dead

From everything that has preceded it is clear that fresh, natural, raw milk is a living food. It is living because it has lactic acid bacteria, which are living organisms that undergo metabolic processes. They produce enzymes and B vitamins in the gut, they are also an integral part of the human immune system, and they destroy and out-compete "pathogenic" bacteria. Consumption of raw, fresh, natural milk primes the immune system and keeps it robust.

There are also enzymes which are essential to life as such. That enzymes are found in milk makes it very easily digestable. In other words, there are nutrients in the food as well as the very enzymes need to digest those nutrients and make use of them are included in the milk too. Enzymes are mostly destroyed by pasteurisation, and this is why so many people have problems with milk. If the enzyme content has been wiped out, digesting it won't be easy.

Aside from lactic acid bacteria, and enzymes there are a range of elements of immunity, such as the Immunoglobulins already covered previously, and the leukocytes (white blood cells that get turned to pus after pasteurisation).

All of these affairs make milk a living entity. It contains life, and it produces "life" in the sense that these same elements help to create fresh, new, very good quality blood (a major factor in the ability of raw fresh, natural, milk to cure many diseases).

Thus, the concept of "living milk" and "dead milk" isn't something baseless, its something said by the specialists in dairy microbiology, based upon measurable biochemical and physiological realities.

Pasteurised Milk and Diabetes

Whereas pure fresh, unprocessed milk (in the form of soured and or skimmed fresh, raw milk) was used to cure diabetes in the late 19th and early 20th centuries, inferior quality milk cleaned up by pasteurisation which leads to deformed milk proteins is now associated with diabetes in susceptible children.

Milk proteins such as casein, beta-lactoglobulin and bovine serum albumin are deformed via pasteurisation. Such deformations in certain milk proteins may be causing an autoimmune responses in susceptible people leading to insulin resistance. Although lots of research is being conducted on this, the focus is on "cow's milk and diabetes" whereas it should really be on "**pasteurised cow's milk and diabetes**". The epidemic of diabetes is a new phenomenon, new to the 20th century, coinciding with pasteurisation of milk, and other factors. It was not common at all prior to that – and it was not known prior to this in nations and cultures whose diets consisted of a large amount of dairy produce.

- C Hoppe1, C Mølgaard1, A Vaag2, V Barkholt3 and K F Michaelsen1. **High intakes of milk, but not meat, increase s-insulin and insulin resistance in 8-year-old boys**. *European Journal of Clinical Nutrition (2005) 59, 393–39*. "Our results indicate that a short-term high milk, but not meat, intake increased insulin secretion and resistance."

- S. M. Virtanen, T. Saukkonen, E. SavilahtP, K. Ylgnen, L. Riisiinen 1, A. Aro, M. Knip, J. Tuomilehto, H. K. Akerblom. **Diet, cow's milk protein antibodies and the risk of IDDM in**

Finnish children. *Diabetologia 1994(April);37(4):381-387)*. "The results suggest that young age at introduction of dairy products and high milk consumption during childhood increase the levels of cow's milk antibodies and that high IgA antibodies to cow's milk formula are independently associated with increased risk of IDDM."

- WM. LANE M. ROBSON MD, FRCP and ALEXANDER K. C. LEUNG MBBS, FRCP. **The Use of Cow's Milk in Infancy**. *PEDIATRICS Vol. 91 No. 2 February 1993, pp. 515*. "In lieu of the recent evidence that cow's milk protein may be implicated in the pathogenesis of diabetes mellitus 2, we believe that the Committee on Nutrition should clarify whether cow's milk is ever appropriate for children and whether or not infant formulas that are based on cow's milk protein are appropriate alternatives to breast milk."

- Gerstein HC. **Cow's milk exposure and type I diabetes mellitus. A critical review of the clinical literature**. *Diabetes Care (1994 Jan) 17(1):13-9*. "Conclusions – Early cow's milk exposure may be an important determinant of subsequent type I diabetes and may increase the risk approximately 1.5 times."

- Dahl-Jørgensen K, Joner G, Hanssen KF. Aker Diabetes Research Center, Aker University Hospital, Oslo, Norway. **Relationship between cows' milk consumption and incidence of IDDM in childhood**. *Diabetes Care. 1991 Nov;14(11):1081-3*. OBJECTIVE: To compare age-standardized incidence rates of diabetes in children 0-14 yr of age and cows' milk consumption in various countries… CONCLUSIONS: ***The results support the hypothesis that cows' milk may contain a triggering factor for the development of IDDM***.

- Fava D, Leslie RD, Pozzilli P. Cattedra di Endocrinologia, University of Rome, La Sapienza, Italy. **Relationship between dairy product consumption and incidence of IDDM in childhood in Italy**. *Diabetes Care. 1994 Dec;17(12):1488-90*. OBJECTIVE--To test the hypothesis that the consumption of dairy products, including fluid cows' milk and cheese, is related to the incidence of insulin-dependent diabetes mellitus (IDDM)… RESULTS--The correlation between fluid milk consumption and incidence of IDDM in Italy was 0.84 ($P < 0.004$, Poisson regression analysis). Cheese consumption was not related to IDDM incidence. CONCLUSIONS--***The results indicate that there is a relationship, even in a single country, between dairy product consumption and the incidence of IDDM that is confined to fluid milk consumption***.

These are only a few of a large body of studies. There are lots more. On the other hand, as early as 1876, Dr. Donkin was treating people with diabetes using fresh, natural, living raw milk. Macfadden writes, "*A Dr. Donkin first employed the milk diet treatment for diabetes, fifty-five years ago. It is for these reasons that we usually give skimmed sweet milk in cases of diabetes...*" (The Miracle of Milk, 1923). I also refer you to the earlier information, a clinical lecture delivered by GW Balfour, "**On the treatment of diabetes by milk etc.**" at the Edinburgh Royal Infirmary which was later published in Edinburgh Medical Journal in 1870 and similarly to what has been stated by Dr. Porter regarding curing of many cases of diabetes successfully. Note, these are cures, not "*symptoms-management, disease-prolongation*" medications, like what is offered today for most chronic illnesses, which then give birth to other diseases by way of the prolonged side effects.

I can illustrate the same with allergies, asthma, heart disease and cancer, and the evidence is established at the molecular level in some of these cases.

Milk, as Allaah placed it in the creation, fresh, pure, raw, unprocessed, living milk is a cure for every disease. When this natural milk is altered from its natural constitution – affecting its composition, metabolic availability, biochemistry, immunity and physiology in the body - then instead of preventing and curing disease, it actually leads to disease. This shows the perfection in Allaah's creation, and the corruption wrought by the hands of men, when they try to abuse or change what is in the creation of Allaah, being motivated in that by greed and other factors.

Heated Milk Proteins and Heart Disease

- Jeffrey J. Segall. **Is milk a coronary health hazard?** *British Journal of Preventive and Social Medicine, 1977, 31, 81-85I.* "SUMMARY Epidemiological and clinical evidence is presented on an association between the quantity of milk consumed and the incidence of ischaemic heart disease. It is suggested that the daily intake of liquid milk for adults should be at most one-third of a pint (less than 0.21)… Conclusion. The evidence presented suggests that a high milk intake may be harmful to coronary health. IHD is a multifactorial disease and milk as a coronary hazard could also be multifactorial: its content of saturated and mono-unsaturated fats, the contribution to calorie overnutrition, **antigenicity of heated milk protein**, and perhaps lactose…"

Note the "*antigenicity of heated milk protein*". This is most likely what is causing allergies in people (as well as heart disease). The issue of heated milk protein was made very clear over 30 years ago by Dr J.C. Annand from Dundee, Scotland who has many papers published in this regard and did a lot of good work in this area.

- Annand J.C. **Denatured bovine immunoglobulin pathogenic in atherosclerosis.** *Atherosclerosis, 1986 Mar;59(3):347-51*. Evidence is related supporting the hypothesis that heat-denatured bovine immunoglobulin (BGG) may be a major risk factor in the pathogenesis of atherosclerosis; it is shown that not only does the consumption of denatured BGG correlate at all three major epidemiological levels--historical, international and social class--but this highly reactive and invasive molecule also seems to possess the biological and/or pathological properties from which could evolve the main pathological changes found not only in atherosclerosis but also in some of its complications.
- Annand J.C. (1971) **The case against milk protein**. *Atherosclerosis, vol.13, p.137.*
- Annand J.C. (1972) **Further evidence in the case against heated milk protein**. *Atherosclerosis, vol.15, no.1 (Jan.), pp. 129-133.*

Dr. Annand stated,

> "**Pasteurisation, the heating of milk which changes the structure of protein, is a major cause of coronary thrombosis… the consumption of heated milk protein … not milk fat … has been found to correlate historically to the high incidence of thrombosis**."[47]

Frances M. Pottenger, a pioneer in the field of nutrition, performed what are now classical experiments on 900 cats over a period extending 10 years in the 1930s, stated,

[47] Related in an Organic Consumer Report publication in October 1975.

> "**Dairy products fed [i.e. eaten] in large amounts, including raw cream and raw butter, do not produce atheroma, do not raise the blood cholesterol, while the highest grade pasteurised produce does** …"[48]

Interestingly, the experiments of Dr. Pottenger are worthy of being mentioned even if briefly. His findings were reported at the Annual Seminar for the Study and Practice of Dental Medicine in Palm Springs, California in 1945. In this report Dr. Pottenger outline 10 years of study of around 900 cats. These cats were bred and studied for four and give generations.

These cats were divided into six groups. The first group was fed raw meat, raw milk and cod liver oil. The second group was fed the same except the meat was cooked. The other groups were fed raw meat and various kids of cooked milk, which is pasteurised, evaporated and sweetened condensed milk.

Only the cats in the first group remained healthy throughout the experiment. The cats in the other groups suffered a wide range of ailments including skeletal deformities, parasitic infestations, allergies, arthritis, reproductive failure, skin and cardiac lesions, and a variety of other degenerative conditions that are described in the medical literature.

There are plenty of other studies correlating milk with heart disease – and in all of these studies they are seeing the same results, but not making the obvious conclusions, its not "cow's milk" that is the cause, its "**pasteurised cow's milk**" that is the cause.

- P. Rank, **Milk and Arteriosclerosis.** *Medical Hypotheses, 20, No. 3 (1986), 317-338*. "Milk consumption is related to arteriosclerosis", "Recent landmark studies confirm a previously suspected close correlation between milk intake and arteriosclerotic heart disease".

- R. Popham, W. Schmidt, and Y. Israel. **Variation in Mortality From Ischemic Heart Disease in Relation to Alcohol and Milk Consumption**. *Medical Hypotheses, 12, No. 4 (1983), 321-329*. "Multiple regression analysis confirmed the importance of the milk factor ... as a determinant of variation in ischemic heart disease mortality rates."

- S. Seely. **Diet and Coronary Disease: A Survey of Mortality Rates and Food Consumption Statistics of 24 Countries**. *Medical Hypotheses, 7, No. 7 (1981), 907-918*. Direct, linear, and reasonably accurate **correlation has been found between coronary heart disease (CHD) mortality rates and the consumption of unfermented milk proteins**-namely the protein content of all dairy products with the only important exception of cheese."

- F. Alamgir, J. Caplin, J. Cleland, M. Norell, and G. Kaye, **Survival Trends, Coronary Event Rates, and the MONICA Project**. *The Lancet, 354 (4 Sep. 1999), pp. 862-863*. "In 1984, S Seely compared coronary death rates with food intakes and noted that the food most highly correlated with coronary deaths was milk... We used Seely's method with more recent data from WHO, European, and other published sources and also found the highest correlation was with milk... Changes in milk-protein consumption, up or down, accurately predicted changes in coronary deaths 4–7 years later... This temporal analysis (to be published in full elsewhere) strongly supports **Seely's conclusion that the principal dietary atherogen is milk and that the atherogenic moiety of milk is in its protein fraction and not in its fat**."

[48] In an article "A Fresh Look at Milk" and can be found in "A History of Randleigh Farm" of William Kenan Jr.

- Moss M. **Does Milk Cause Coronary Heart Disease?** *J Nutr Env Med 2002; 12(3): 207-16*. "Purpose: To investigate the evidence linking coronary heart disease (CHD) deaths with milk consumption, and the evidence against such a link. Design: Literature-based review, together with some statistical analysis. Materials and Methods: Analysis of data from a Medline search and standard statistical sources. Results: Several studies have been published showing a high positive correlation between milk consumption in different countries and rates of death a few years later from CHD. One investigation showed that countries which reduced milk consumption later had reduced rates of CHD death, while the only country studied which increased its milk consumption had an increased rate of CHD death. A variety of possible reasons for a link between milk and CHD have been suggested. Conclusions: **Milk consumption does appear to be strongly related to CHD death in communities where susceptible people live long enough**. Research into the diets of large numbers of people could usefully be preceded by sampling the questions on a subgroup to determine if the data collected will give accurate information on total milk consumption. A randomized controlled study on the effects of a milk-free diet on people with angina would be worthwhile".

- Moss M, Freed D. **The Cow and the Coronary: Epidemiology, Biochemistry and Immunology**. *Int J Cardiol 2003; 87: 203-216*. "Background: Certified death rates from coronary heart disease (CHD) are positively correlated country-by-country with milk consumption, particularly with that of the non-fat portion of milk. **CHD death is also associated with circulating antibodies against milk fat-globule membrane (MFGM), raising the possibility that milk intake might be a specific risk factor for CHD**. We studied the epidemiology and immunology of milk to see if the association is causal. Results: Milk showed a positive correlation with CHD death rates in both space and time (r >0.9 in some cases). Human anti-bovine MFGM antibodies bind to human large granular lymphocytes and also to human platelets, causing aggregation. Conclusions: **We suggest that non-fat aspects of milk, particularly the Ca/Mg ratio, lactose and MFGM antigens, have specific coronary atherogenic effects, both biochemical and immunological, and the simultaneous attack from these three directions may explain why this foodstuff has such a strong effect**".

This last study and the final sentence is **an absolutely amazing piece of research in terms of its findings**. I would love to expand upon this in a section on its own, but won't out of fear of digressing.

I haven't even touched upon homogenisation yet, and there is evidence that it plays a role in diseases. I won't go into all the details about it here but will simply establish for brevity's sake that researchers readily admit that the true and real effect homogenisation is having on milk quality and health is something that is not fully known.

Important Words Regarding Studies of Effect of Homogenisation on Metabolism of Milk

Most milk today is pasteurised and homogenised. Homogenisation was introduced to solve the problem of milk-creaming. So homogenisation was introduced to make the cream uniform in the milk and not rise to the top. This was for the benefit of the milk producers, from a marketing point of view.

Dairy researchers readily admit the lack of long term safety studies on homogenisation of milk. Marie-Caroline Michalski writes, "*...the effect of homogenization has not been studied. In the current context of obesity and allergy outbreaks, the impact of homogenization and other technological processes on the health properties of milk remains to be clarified*.", as occurs in a paper in the journal *Trends in Food*

Science & Technology 2006, vol. 17, no8, pp. 423-43. This is ready acknowledgement that they don't' really know the impact that homogenisation is having on health.

I wan to end this section with a quotes from another paper, and an additional review paper by the same author in which the issue is raised about how little is known about the true effect of homogenisation upon health and particularly diseases such as coronary heart disease, diabetes, and allergy, and the need for *clinical-level* studies. I totally agree with this author. The same should be done with pasteurised milk. Most of what we have are epidemiological studies, and epidemiological studies don't deal with true underlying facts, they deal in probabilities. It's clinical level studies that establish the facts. Epidemiology deals in "what could have happened" at the population level, clinical studies deal in "what actually did happen" on an individual level. Only the latter is real science *per se*. So this call by Michalski is to be much commended.

- Marie-Caroline Michalski. Joint Research Unit, Metabolic Regulations, Nutrition and Diabetes, Universite de Lyon, Faculté de Médecine Lyon Sud, France. **Effects of homogenisation on the health properties of market milk**. *Food Science Central (http://www.ifis.org) 6 August 2007*. "Milk contains bioactive proteins, peptides, lipids, oligosaccharides and growth factors, as well as other endogenous or exogenous trace elements. However, their possible activation, alteration or inactivation due to dairy processes are not well known. **We feel that studies dealing with the health properties of milk and dairy products should take their physico-chemical properties and structure into account as relevant parameters, because they affect digestion metabolism. It is thus of primary importance that the technological treatments applied to the food products be described in clinical studies**. In the current context of obesity and allergy outbreaks, interdisciplinary studies on the impact of processing parameters and physico-chemical properties on the health value of milk and dairy products would help to design products meeting the required qualities of shelf-life, taste and health value".

Michalski is advocating studies of this nature so that they would, "*help to design products meeting the required qualities of shelf-life, taste and health value*". The very simple answer to this is just create and enforce a naturally clean milk supply, and you wouldn't have the problems associated with pasteurised homogenised milk (see next section for detailed treatment of this subject from a historical perspective).

In another longer review paper of all current research on the subject, *British Journal of Nutrition (2007), 97, 598–610*, Michalski writes,

> "The effects of milk homogenization and heating regarding the bioactivity of casein peptides and MFGM proteins and lipids, and the cardiovascular impact of milk consumption, **remain to be elucidated**."

So they don't really know what the effects are of heated milk proteins and structural changes induced by homogenisation (even though studies on this have been done by the likes of J.C. Annand 30 years ago, as well as others more recently). She continues,

> "Further studies should aim to dissociate heat treatment from homogenization effects. It also appears necessary to compare the digestion and health effects of milk products containing fat droplets with different size and interface composition (native MFGM or fragments thereof, native micellar casein, sodium caseinate, whey protein isolate, phospholipids etc.)."

She is saying that effects of pasteurisation and homogenisation should be studied in isolation, and likewise to study the impact upon health and digestion of reduction in particle size of the fat droplets through homogenisation. She continues,

> "More generally, milk contains bioactive proteins, polypeptides, peptides, lipids (cholesterol, phospholipids such as sphingomyelin, conjugated linoleic acid, gangliosides and cerebrosides), oligosaccharides, hormones and growth factors, as well as additives (vitamin D, n-3 fatty acids in some brands), bacteria, and possible traces of endotoxins, antibiotics, detergents/disinfectants and pesticides/insecticides; however, their possible activation, alteration or inactivation due to dairy processes are not well known."

That's a very revealing statement in many ways. The inferior quality, pasteurised homogenised milk from cows fed on unnatural diets, in unnatural habitats, is a concoction of many things including antibiotics, detergents and pesticides – and they are saying that the effects of this upon the dairy processes are "*not well known*".

> "In this respect, the effect of new alternative processes for milk preservation should be studied regarding their putative impact on milk-related health properties."

Here we have it, they are looking for alternatives to pasteurisation. I know that there are around ten different alternative solutions being looked at, as alternatives to current methods of making milk "safe". This shows that pasteurisation is an inferior solution and is acknowledged as such, and research is under way to find superior methods. There is one solution that would solve all these problems. Just engineer a clean milk supply. That's what doctors and physicians were aggressively and fiercely fighting for over a hundred years ago, with very strong opposition to pasteurisation. How keen was their insight.

The fact of the the matter is that a clean milk supply is already in existence, and its producing fresh, raw, natural, living milk that people are finding is making a tremendous difference to their health and that of their children.

Everything that has preceded proves that the benefits of fresh, raw, natural, living milk, "***labanan khaalisan*** **لبنا خالصا**" as Allaah placed it in the creation, are more than just claimed benefits, they are true and real benefits.

So far, whatever I have covered is only half the story.

The other half of the story is revealed when you look at *how conventional dairy milk is actually produced*. So leaving the changes in composition and physiology to one side, lets look at how conventional dairy milk is produced in the first place. Before that, a background on the corruption of the milk supply in the 19th century is necessary.

Corruption of the Milk Supply in 19th Century Industrialized Nations and The Circumstances Behind the Adoption of Pasteurization

Raw Milk That *Must* Be Pasteurised

For "raw milk destined for pasteurisation", standards are very lax for the actual production of this inferior milk from dairy cattle, but standards in post-production processing of this milk are very strict. In other words, what's happening in today's mass-production milk industry is inferior and "pathogen" infested milk being cleaned up for public consumption. "Dairy herds" routinely test for "pathogens" due to what they are fed and the conditions they are kept in, and their developed antibiotic resistance (as a result of small quantities of antibiotics put in cattle feeds).

We hear and read all the time, statements that unprocessed, raw milk has lots of "pathogenic" bacteria and is dangerous and so on. This is true. But this is in relation to the "*raw milk ultimately destined for pasteurisation*" the conventional dairy cattle milk that makes up most of the supply. The likes of these statements are oft-repeated, oft-quoted and spread througought publications, media, newspaper reports and so on.

I would agree entirely, pasteurisation is absolutely essential for such milk as a matter of utmost public health concern. Not pasteurising such milk would be criminal and downright dangerous. And anyone seeking out this type of inferior raw milk will be exposing themselves to grave and serious danger.

What I don't agree with, however, is that fresh, raw milk produced by healthy cattle routinely tested for disease, fed on pasture, in their natural habitat and acquired and bottled in hygienic setting, tested using modern technology for absence of "pathogens", in compliance with state and national legislation - that this milk is inherently dangerous and should require pasteurisation. This is not the case and *is proven not to be the case*. **This is milk as Allaah placed it in the creation**.

It's important that differentiation is made between the two. This milk exists today wal-hamdulillaah and available for whoever seeks it, *and lofty and exonerated is Allaah from that He should make such milk to be disadvantageous for human consumption in its natural form*.

Thus, for fresh raw milk, as Allaah has placed it in the creation, the issue of hygiene and safety is a separate matter from the inherent nature and quality of this milk. Nations and societies have been enjoying the immense benefits of fresh, raw milk for thousands of years, exactly as Allaah placed it in nature, without much complaint - until the advent of the filth and squalor of the 19th century industrialised nation state which led to the diseases of squalor such as typhoid, cholera and others to spread via numerous transmission routes, one of which was milk.

19th Century Industrialization, Expansion of Cities and the Milk Supply

Milk unfortunately became one of the single largest vehicles for transmission of disease in the 1800s. It all came down to total abuse of standards of hygiene, the actions of rogue dairy farmers and producers, unsanitary milking operations, and the overriding of commercial interests (on behalf of dairies and unscrupulous farmers) over the interests of public safety. There were lots of unprecedented conditions in 19th century industrialized nations. As such, measures were required to curb the outbreaks of disease, many of which were human diseases transmitted through the medium of milk, and not inherent to milk

itself. These human diseases arose in that time (the industrialized nation state) due to lack of hygiene, malnutrition, absence of a clean water supply, and squalid living conditions. This happened in a time where cities exploded with growth in their populations. The emergence of mass-dairy production just added another medium for the transmission of disease that was already rampant – typhoid, cholera, tuberculosis, scarlet fever and so on.

Due to these horrendous standards of hygiene in all aspects of daily life, and the nature of the logistics of milk supply over long distances (rail was used to transport milk over hundreds of miles), m*ilk became a vehicle for diseases.* It became the route through which diseases spread. Commentators on this situation explained that the most desired solution to this problem was to ensure a "naturally pure milk supply", however the practicalities and circumstances forced an admission that artificial processes such as pasteurisation may be required as a matter of immediacy and urgency, as the easier of two options.

I quote you from Swithinbank and Newman, "Bacteriology of Milk" 1903, (p.453), through Heather Zimmerman in Porters "Milk Diet as a Remedy For Chronic Disease" who wrote: "At the outset, we desire to state that if dairy work is properly carried out and the herds, cowsheds, and milking operations are of the standard suggested in the forgoing pages[49], the use of pasteurisation and sterilisation are not required for milk which is produced and consumed in the same locality. *Personally we are strong of the opinion that what is required is a naturally pure milk supply in contradistinction to an artificial pure milk supply*[50]. As things are at present and under the circumstances of modern civilization, however, we admit that it may be necessary that some such processes be adopted[51]."

Nathan Strauss, who was largely responsible for the predominance of pasteurisation at the turn of the century said, "If all these reforms[52] were universally carried out then we should indeed have an ideal milk supply. On an experimental scale, we may say, they have been carried out already so that of the possibility of reforms there can be no doubt. But the price of such milk is prohibitive for all but the rich … The reform can only come gradually; there must be improvement before there can be perfection. That being so, there is nothing for it but, for the present at least, to adopt a temporary policy of compromise … This policy, in a word, is Pasteurization."[53]

In the book "The Common Sense of the Milk Question" by John Spargo (1908), he says about those favouring pasteurisation that they, "*frankly admit that pasteurisation is a makeshift – a necessary evil. They readily admit, as all sane men must, that it would be vastly better to have clean and uninfected milk, rather than milk which has been, so to say, cleansed and disinfected*"[54].

Pasteurisation was never intended as a permanent solution. It was only a temporary measure which the circumstances demanded and which was actually vociferously opposed at the time. Even proponents acknowledged it to be an inferior solution. The most desired solution was to create standards and protocols to ensure safe delivery of fresh, raw milk, something that actually did take place in the US

[49] The standards being referred to are part of today's Pasteurized Milk Ordinance and refer to standards of hygiene.
[50] Referring here to clean, fresh milk as opposed to a pasteurised (artificial) milk.
[51] Referring here to pasteurisation or adding preservatives.
[52] I.e. relating to maintaining a clean, hygienic supply of fresh, raw milk.
[53] "The Life Work of Nathan Strauss" by Lina Guthers Strauss, p.236 by way of "A Very Brief History of Milk as Medicine" Andrew Bernstein.
[54] "A Very Brief History of Milk as Medicine", Andrew Bernstein.

and which gave birth to "certified milk". The provision of this certified raw milk ran in parallel to pasteurised milk for decades in the United States.

In light of the wide scale abuses of hygiene in the dairy industry, the long distances milk had to travel due to increased demand due to the swelling of cities, and the long time such standards and protocols would have taken to implement on a much wider and broader scale, it was not practical and thus pasteurisation was a very easy, immediate and quick solution. Over the next few decades pasteurisation became the standard *due to a mix of political and economic factors*.

I refer you to an amazing essay that sheds great light on this subject by Alan Czaplicki Called "**Pure Milk Is Better Than Purified Milk -Pasteurization and Milk Purity in Chicago, 1908–1916**". This essay appears the Social Science History Journal (Volume 31. Number 3, Fall 2007) and you can purchase it online from Project Muse at the John Hopkins University (http://www.jhu.edu). – I'll quote you its abstract for now and will quote extensively from it later:

> "This article explains how pasteurization—with few outspoken political supporters during this period—first became a primary milk purification strategy in Chicago and why eight years passed between pasteurization's initial introduction into law and the city's adoption of full mandatory pasteurization. It expands the current focus on the political agreement to pasteurize to include the organizational processes involved in incorporating pasteurization into both policy and practice. It shows that the decision to pasteurize did not occur at a clearly defined point but instead evolved over time as a consequence of the interplay of political interest groups, state-municipal legal relations, and the merging of different organizational practices. Such an approach considerably complicates and expands existing accounts of how political interests and agreements shaped pasteurization and milk purification policies and practice."

In short, conditions arose that required urgent action – pasteurisation was a good short term solution but political factors played a major role in making it the chosen route as opposed to cleaning of the milk supply itself which was what doctors and physicians wanted, as they recognised its immense benefits and knew of the inferiority of "cleaned up inferior quality, dirty, raw milk".

Glimpses into the Swill and Slop Milk of the Era

Here are the scans I promised of Robert Hartley's 1842 book called "*An Historical, Scientific and Practical Essay on Milk as an Article of Human Sustenance, with a Consideration upon the Present Unnatural Methods of Producing It for the Supply of Large Cities*". I ask that you kindly take the time to look at the issues revealed and addressed by Hartley as far back as the 1840s. This situation remained for decades and was responsible for the spread of numerous diseases. Notice the references to "slop milk" and "pure milk" and differences between them. With the increase in cities and populations in them, and therefore, the demand in milk, greedy dairies and farmers cared little about quality and focused on quantity. Thus "slop" and "swill" milk emerged and through this type of milk that diseases spread. Pure milk was still available and was known to be safe, healthier and superior.

I kindly ask that you read through every single word and sentence in the contents below to get a real good picture of the situation.

CHAPTER XII.

THE UNNATURAL METHODS OF PRODUCING MILK FOR THE CONSUMPTION OF LARGE CITIES.

2

CHAPTER XIII.

EVILS OF UNNATURAL FEEDING DEMONSTRATED FROM THE PHYSICAL STRUCTURE OF THE COW.

CHAPTER XIV.

APPROPRIATE FOOD, PURE AIR, AND EXERCISE, NECESSARY TO THE HEALTHY CONDITION OF DAIRY CATTLE.

CHAPTER XV.

ACTUAL CONDITION OF THE DAIRIES.

CHAPTER XVI.

CONDITION OF THE DAIRIES CONTINUED.

CHAPTER XVII.

THE CAUSE INFERRED FROM THE EFFECTS.

CHAPTER XVIII.

OTHER DEMONSTRATIONS OF THE EFFECTS OF PERNICIOUS DIET.

CHAPTER XXVIII.

LETTERS FROM CHARLES A. LEE, M. D. LATE PROFESSOR OF MATERIA MEDICA IN THE UNIVERSITY OF NEW-YORK, ETC.

CHAPTER XXIX.

MILK SICKNESS.

CHAPTER XXX.

FOREIGN MILK DAIRIES.

CHAPTER XXXI.

OBJECTIONS ANSWERED, AND THE DIFFICULTIES OF REFORM CONSIDERED.

CHAPTER XXXII.

FRAUDS AND IMPOSITIONS IN THE SLOP-MILK SYSTEM.

CHAPTER XXXIII.

FACTS AND ESTIMATES.

This is just one book from many from the time period right through to the early 20th century that show exactly what happened to the milk supply in industrialized nations. Your views towards fresh, pure, raw, natural milk - like those of most people - are unfortunately heavily skewed towards the original milk problems in the beginnings of the industrial age that were the result of historical precedents.

Summary of 19th and 20th Century Slop Milk Distillery Dairies

I want to list notable items from the contents pages of Hartleys 1842 book to show that in reality there is not much difference between milk quality then and milk quality now, with the exception that we just have cleaner and more hygienic environments, thus less disease. As for the actual inherent milk quality, then its essentially the same, but without as much dirt and filth. People could get away with a lot more then. These are topics Hartley covers, and I'm quoting from him verbatim whatever is in quotes:

- "Connection of the dairies with distillers" – today's dairies are no different, they purchase distiller's grains, leftovers from the brewery industry.
- "Slop as food for fattening cattle" – yes, we still have slop today.
- "Distillery-slop dairies".
- "Actual Condition of the Dairies", "Confinement of the milch-cows. Consequences of this treatment" – this is how all modern milk is produced. Confinement does have very tangible effects on the cow's health, and ultimately upon the quality of the milk produced.
- "Injurious consequences of slop on the health of cattle" – Hartley knew it and saw it back then.
- "Facts illustrating the poisonous effects of milk", "Milk sickness".
- "Impure milk acid", "Test of acidity", "How acidity may be corrected".
- "Beer-grains", "Milk in our cities worse than in Paris".
- "The superiority of pure milk for culinary purposes" – yes, there was pure, fresh, real milk available then that was not associated with disease.
- "Adulteration of milk with drugs" – well, things are no different today, we have antiobiotics and pesticides in the milk supply.
- "Cases of sickness occasioned by slop-milk, and recovery".
- "Difficulties of obtaining pure milk for children" – they knew that real, pure milk was superior and it was in existence, but in cities it was hard to get hold of.
- "Influence of food upon quality of milk" – as the Prophet (sallallaahu alayhi wasallam) alluded, "…*for indeed it ruminates on every herbage*", as Ibn al-Qayyim also mentioned in "at-Tibb an-Nabawiyy", that what cattle feed upon affects the medicinal qualities of their milk.
- "Teeth of the present generation inferior to those of the preceding" – as a result of inferior milk.
- "Effects of slop milk not limited to infants".
- "Phosphate of lime in pure milk" – he means here the unscrupulous practice of adding chalk to milk in those days to make up for its inferiority. In modern times we hear of "fortified" milk. Actually its pretty much the same thing. Milk that needs "fortifying" shows that it is poor milk in the first place. It's inherently inferior to begin with, and though pasteurisation makes it "safer" from one angle, it increases its inferiority from another.
- "Impure milk not peculiar to American cities" – this was happening all over the place. Hartley mentions, "Flemish and Dutch dairies, "Dairy management in Holland, Switzerland", "How managed for the supply of large towns with milk in England".
- Regarding England in particular, he has the following headings, "Brewer's grains, the chief food of milch cows", "Distillery slop", "Rhodes dairy, description of", "Laycocks dairy", "Metropolitan dairy", "Frauds in milk", "Effects of stabling", "Cows in London", "Adulterations and impositions in milk", "Harley's dairy at Glasgow".

- Regarding the difficulties of reform for this very serious situation regarding the milk supply he has numerous headings that indicate the cow's actually becoming addicted to the distillery slop! He also writes, "Why distillers are opposed to reform", "Dilution and sale of slop essential to the support of distilleries". Today this is called "Distiller's grain" or "Brewer's grain" and it can be wet (which is the "sloppy" version) or dry. Hartley pointed out back then the evils of this slop milk. Today, dairy cattle are fed on the same thing, along with other unnatural feeds.
- "The poor willing to pay a fair price for good milk", "Price no difficulty with the wealthy". In other words, the poor of that time knew the difference between real, good milk and the inferior milk from the dairies. Unfortunately today, most of mankind in the developed world is in ignorant bliss and can't tell the difference between milk as Allaah placed it in the creation, and between what is essentially the same milk that was being produced in the 19th and early 20th centuries, the "slop" milk.
- "Feeding cattle with slop, the result of choice, not of necessity" – in other words this was a calculated move for purely commercial reasons. It was more profitable. That's what today's mass-production of dairy is about, its all about profit. Pasteurisation could not have been a more wonderful invention for a corrupt, and inferior milk supply.

I would like you to bear all this in mind and consider well what is to follow in the next few pages

We Have the Same Quality Milk Today

Those same problems are found **in conventional dairies** today that produce "**raw milk destined for pasteurisation**". Cattle are fed unnaturally on grains, soya, "slop" and other foods that produce inferior quality milk, leading to acid resistant "pathogenic" (and heat-resistant) bacteria. They are injected with growth hormones (in numeous countries), kept in unnatural conditions leading to illnesses and subsequently filled with antibiotics. This leads to multi-drug resistance bacteria and as these antibiotic drugs also remain in the milk it leads to antibiotic resistance in those who consume the milk.

The consequences …?

16,000 Culture-Confirmed Cases and Almost 200,000 Affected in Pasteurised Milk Epidemic – Antimicrobial Resistant Salmenollosis

Here's a paper from the Journal of the American Medical Association December 11th 1987:

Massive Outbreak of Antimicrobial-Resistant Salmonellosis Traced to Pasteurized Milk

C. A. Ryan, M. K. Nickels, N. T. Hargrett-Bean, M. E. Potter, T. Endo, L. Mayer, C. W. Langkop, C. Gibson, R. C. McDonald, R. T. Kenney and et. al.
Division of Bacterial Diseases, Centers for Disease Control, Atlanta, GA 30333.

Two waves of antimicrobial-resistant Salmonella typhimurium infections in Illinois totaling over **16,000 culture-confirmed cases**[55] were traced to **two brands of pasteurized 2% milk produced by a single dairy plant**. Salmonellosis was associated with taking antimicrobials before onset of illness. Two surveys to determine the number of persons who were actually affected yielded estimates of **168,791 and 197,581** persons, making this the largest outbreak of salmonellosis ever identified in the United States.

A Brief Word About Pasteurised Milk and Bacteria

We are seeing emergence of new strains of bacteria that are associated with an ever-increasing level of food-poisoning whilst previously being unheard of. Campylobacter is a good example. When you look at the data over the past century, you see trends of bacterial species becoming prominent and then fading away, whilst others come to the fore. Campylobacter emerged in the mid 1970s.

There are many factors at work behind this and I will point out just one or two key issues, as this is whole subject in itself.

One factor is the sterilisation of the food supply which is removing the natural contact between humans and what would normally be harmless, beneficial bacteria. There is a degree of "overkill" involved which is leading to people's immune systems not being exercised and trained with natural contact with such bacteria. Thus, first time exposure to such bacteria leads to acute illness or allergy. I have scientific papers to establish this fact, showing regular early contact with species such as Campylobacter leads to naturally developed immunity. Campylobacter has always been ubiquitous, its always been everywhere, in food, in humans and elsewhere, and it was not harmful before.

That it is associated with enteritis in susceptible individuals is actually *an interplay of numerous factors of which the bacteria is only one*. Not all people get food-poisoning after consuming contaminated food.

Another factor is increasing antibiotic resistance, where use of antibiotics lead to mutations and more resistant bacteria which were previously harmless or even beneficial bacteria. Because of the nature of the food supply chain, and food production and farming methods (use of antibiotics) people are exposed more and more to small levels of antibiotic residues through ingestion of food. This is besides

[55] Later ended up being 19,660 cases.

antibiotics used for medication in illness. This study is one of many highlighting and trying to address aspects of the problem of antibiotic residues in milk and meat.

- Mitchell JM, Griffiths MW, McEwen SA, McNab WB, Yee AJ. **Antimicrobial drug residues in milk and meat: causes, concerns, prevalence, regulations, tests, and test performance**. *J Food Prot. 1998 Jun;61(6):742-56*. This paper presents a historical review of antimicrobial use in food animals, the causes of residues in meat and milk, the types of residues found, their regulation in Canada, tests used for their detection, and test performance parameters, with an emphasis on immunoassay techniques. The development of residue detection methods began shortly after the introduction of antimicrobials to food animal production in the late 1940s. From initial technical concerns expressed by the dairy industry to the present public health and international trade implications, there has been an ongoing need for reliable, sensitive, and economical methods for the detection of antimicrobial residues in food animal products such as milk and meat.

Add to this the very large numbers of immunodepressed people walking around (due to poor nutrition and medication whose side effects lead to weakened immunity), then you have the right environment for potentially huge outbreaks associated with anti-microbial resistant bacteria. Case in point, the one mentioned above.

In the above outbreak Salmonellosis was associated with "taking anti-microbials" before onset of illness. This means that the beneficial bacteria in the guts of these people (*which constitute an integral and essential part of the human immune and defence process*) was wiped out prior to them taking the pasteurised milk. Further, consumption of pasteurised milk that still contains antibiotics (given to the cattle in their feed) also means developed resistance of "pathogenic" bacteria inside the human gut over prolonged periods of time. Adding these things together, you have all the ingredients for mass food-poisoning from pasteurised milk. These do occur and they will be blamed on "raw milk" in the guise of "incomplete pasteurisation". Bearing in mind that the "raw milk" we are speaking of here (from conventional dairies) is indeed dangerous and must be pasteurised.

Pasteurisation is also leading to "***emerging heat-resistant pathogens***" as is being reported and discussed more and more in dairy science journals and government reports. Such bacteria are being implicated in Crohn's disease in numerous studies, and I have scientific papers and government reports on these issues. Campylobacter, Listeria and Salmonella have all been found in food-poisoning outbreaks involving pasteurised milk, and some forms of Listeria that survive pasteurisation. You might say, "this proves that raw milk definitely needs to be pasteurised", and I would say I absolutely agree, the inferior, poor quality raw milk from artificially fed, ill cows on antibiotics definitely needs to be pasteurised.

- Esperanza, F. Rivera, M.D. Ricarchito, B. Manera, M.D. **Antimicrobial Activity of Breastmilk Against Common Pediatric Pathogens**. *Phil J Microbiol Infect Dis 1989; 18(2):67-74*

In this excellent research paper, the authors demonstrate the amazing ability of breast milk to inhibit and destroy nine bacterial species including S. aureus, E.coli, Salmonella, Enterobactera and Shigella. I've mentioned it here because there is a great statement they make at the end under a "Recommendations" heading, after summarizing their great findings. They say: "*It can be said that in any part of the world, no single pediatric measure has such widespread and dramatic potential for child health as a return to breastfeeding.*"

I say this is absolutely true regarding breastfeeding, and – given everything discussed so far and what is to follow – it is equally as true regarding fresh, natural, living, clean cow's milk. I believe that no single measure has such widespread and dramatic potential for general human health as a return to fresh, clean, natural, living milk from pasture fed, healthy cows in their natural habitat, acquired in a hygienic setting in compliance with strict bacteriological standards. All of which is possible and currently available limitedly.

Efforts to engineer **a naturally clean milk supply** would have an absolutely huge and positive impact on public health.

Milk Acidity from Conventional Dairy Farms and Bacterial Acid-Resistance

Note also from the book of Hartley that he makes references to the acidity of milk in that time, and it being an aberration from natural milk. Milk ought to be neutral, if not slightly alkaline in its pH. Today, we actually have the same thing – acid milk. This is producing acid-resistant bacteria in both the milk and in the meat, due to the acid-forming property of the food given to cattle (distillery grains and other feeds).

- Francisco Diez-Gonzalez, Todd R. Callaway, Menas G. Kizoulis, James B. Russell. **Grain Feeding and the Dissemination of Acid-Resistant Escherichia coli from Cattle**. *Science 11 September 1998 Vol. 281. no. 5383, pp. 1666 - 1668*. "The gastric stomach of humans is a barrier to food-borne pathogens, but Escherichia coli can survive at pH 2.0 if it is grown under mildly acidic conditions. Cattle are a natural reservoir for pathogenic E. coli, and cattle fed mostly grain had lower colonic pH and more acid-resistant E. coli than cattle fed only hay. **On the basis of numbers and survival after acid shock, cattle that were fed grain had 106-fold more acid-resistant E. coli than cattle fed hay, but a brief period of hay feeding decreased the acid-resistant count substantially**."

That's a 106-fold increase – that's a staggering increase. Even if we get a substantially reduced level of acid-resistance due to a short period of hay feeding, whatever is left of increased acid-resistance is still a very significant amount.

- J. B. Russell, F. Diez-Gonzalez 1, and G. N. Jarvis. Agricultural Research Service/USDA, and Section of Microbiology, Cornell University, Ithaca, NY. **Invited Review: Effects of Diet Shifts on Escherichia coli in Cattle**. *Journal of Dairy Science Vol. 83 No. 4 863-873*. "**When fermentation acids accumulate in the colon and pH decreases, the numbers of acid-resistant E. coli increase; acid-resistant E. coli are more likely to survive the gastric stomach of humans**."

- James B. Russell, Jennifer L. Rychlik. Agricultural Research Service, U.S. Department of Agriculture. Department of Microbiology, Cornell University, Ithaca, NY 14853, USA. **Factors That Alter Rumen Microbial Ecology**. *Science 11 May 2001:Vol. 292. no. 5519, pp. 1119 - 1122*. "Ruminant animals and ruminal microorganisms have a symbiotic relationship that facilitates fiber digestion, **but domestic ruminants in developed countries are often fed an abundance of grain and little fiber**. When ruminants are fed fiber-deficient rations, physiological mechanisms of homeostasis are disrupted, **ruminal pH declines, microbial ecology is altered, and the animal becomes more susceptible to metabolic disorders and, in some cases, infectious disease**. Some disorders can be counteracted by feed additives (for

example, antibiotics and buffers), **but these additives can alter the composition of the ruminal ecosystem even further**."

As I keep saying and will continue to say, cattle fed on pasture (grass, shrubs, plants), left in their natural habitat will **not** produce dangerous milk. Rather, they will produce, fresh, natural, safe, clean, living milk – "***labanan khaalisan*** **لبنا خالصا**" as Allaah has described it. True, environmental factors can lead to contamination of such milk, but that is not unique to raw milk, it is universal for all foods, including water, produce, meat, poultry and so on. So we have to keep things in context.

Today's Mass-Produced Pasteurised Milk

Since the milk from these contemporary dairies is ultimately destined for pasteurisation, actual milk quality standards are very low. The milk produced thereby, absolutely must go through pasteurisation for it to be deemed safe for human consumption. Although not as horrid as milk in the 19th and early 20th century industrialized nations, the reality of today's milk and its essential nature is fundamentally the same as that from the era of "swill and slop milk". If instead of pasteurisation state authorities at that time had endeavoured to actually clean up the milk supply (in terms of feeding and habitat) – despite associated costs – we would not have this particular situation today and would, inshaa'Allaah, have been enjoying good, clean, fresh milk. Despite that, there are people enjoying good clean, fresh, natural milk because there are honest and scrupulous farmers who are providing it – in various parts of the world.

Pasteurisation solved an immediate problem of disease transmission through milk, but it also led to the realisation amongst many involved in the dairy business that the use of pasteurisation can afford a good commercial advantage in that a greater milk yield of inferior quality can still be produced and sold after pasteurisation. As I have said elsewhere, pasteurisation is primarily a commercial consideration in today's mass-production dairies. It does not equate entirely to public safety as will be demonstrated later inshaa'Allaah.

Comparison Between What 19th and 20th Century "Distillery Dairies" Fed Their Cattle To What Today's Conventional Dairy Cows Are Fed On

I refer you to the "Hoards Dairyman" (www.hoards.com) a magazine for dairy farmers and an edition in early 2002 in which the following is revealed about what today's dairy cattle are fed:

- Gourmet foods including chicken feathers, blood, pork, fish and soybeans
- Almost 80% of cows are fed sodium bicarbonate and more than half get yeast and magnesium dioxide.
- Over a third of dairy cows in the US are given supplements such as niacin, zinc methionine and rendered fat (tallow) from other dead dairy cattle.
- Roasted soybeans are routinely given to dairy cows. The issue of soy is an entirely different subject on its own.
- Over a third receive dried blood from chicken.

A survey of numerous dairy cattle feeding reports provided by the industry itself reveals:

- Corn gluten feed, cottonseed meal and a variety of different **commercial grains**.
- **Blood meal** – from the by-products of the meat rendering industry
- **Meat meal** – which is "A rendered product from the carcasses of mammals".

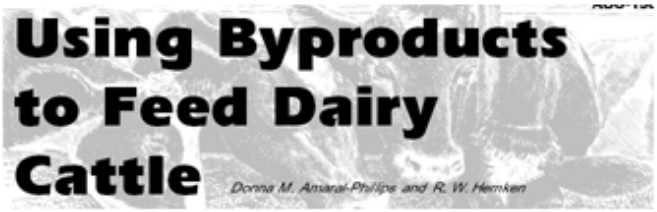
- **Hydrolyzed feather meal** – which is "Byproduct from the pressure treatment of clean, undecomposed feathers from slaughtered poultry"
- Liquid whey – which is "Byproduct of cheese production"
- **Stillage** – which is "**Thin slop**" and "**Byproduct from the distillery industry**" (these are words used by the industry – not mine).
- Inert fats (bypass fats)
- **Tallow** – which is "Derived primarily from rendered beef fat but may include other animal fats".
- **Yellow grease** – which is "Byproduct derived from grease used in the restaurant industry."
- ***Brewers dried grains*[56] *and distillers dried grains***. These are grains formerly used to distil alcoholic drinks. Times haven't changed much from the "swill and slop" distillery, brewery dairies of the 19th century.
- Soy and other hulls – this brings in **estrogen** into the cow milk
- **Antibiotics**[57] are added to feeding rations for "stress reduction" and legal limits vary but can be up to 100mg/ day. As cattle are being abused and made to give a higher milk yield by unnatural methods, they will be stressed and prone to disease.

This information is all from official dairy science publications and reports. All these foods, feedlots and by-products are used in conventional dairy farms. All this is artificial and its all aimed at artificially increasing milk yield, whilst keeping the cows "stabilized". These cows are ill, worn-out cows that live four to five times shorter than normal grass fed cows. It is the milk produced from cows that are fed on these things that your average person is consuming today. Even much of what is claimed to be "organic" milk is not entirely free from some of these feeding practices and you have to research on a farm by farm basis to get to the realities.

I am including some screenshots of a College of Agriculture document that makes recommendations on feeding practices to dairy farmers below. I've simply cut and pasted the relevant parts:

[56] Let me quote you from a UK supplier of these grains, "Brewers Spent Grains (Draff) is a moist by-product from the brewing industry, obtained from residues of malted and unmalted cereals and other starchy products. At the Brewery the cereal (mainly malted barley) is carefully infused with hot water ('wet mashed') to extract malt sugars. The liquor is drained off (wash) and then treated in various ways, depending on the end product i.e. Beer, Lager, Vinegar etc. The remaining fibrous and protein materials are mixed to produce brewers grains." From a supplier in Cheshire, UK.

[57] Today, antibiotics have found wide *non-medical* use. Some are used in animal husbandry, along with vitamin B_{12}, to enhance the weight gain of livestock. However, some authorities believe the addition of antibiotics to animal feeds is dangerous because continuous low exposure to the antibiotic can sensitize humans to the drug and make them unable to take the substance later for the treatment of infection. In addition low levels of antibiotics in animal feed encourage the emergence of antibiotic-resistant strains of micro-organisms. Drug resistance has been shown to be carried by a genetic particle transmissible from one strain of micro-organism to another, and the presence of low levels of antibiotics can actually cause an increase in the number of such particles in the bacterial population.



Blood Meal
1. Byproduct of the rendering industry.
2. Made from clean, fresh animal blood exclusive of the urine, hair, stomach contents, etc.

Brewer's Grains
1. Byproduct produced by the beer or malt industry which includes spent grain and hops.

Corn Gluten Meal
1. Byproduct is produced during the wet corn milling process where corn syrup and starch are made.

Fish Meal
1. Made from clean, dried, ground, and undecomposed fish.

Meat Meal
1. A rendered product from the carcasses of mammals excluding blood, hair, hoof, hide trimmings, feces, stomach, and rumen contents. Similar to meat and bone meal except no minimum phosphorus concentration required.

Meat and Bone Meal
1. A rendered product from the carcass of mammals excluding blood, hair, hoof, hide trimmings, feces, stomach, and rumen contents. It contains a minimum of 4% phosphorus with a calcium content that does not exceed 2.2 times the phosphorus concentration.

Tallow
1. Derived primarily from rendered beef fat but may include other animal fats.

Corn Gluten Feed
1. A medium protein byproduct obtained when high fructose corn syrup is made.

Wet Distiller's Grains
1. Wet distiller's grain contains approximately 65-75% moisture. It is produced by straining out the coarser particles found in the stillage and then pressing to remove some moisture.

Dried Distiller's Grains with Solubles
1. Byproduct from the fermentation of grain for the production of ethyl alcohol.
2. Dried distiller's grain with solubles. Solubles left over from the fermentation are added to the grains before they are dried (most common product).

Hydrolyzed Feather Meal
1. Byproduct from the pressure treatment of clean, undecomposed feathers from slaughtered poultry.

Stillage (Thin Slop)
1. Byproduct from the distillery industry.
2. Material remaining after straining, pressing, or centrifuging out larger particles.

Yellow Grease
1. Byproduct derived from grease used in the restaurant industry.
2. Best used in feedlot rations rather than rations for lactating dairy cows.

Wow … that's great – so we will have the same brewer's grains, distiller's grains, the "slop" from the distillery industry (these are all acid-fermented grains used for producing alcohol). We have blood which is a byproduct of the meat rendering industry, meat and bone meals coming from carcasses of animals, feather meals (hydrolysed for good measure), corn (and there's soya, cottonseed and others too).

This really should be considered cattle abuse, and what's worse is that today's "dairy science" is all about how to maximise milk production whilst using the cheapest food sources that will give as much nutrition to cattle as the natural cattle diet would.

Below is a press release from the Kansas State University on research related to distillery grain feeding and E.Coli – and no its not from the 1840s, its from 2007.

Public release date: 4-Dec-2007
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K-State researchers findings on E. coli

Feeding cattle byproduct of ethanol production causes E. coli 0157 to spike

MANHATTAN, KAN. -- Ethanol plants and livestock producers have created a symbiotic relationship. Cattle producers feed their livestock distiller's grains, a byproduct of the ethanol distilling process, giving ethanol producers have an added source of income.

But recent research at Kansas State University has found that cattle fed distiller's grain have an increased prevalence of E. coli 0157 in their hindgut. This particular type of E. coli is present in healthy cattle but poses a health risk to humans, who can acquire it through undercooked meat, raw dairy products and produce contaminated with cattle manure.

"Distiller's grain is a good animal feed. That's why ethanol plants are often built next to feedlots," said T.G. Nagaraja, a professor of diagnostic medicine and pathobiology at K-State's College of Veterinary Medicine.

The growth in ethanol plants means more cattle are likely to be fed distiller's grain, therefore harboring 0157 and potentially a source of health risks to humans, Nagaraja said. That's why he and Jim Drouillard, K-State professor of animal sciences, have been collaborating on testing distiller's grain-fed cattle for 0157. Nagaraja and Drouillard, who studied the carcass quality of cattle fed distiller's grain, are joined by Megan Jacob, a K-State doctoral student in pathobiology. Through three rounds of testing, Nagaraja said the prevalence of 0157 was about twice as high in cattle fed distiller's grain compared with those cattle that were on a diet lacking the ethanol byproduct.

"This is a very interesting observation and is likely to have profound implications in food safety," Nagaraja said.

Food safety and animal health are research priorities at K-State, which since 1999 has dedicated more than $70 million on research related to animal health and food safety. More than 150 K-Staters are actively involved in these areas.

Nagaraja said research in the next few years will focus on finding out why 0157 is more prevalent in cattle fed a distiller's grain diet. He said it could be something that changes in the animals' hindgut as a result of feeding distiller's grains, or maybe the byproduct provides a nutrient for the bacteria.

"Feeding cattle distiller's grain is a big economic advantage for ethanol plants," Nagaraja said. "We realize we can't tell cattle producers, 'Don't feed distiller's grain.' What we want to do is not only understand the reasons why 0157 increases, but also find a way to prevent that from happening."

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All I can say is "Allaahu Akbar" … Indeed lofty is Allaah, the Best of creators, He creates, in the bellies of cattle that feed on herbage (grass, shrubs, plants) "***labanan khaalisan*** **لبنا خالصا**" - **pure,**

safe, natural, living, healthy, wholesome milk – and indeed lowly is mankind who disfigures Allaah's creation and makes dirty, inferior, very poor quality, inherently dangerous milk by feeding cattle on waste products of alchohol distillation plants, amongst other unnatural and disease causing foods!

Therefore, Things have not really changed that much since the time of Robert Hartley back in the 1830s and 1840s. The difference is that in Hartley's time pasteurisation had not been invented. Thus that inferior dirty milk led to great levels of disease. Today, things are not really different fundamentally. The only difference is that today we have much cleaner environments (thus less disease) but the same inferior quality milk is still being produced, without being as dirty as that in the 19th and early 20th centuries. Pasteurisation simply allows the "cleaning" of inferior quality milk. So Indeed, this milk simply must be pasteurised. An insistence upon a naturally clean milk supply would completely wipe out the entire conventional dairy industry, pretty much overnight.

To reiterate and stress again, the true picture of today's milk supply is one of inferior quality milk coming from abused cows, regularly infested with "pathogenic" bacteria, containing antibiotics, hormones, pesticide residues and other toxins - but made "clean" through the process of pasteurisation. Pasteurisation is great for mass commercialisation of the milk supply. Milk yield is the overall concern and the ultimate goal. Pasteurisation is an effective tool for that end. Pasteurisation is primarily an issues of economics.

It just happened to be useful for restricting disease in a historical setting. It allows inferior milk to be produced, cleaned up and sold to an ignorant public as a great health food, when research establishes its growing association with allergies, asthma, diabetes, and heart disease.

These diseases do not occur with fresh, unprocessed, natural, living milk. Thus, just as in the 19th and early 20th century we had "slop and swill milk" that was the medium of disease, then likewise we have today's inferior, unclean raw milk that requires pasteurisation, the end result of which is an inferior, unnatural product implicated in much allergy and disease.

We will now look at the "Certified Milk Movement" set in motion by ***doctors and physicians*** towards the end of the 19th century.

The Certified Milk Movement of Henry Coit and Pasteurisation

In the late 19th century and early 20th century, the "Certified Milk" movement emerged and called for a cleaning up of the milk supply. They did a huge service to the milk supply and the doctors involved in this movement contributed greatly to the development of modern paediatrics[58]. To the right is an article from the January 2, 1910 edition of the New York Times. The red highlight underline (towards the bottom) was added by me. Today, in the US, "Grade A" pasteurised milk is allowed to have a bacterial amount of no more than 20,000 per ml of milk – that's after pasteurisation. One hundred years ago, they were achieving 10,000 to 30,000 per ml with the certified raw milk. *And that's considering that bacterial counts do not actually equate to safety or non-safety*.

WORK OF DOCTORS TO GET PURE MILK

County Medical Society Gratified by Increased Sales of the Certified Product.

8,500 QUARTS TAKEN DAILY

The Milk Commission Is Now Self-Supporting, the Dairymen's Fees Defraying Expenses.

Members of the Milk Commission appointed by the Medical Society of the County of New York to aid in improving the milk supply of the city are satisfied that the results obtained have justified their appointment. They say the milk certified by the commission "is the only milk coming to New York City that is suitable for the feeding of infants and invalids."

Dr. Walter Lester Carr of the County Medical Society says in The New York Medical Journal:

Bacteria Reduced to Fine Point.

"A perusal of the requirements for the production of certified milk exacted by the commission acting under the authorization of this society will convince one of the safety that users of this milk have. Thirty thousand bacteria per cubic centiemeter are allowed, and this number is infinitesimal compared with many grades of family milk, where the bacteria range into the millions."

From the early 19th century fresh, pure, natural milk was always available, the poor people were willing to pay a premium for it where they could find it from honest farmers. It was never associated with disease. It was the "slop milk" that was associated with disease for most of the 19th century and early 20th century.

The push for the pure, fresh, natural milk was actually **made by doctors** themselves who recognized the very important role of pure, fresh, raw milk to health, especially in children.

In 1892 Henry L. Coit, M.D., encouraged the local doctors' association to establish a milk commission in New Jersey. In 1906 Cincinnati physicians established a similar milk commission which called for a national conference to be held on June 3, 1907, in Atlantic City. This meeting established the national American Association of Medical Milk Commissions (AAMMC). By 1908, pure milk commissions operated in twenty-one American cities[59].

[58] Waserman, M.J. **Henry L. Coit and the certified milk movement in the development of modern pediatrics.** *Bull Hist Med. 1972 Jul-Aug;46(4):359-90.*

[59] The same concerns were felt in England too and there were individuals who set up movements to engineer a "pure milk supply". Stanford Shulman writes, "Henry Ashby (British) was a pediatrician and public health officer who led the movement in Britain to advocate for a pure milk supply during the 1890s and early 1900s." Stanford T. Shulman in "**A History Of Pediatric Specialties**". *Pediatric Research Vol. 55, No. 1, 2004*

Coit initially led 42 doctors to create what evolved into the "Certified Milk" movement. These were the people who were saving babies by ensuring a clean milk supply. I refer you to a 1998 book by Richard Meckel called "Save the Babies" who describes this in good detail and is the best starting point for information on the subject.

I want to quote from another of my sources, Ron Schmid, "The Untold Story of Milk" to provide some more details in this regard.

> "The Society formed a committee of forty-two physicians to "*inquire into the relations, if any existed, between the mortality among infants in large centers of population and the milk supply. After two years' work, in 1891, the Milk Committee discontinued their futile efforts, having demonstrated the helplessness of ordinary measures to accomplish for the cause of pure milk what physicians require. The State Dairy Commissioner wrote, 'Such a radical reform as you desire in the production and handling of milk may not be accomplished in our generation.' This aroused my indignation. I then devised a plan for a professional body composed of physicians, which should first educate, then encourage, and finally endorse, the work of dairymen who would bring to us milk designed for the most exacting needs of physicians*." The plan included a legal contract the dairymen were to agree to, specifying the details about how the milk would be produced, inspected and certified.
>
> Coit then enlisted several other physicians and together they formed the Essex County Medical Milk Commission in April, 1893. Professional dairy experts to act as consultants were selected, and the group then sought and found the first dairyman who would promise to fulfill the requirements of the contract, Stephen Francisco, of Caldwell, New Jersey. Thus was born the first Medical Milk Commission and the certified milk movement.
>
> Coit's plan included three general requirements. First, physicians in the local medical society were asked to select the members of a Medical Milk Commission and support their efforts to bring to the city in which they lived a supply of milk produced under conditions that would assure purity. Second, "approved and trustworthy dairymen possessing honor" would be induced, by reason of promised medical support and an increased price of their milk, to produce and handle their milk in accord with the requirements imposed by legal contract with the Medical Milk Commission. Third, the duties of the Commission would include setting standards of purity for the milk, conducting periodic inspections of the dairies providing the milk, and providing for periodic examinations of the animals and the employees of the dairy by competent physicians. **The milk produced was to be subjected to periodic chemical analyses, and to bacterial counts made under the direction of the Commission. The milk was required to be entirely free of pathogenic organisms. Coit coined the term "Certified Milk" to distinguish milk produced through the operation of his distinctive plan**.
>
> He had created a private organization of physicians to do what the local or state government had not. Other cities throughout the country began forming Commissions, and in 1906 the Medical Milk Commissions were federated into the American Association of Medical Milk Commissions. In 1909 the governor of New Jersey signed into law the Medical Milk Commission Law, passed unanimously by the New Jersey Senate and House, save one negative vote in the House. The law protected the professional interests of the Milk Commissions in the state and every feature of their activity.

> **Certified raw milk, supported by a significant percentage of the medical profession and with strong support from legislators and the public, had been established as the standard to which all other milk was compared**. Though more and more milk was being pasteurized, pasteurization was seen by many as a stopgap measure that would no longer be needed once the production and distribution of milk was more carefully regulated. Certified milk was the model for the production of better milk everywhere. ***In writings about milk throughout the first half of the 1900s, time and again one finds references to the essential role the certified milk movement played in raising the standards of the entire dairy industry***. This is reflected in the rules and regulations governing dairy production that have been codified in every state's laws, and that today regulate the production of licensed raw milk for sale in retail stores in California, Maine, New Mexico and Connecticut."

The Doctors Were the Most Vocal in Opposition to Pasteurisation

There was considerable debate at the time between proponents of the use of pasteurisation for addressing the problem and those who wanted focus instead upon ensuring a naturally clean and pure milk supply. It was actually ***the doctors*** who argued against pasteurisation on the basis that it destroyed the natural qualities of milk. Coit, a physician himself was the one who mobilised the doctors, as a result of which associations were set up. These doctors, along with other groups such as vets and health officials maintained that the solution was to encourage the dairies to clean up in order to meet the Medical Milk Commissions certification standards.

Due to the efforts of well-informed, well-educated, smart doctors - in the time when child mortality was very high due to a dirty, filthy milk supply - fresh, clean, natural milk was kept available. It was used by the medical profession for health and medicinal purposes.

I'm going to quote more from two essays by Alan Czaplicki, whom I quoted from earlier on who sheds greater light on the circumstances in which pasteurisation became law in certain states. One of these essays was published in the Social Science History Journal (Volume 31. Number 3, Fall 2007), I'll quote from this one first.

> "**While cheap, mass-produced pasteurized milk addressed some public health concerns in the city, it never became a motivating force behind the use of pasteurisation**". p.412.

Public health concerns were not the primary driving force behind compulsory pasteurisation. It was more to do with the concern over the excessive cost to the state in enforcing hygiene and compulsory tuberculin tests (running into the tens of millions of dollars at that time). To engineer and enforce a naturally clean milk supply was financially burdensome and required too many resources – not sustainable by states at that time.

Czaplicki also says,

> "All three of these analyses highlight the political dynamics of milk purification efforts, offering compelling accounts of the various interest groups and their coalitions. While differing on the outcomes of political contention, these authors agree in situating pasteurization in the political maelstrom created by bovine tuberculosis, consolidation and centralization of milk production, and differing visions for reform. **Moreover, they share**

> **a common position with progress narratives in discussing milk pricing as central to the political compromises around pasteurization and milk purity**". p.416.

Czaplicki is referring to analyses given by three other groups of researchers who have discussed this same matter. He is reviewing their discussions, and points out a central point of agreement amongst all of them. Milk pricing, and ensuring milk was available to poorer people was a central, but not necessarily a primary factor in the adoption of wide scale pasteurisation. They knew that fresh, pure milk from a clean supply was prohibitively expensive. So they had to make a choice and decided to keep milk available to all sectors of the society and thus, they tended towards pasteurisation. Czaplicki then mentions the sentiments of Evans in desiring a naturally clean milk supply,

> "Evans's ambivalence to the procedure confirms this interpretation. In conference speeches for the AAMMC,8 Evans promoted pasteurization as allowing the poor to afford "safe" milk (AAMMC 1909: 56; Halpern 1988: 60) but also suggested that city officials "*are up against a practical question. . . . we would like, of course, to have a perfectly produced milk [but] . . . [p]asteurization does not put anything into milk that is not there*" (Chicago Tribune 1909e). Evans's support for pasteurization in the early years of the ordinance thus appears tepid, even though the city eventually succeeded in pasteurizing over 50 percent of the milk supply in 1909 (Chicago Department of Health 1919)". pp.419-420.

This establishes that a clean supply was the most desired solution, but it was not practicable at the time, due to excessive costs and unsustainable burdens upon state authorities in the enforcement of policies and monitoring of best practice. Czaplicki notes,

> "The committee's position on pasteurization was more ambiguous. State legislators feared that "*pasteurized milk may well mean cooked dirt, cooked dung and cooked bacterial products*" and that "*a false sense of security is undoubtedly conveyed by the term pasteurized milk*" p.423.

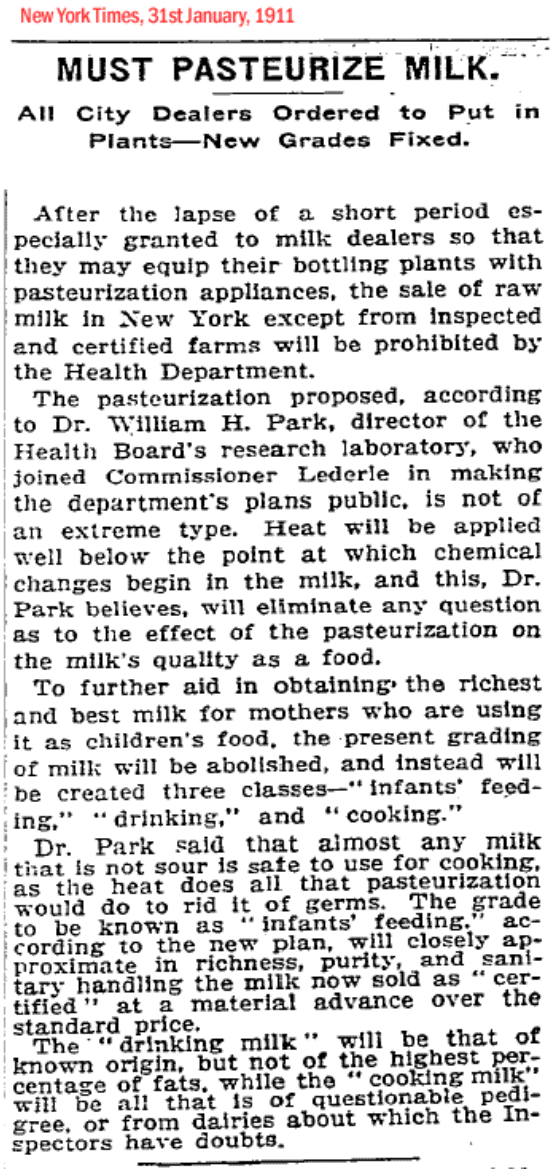
It was recognised at the time that pasteurisation simply allows dairy producers to continue producing low quality milk knowing that pasteurisation will make it safe and saleable. Czaplicki states,

> "This new law reflected continued ambivalence toward pasteurization as a purification process. Establishing two grades of milk, the law required that all farms providing milk to the city be subjected to inspections for cleanliness and appropriate milk production techniques. Those farmers wanting to sell milk in the higher grade would also have to tuberculin-test their cattle voluntarily. If unwilling to do so, farmers could still sell at the lower grade if they passed basic sanitary requirements and pasteurized the milk (Chicago Department of Health 1919). **In this way, city officials reincorporated tuberculin testing through the back door of voluntary action while creating a clear distinction between the higher-quality, tuberculin-tested "inspected" grade of milk and the lower-quality, "pasteurized" grade"**. p.424

See the New York Times article of 31st January, 1911 (further below) in which a new gradation of milk was forced. All raw milk was prohibited *except from certified inspected farms*. The pasteurisation was for those farms not able to meet those same standards (of cleanliness) and tuberculin testing. The pasteurisation was to be of a mild type – it was known that heating leads

to inferior quality milk back then. So certified milk was excepted from the obligatory pasteurisation, and "infants feeding milk" had to closely approximate the standards of the "certified (unpasteurised"milk".

Thus, certified raw milk was milk meeting standards of hygiene and also coming from cows tested for tuberculosis. It was known to be superior milk. Pasteurised milk was for farmers who did not meet all such requirements. It was from their milk that disease was being spread. Thus due to the efforts of the doctors a superior certified grade of milk was available that was not associated with disease. Czaplicki says later,



New York Times, 31st January, 1911

MUST PASTEURIZE MILK.

All City Dealers Ordered to Put in Plants—New Grades Fixed.

After the lapse of a short period especially granted to milk dealers so that they may equip their bottling plants with pasteurization appliances, the sale of raw milk in New York except from inspected and certified farms will be prohibited by the Health Department.

The pasteurization proposed, according to Dr. William H. Park, director of the Health Board's research laboratory, who joined Commissioner Lederle in making the department's plans public, is not of an extreme type. Heat will be applied well below the point at which chemical changes begin in the milk, and this, Dr. Park believes, will eliminate any question as to the effect of the pasteurization on the milk's quality as a food.

To further aid in obtaining the richest and best milk for mothers who are using it as children's food, the present grading of milk will be abolished, and instead will be created three classes—"infants' feeding," "drinking," and "cooking."

Dr. Park said that almost any milk that is not sour is safe to use for cooking, as the heat does all that pasteurization would do to rid it of germs. The grade to be known as "infants' feeding," according to the new plan, will closely approximate in richness, purity, and sanitary handling the milk now sold as "certified" at a material advance over the standard price.

The "drinking milk" will be that of known origin, but not of the highest percentage of fats, while the "cooking milk" will be all that is of questionable pedigree, or from dairies about which the Inspectors have doubts.

> "Medical milk commission members followed the injunction of their founder, Henry L. Coit, who suggested the "true springs of cleanliness are in the thought before we can have effective cleanliness in the surroundings" (AAMMC 1910: 13). Commissions therefore took upon themselves the responsibility to "**establish clinical standards of purity for the milk, be responsible for the inspection of the dairy or dairies under their patronage, and provide for the examinations of dairy stock and be responsible for the chemical and bacteriological testing of [milk]**" (Waserman 1972: 362). By 1909 the association boasted 57 member commissions and had firmly established its presence on the national milk purification scene by hosting annual conferences to discuss new methods of sanitation and the accomplishments of member organizations (AAMMC 1909: 51–57)". p.425

It was the doctors, the medical profession who were behind these efforts, and they knew full well the importance of a clean milk supply, as opposed to an inferior quality milk, justified by pasteurisation.

Czaplicki says later in the essay,

> "As physicians, these members promoted bacteriological theories of disease and suggested that the ideal certified milk would contain "very few microorganisms, and no pathogenic

> micro-organisms" (AAMMC 1907: 15). However, the AAMMC juxtaposed this "pure" certified milk to pasteurization, with one member remarking that the slogan of the AAMMC should be "***pure milk is better than purified milk***" (AAMMC 1908: 20; Waserman 1972: 376). Moreover, Coit himself echoed the Illinois committee's arguments against pasteurization, suggesting that the process would be used by the smaller milk producers to "cover" stale milk for sale (Levenstein 1983: 86)". p.425

This is a nice paragraph, showing the essence of the position of the doctors. Even though these doctors believed in the fairly new bacteriological theory of disease, they still held that a clean, natural milk supply is superior and better than a purified milk supply, "**pure milk is better than purified milk**". What a great statement, they are speaking of "***labanan khaalisan*** **لبنا خالصا**". Further, these doctors were shrewd to the fact that pasteurisation would be merely a veil for inferior quality milk. Indeed this is the case today, as it was then – as we have already established with firm and concrete evidence.

The other paper by Czaplicki was from a presentation at the American Sociological Association annual meetings, August 14-17, 2004, San Francisco, and deals more with the medical doctors and the AAMMC (American Association of Medical Milk Commission). First, the abstract:

> "Milk purification became an issue of much contention in the first decades of the twentieth century. **Public health officials, medical doctors, and philanthropists developed many methods for purifying the milk supply as a way of reducing infant mortality. Interestingly, these experts consistently rejected pasteurization as a method in Chicago and elsewhere**. I argue that this seeming contradiction arises from experts' belief in hygienic schemata, which focused on controlling the conditions of production around milk rather than "altering" the milk itself. Pasteurization's eventual acceptance as a milk purification process develops out of its fortuitous (and contingent) introduction into city law in 1908, and a process of syncretization that amalgamated pasteurization and hygienic practices. *From these empirical findings, this paper lends support to sociological claims that technological advances (such as pasteurization) should not be understood as "inevitable", but as contingent and contested social processes*".

Nicely sums up the historical reality, and I agree with his observation, based upon the available and presented facts.

> "American doctors clearly saw bacteria, or germs, as an active threat to the health of humans, especially infants, and within popular magazines, an all-consuming war was promoted between bodies and germs (McClary 1979, 41). Pasteurization, however, figured little in this war, even though it was known to doctors from at least the 1860s". p.7

These doctors, health officials, veterinarians – despite their belief in the association of bacteria with disease – opposed pasteurisation knowing full well that a pure and clean milk supply was the true and real solution.

> "The AAMMC felt physicians had a responsibility to directly see to it that proper procedures were used to produce pure milk". p.8.

The AAMMC was a commission set up by doctors with a view to promoting natural milk purity and safety awareness to all doctors.

> "**More importantly, these doctors felt that obtaining a clean raw milk supply was more important than the killing of germs within the milk. Not only did they think that sterilization ruined the flavor of milk, but the chemical transformation of such milk went against the principles of obtaining infant food that was close in chemical composition to mother's milk ... American doctors and pediatricians were far more likely to privilege the notion that rawness, or freshness, was a precondition for "pure" milk"**." pp.7-8.

These realities were known and fully understood back then. That's why the opposition to pasteurisation came primarily from doctors who had a much more holistic understanding of health, disease and nutrition. In those days doctors adopted a whole-person-body approach and recognised the "food as medicine" paradigm which they used as a primary measure. Their practice was built upon the absolutely, undeniable fact that the vast majority of diseases are tied to nutrition and lifestyle.

Czaplicki continues,

> "AAMMC president Coit clearly distrusted pasteurization as a process. Pasteurization, he believed, would be used by the smaller milk producers to "cover" stale milk by destroying the bacteria in this old milk in order to resell it". p.8. "So while some AAMMC members clearly believed in bacteriological theories of disease, they still felt the solution to the problem of impure milk involved setting sanitary guidelines for milk production... As a result, pasteurization was somewhat of an anomaly for these doctors…" p.10.

Pasteurisation today, and as it has pretty much always been, is just an extremely useful tool in the commercialisation of the milk supply. It allows inferior milk production for later "purification". The doctors knew full well what impact pasteurisation would have from social and health perspective, and they were extremely shrewd and forward thinking in their viewpoint. Czaplicki illustrates the strength of feeling amongst such doctors on the issue:

> "This greatly undermined the sentiments underlying one AAMMC members' widely approved comment that "***the fight for pure milk should be made so strong that it will overwhelm every opposition and speedily mature into a great, life-saving victory***" (AAMMC 1909, 113)". p.12.

These are the types of doctors we need today … Walhamdulillaah, those who recognise that pure, fresh, raw, natural, living and extremely safe milk can be produced and is being produced, in the millions of gallons, with tens of thousands of beneficiaries, and is available for the one who seeks it. This is "***labanan khaalisan*** **لبنا خالصا**" and its demand is in fact growing and growing.

Czaplicki says,

> "This "commercial" pasteurization, however, was widely seen by doctors as an advertising ploy; at the AAMMC meetings in 1909, this type of pasteurization was denigrated as not having rigorous enough standards to kill bacteria and thus giving false security to consumers (AAMMC 1909, 34; Rosenkrantz 1972, 109, for Massachusetts example). **Chicago doctors claimed that commercial pasteurization failed to provide adequate protection from contaminated milk for two reasons: first, the process did not require the milk to be heated to a high enough temperature to be effective; and second, the procedure added another step to milk production, generating another source of milk**

> **contamination.** Even with these problems, though, labeling milk products "pasteurized" "lent a scientific credential to the product, and some doctors feared that especially poor consumers would believe that, in the words of one doctor, "'pasteurized milk' is subjected to some process that makes it immune from dust or bacteria of all kinds" (AAMMC 1908, 18)". p.14

Some excellent points. How insightful were these doctors. Firstly, the various degrees of pasteurisation that are in use are a result of the attempt to balance safety with maintenance of nutritional value and taste. It's not a guarantee of safety, its basically a compromise between taste, quality and safety. Some pathogenic bacteria are heat resistant as is now being established even though it was believed as such almost a hundred years ago[60].

Secondly, pasteurisation makes milk extremely vulnerable to post-production contamination, since the beneficial bacteria and inherent immunity of milk has been destroyed. **For this reason, you will see huge epidemics involving pasteurised milk, but never with fresh, raw, natural milk**. With the latter you will *only see sporadic* occurrences and always mild in nature. The greatest case of food-poisoning from milk was with pasteurised milk, ironically, in Chicago itself involving close to 200,000 cases with 16,000 culture-confirmed cases. On the contrary, in the state of California, with around 100,000 regular raw milk consumers, there has never been a single proven case of food-poisoning from raw milk, let alone an endemic. This is due to this milk being the superior "***labanan khaalisan*** **لبنا خالصا**".

Czaplicki states,

> **"The concept of "perfectly produced" was associated with certified milk in this case, even though Evans suggested that the price of such milk was "prohibitive". From these comments, it seems clear that Koehler and Evans felt that sanitation was the primary method of stopping the spread of disease, even if it was a goal that was difficult to realize and that pasteurization would have to be used in the interim**". p.17.

Again confirming the point that pasteurisation would not have been necessary in the presence of a clean, natural milk supply and that this was fully and readily acknowledged even by proponents of pasteurisation. Unfortunately, the interplay of political and economic factors changed all that and led to pretty much a universal implementation of pasteurisation over the next couple of decades.

The Gradations of Milk in the Early 1900s

In the Book, "*The Modern Milk Problem*" by Joseph Macnutt, (1917), the author speaks of the various grading systems for milk that were devised by various state authorities throughout the US. I am quoting directly from his book, which I have as a first-hand source. The New York Times article I've quoted above (31st January 1911) reports the same thing that Macnutt is reporting below. Namely that all milk

[60] Initial pasteurization conditions, known as flash pasteurization, were to heat the milk to 155 to 178°F (68.3 to 81°C) for an instant followed by cooling. Pasteurization conditions were adjusted to 143°F (61.7°C) for 30 minutes or 160°F (71.1°C) for 15 seconds to inactivate Mycobacterium bovis, the organism responsible for tuberculosis. However, in 1957 these conditions were shown to be inadequate for the inactivation of Coxiella burnetii which causes Q fever in humans (Enright et al., 1957). New pasteurization conditions of 145°F (62.8°C) for 30 minutes for a batch process, or 161°F (71.7°C) for 15 sec for a continuous process, were adopted in order to inactivate Coxiella burnetii, and these conditions are still in use today. Now it is being found that "pathogenic" bacteria are surviving even the current standard process of pasteurisation, including forms of Listeria.

that does not meet bacteriological standards and is not tuberculin tested, must undergo pasteurisation. Excepted from this was certified raw milk. He says, (pp.116-118)

> "We now come to the most recent and the logical development in the administrative control of milk supplies.
>
> There was a time when just two general kinds of milk were recognized good, or salable, and bad, or unsalable. As the situation grew more complex, and bacteriological analysis came into use, it was seen that the matter was not so simple. It then appeared to those who made a special study of milk supplies, that, while the supplies in large cities might be made to comply with certain minimum legal requirements, few perhaps none with certainty could be relied upon as fit for the use of infants and invalids. It was recognized as impossible to bring the general supply up to this desired standard. Hence the introduction of the milk depot for supplying special milk to the babies of the poor and the devising of a special grade of milk namely, certified milk medically supervised,for the babies of the well-to-do. Then, gradually, it came to be seen that these two special kinds the one being on a philanthropic basis and the other costing a luxury price, could not solve the whole problem.
>
> Meanwhile the situation had intensified; milk-borne disease became more and more insistent; a new factor had arisen in the shape of commercial pasteurization; the necessity of public control became more pressing. To-day the problem is how to exert such control in a way which is scientific, just to all parties concerned, equal to sanitary needs, yet economically practicable.
>
> Progressive sanitary authorities have recognized the fallacy of attempting to make all market milks conform to the same standard by lumping together raw and pasteurized milks, milks for infant feeding and milks for ordinary household use. Distinctions must be made. The result has been the establishment of grades of milk publicly distinguished by means of simple labelling.
>
> Such classification must logically be based on the uses to which milk is put and the corresponding sanitary criteria. The simplest division of uses is: (1) milk for infants, (2) milk for adults, (3) milk for cooking and manufacturing only. This requires three corresponding grades. The conspicuous criteria are bacteriological character and the application or non-application of pasteurization. It is essential that the grades be few, clearly defined, and readily understood.
>
> The idea of milk classification is not new. A rudiment of it exists in the setting-aside of the special grade of certified milk, which, however, has never played a quantitively important part in general milk supplies. Dr. Ernest Lederle, then Health Commissioner of New York City, advocated as long ago as 1907 the grading of milks in some such manner as has since been effected in that city. Dr. A. D. Melvin, Chief of the Bureau of Animal Industry, United States Department of Agriculture, proposed at about the same time a classification (see below) which has done much to further the grading idea. Since then other systems have been devised. The principle is so rapidly gaining acceptance that the diversity of the different systems may become a problem in itself. As close conformity as possible to one generally accepted plan e. g., that of the Com-
> mission on Milk Standards, cited below, would be desirable."

He then mentions, amongst others, the United States Department of Agriculture classification as follows

Class A. Certified milk or its equivalent.
Class B. Inspected milk (raw, tuberculin-tested).
Class C. Pasteurized milk.

And then later in an Appendix he gives the subject full treatment where he quotes from the Milk Commission of New York (page 189 onwards). In New York for example, the grading system was as follows:

- **Grade A Raw certified milk** that met very strict standards of hygiene. This was to be used for infants and could not have more than 10,000 bacteria per cubic centimetre on delivery to the consumer.
- Grade A Pasteurised milk, that prior to pasteurisation, should not have more than 200,000 bacteria per cubic centimetre and after pasteurisation should not have more than 10,000 bacteria per cubic centimetre on delivery to the consumer.
- Grade B – which must be pasteurised – that contains no more than 1,000,000 bacteria per cubic centimetre before pasteurisation and 50,000 after, on delivery to the consumer.
- Grade C – which must be pasteurised – that contains more than 1,000,000 bacteria per cubic centimetre and 50,000 after, on delivery to the consumer.

Note that the Grade A Raw certified milk has no more than 10,000 bacteria per ml, whereas the other milk before it is pasteurised, can have up to 200,000 bacteria per ml. If we assume that the bacterial count is an indicator of quality, that makes raw certified milk up to 2000% superior to Grade A pasteurised milk. In fact, that Grade A Raw certified milk was superior to todays Grade A Pasteurised milk in the US which allows 15,000 bacteria per ml ***after*** pasteurisation

Contents pages of Macnutt's 1917 book:

THE MODERN MILK PROBLEM

IN SANITATION, ECONOMICS, AND AGRICULTURE

BY

J. SCOTT MACNUTT

LECTURER ON PUBLIC HEALTH SERVICE IN THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY; AUTHOR OF "A MANUAL FOR HEALTH OFFICERS"

CONTENTS

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Grading Systems

The following, in outline, are some representative plans of classification. (For a fuller description of grading systems, see Appendix B.)

1. *United States Department of Agriculture.*
   - Class A. Certified milk or its equivalent.
   - B. Inspected milk (raw, tuberculin-tested).
   - C. Pasteurized milk.

(This classification is interesting as being, apparently, the first attempt to devise sanitary grades. It was proposed by Dr. A. D. Melvin, in 1908. It does not, however, express the ideas of to-day as do the following.)

2. *National Commission on Milk Standards (of the New York Milk Committee).**
   - Grade A. Raw.
   - Pasteurized.
   - B. Pasteurized.
   - C. Pasteurized (for cooking or manufacturing purposes only).

* This classification applies also to cream.

Summary of the Certified Milk Movement and Pasteurisation

My point in raising all of the above was to show:

- Doctors, realising the superior value of fresh, pure, raw, clean milk, were chiefly behind the effort to ensure a clean, fresh, milk supply, rather than an artificially clean milk supply (through pasteurisation).

- The use of milk as a health-restorative and curative was widespread all across Europe and America and it's important status as a pure natural food was recognised by doctors, enough to warrant their opposition to pasteurisation.

- Those doctors knew that although pasteurisation would reduce disease incidence in the interim, it would nevertheless be an inferior solution leading to inferior milk of poor nutritional and medicinal value.

- Doctors, led by Henry Coit mobilised themselves into societies and associations to fight for a clean milk supply. Their efforts paid off leading to a much better quality milk supply, but due to political and economic factors, it was pasteurisation that got the upper hand overall in the ensuing decades. Nevertheless, "certified milk" standards were integral to the reduction in disease.

- Pasteurisation was chosen because it was economically advantageous and required less money, time, resources and hassle. In short, it was the easy way out.

- During all that time, milk as a cure for disease was being used all over America and in Europe (where similar circumstances prevailed) with the use of of raw, natural, living milk.

- As a result of this historical background, and with the arrival of widespread pasteurisation the knowledge and use of fresh, pure, natural, living milk as a powerful, effective curative medicine disappeared.

There is a very nice statement in an article called "Antiseptic in Milk", published in 1938 and written by Doid, Wizaman and Kleiner which very nicely sums up the nature of the situation at that time. They state,

> "The strictest bacteriological standards for milk must always be maintained. **The feeding of cattle should receive greater attention**. **It should be determined experimentally, if possible, whether health and resistance are undermined by pasteurisation**. If so, in our attempt to protect the child from milk-borne infections, we may be denying his heritage of good health by removing from his milk vitamins, hormones, and enzymes that control the mineral assimilation and promote body development and general resistance to disease. Is it also possible that these same elements are as important to the adult invalid who needs milk as to the infant?… **Let us have closer cooperation between raw-milk producers and public-health officials so that the growth-producing factors of raw milk can be studied. We cannot afford to pasteurise milk if it is found that pasteurisation diminishes the potency of the growth-promoting factors that determine the skeletal development of our children. We cannot afford to lessen the resistance of our children to respiratory infection, asthma, bronchitis and the common cold when**

> **factors preventing them are present in greater amounts in properly clean raw milk[61] than in pasteurised milk**."

This is a great and profound statement from 80 years ago and accurately summarises the essential issues. *A commentary on this statement would be an essay on its own*. It also illustrates their very profound understanding of the pertinent matters underlying the issue of real, fresh, clean natural living milk versus dirty, inferior quality "cleaned up" milk.

Strangely enough, eighty years later we still have the exact same situation. Compare the previous quote to this 2004 report submitted to the Colorado Board of Health by a farm providing raw milk by using a legal loophole, and asking for raw milk sale to be made legal:

> "It is our goal to help widen the vision of the Board of Health to realize that the short term gains of pasteurisation can carry long-term, unintended consequences such as those described by Dr. Oski[62]. Properly handled raw milk can provide protection for it's consumers and provide long term benefits which simply cannot be provided following pasteurisation. Rather than simply banning the consumption of raw milk, perhaps a better role for public health authorities is to help producers of raw milk make the best possible products and to ensure that any contamination is minimal through the implementation of standards. Public health authorities can then concern themselves with quality as well as safety, while protecting the public's freedom to choose. We seek help in creating a system that allows citizen's access to clean raw milk and foods from local sources that are based [on] high standards, honesty and trust between the producer and the consumer, rather than for the profits and convenience of corporate entities."

In the US, 27 states allow the sale of raw milk. In the other states, raw milk advocates are calling for the same thing that Dr. Coit and hundreds of doctors were fighting for more than a hundred years ago. That "certified milk" quality of a hundred years ago was the same as today's "Grade A" pasteurised milk in terms of bacterial quality. The only difference is that the certified milk of a hundred years ago had "natural" quality, whereas today's milk is pasteurised to achieve such low bacterial counts. *Clean, fresh, pure milk can be produced, was being produced (a hundred years ago) and is still being produced walillaahil-hamd*.

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[61] Waser, M., K. B. Michels, et al. (2007). "**Inverse association of farm milk consumption with asthma and allergy in rural and suburban populations across Europe**." *Clin Exp Allergy 37(5): 661-670*. "Farm milk consumption [early] in life showed a statistically significant inverse association with asthma ... Our results indicate that consumption of farm milk may offer protection against asthma and allergy. A deepened understanding of the relevant protective components of farm milk and a better insight into the biological mechanisms underlying this association are warranted as a basis for the development of a safe product for prevention."

Perkin MR, Strachan DP. **Which aspects of the farming lifestyle explain the inverse association with childhood allergy?** *J Allergy Clin Immunol. 2006 Jun;117(6):1374-81*. "BACKGROUND: Farmers' children have a reduced prevalence of allergic disorders. The specific protective environmental factors responsible are not yet identified. OBJECTIVE: We sought to determine whether farmers' children in the rural county of Shropshire, England, have a reduced risk of atopy and, if so, to identify the factors responsible. CONCLUSION: Unpasteurized milk consumption was the exposure mediating the protective effect on skin prick test positivity. The effect was independent of farming status and present with consumption of infrequent amounts of unpasteurized milk. CLINICAL IMPLICATIONS: Unpasteurized milk might be a modifiable influence on allergic sensitization in children."

[62] See the end of this paper for information on the book by Dr. Oski, "Don't Drink Your Milk".

An Example of Safe Fresh Milk Production

I have said previously, milk is being produced in the millions of gallons, over many long years without a single proven case of food poisoning. There are numerous examples of dairies across the US and Europe, operating in this manner.

As an illustration I refer you to Organic Pastures - http://www.organicpastures.com

An article from their site was on HealthyMuslim.Com at:
http://www.healthymuslim.com/?fohil

They, like all certified raw milk providers (in US, Europe and the UK), are under strict legal requirements for production of raw milk. They publish all their bacterial counts that are performed routinely by external third parties. Here is a list of their published bacterial counts and pathogen counts:

http://www.organicpastures.com/pdfs/Bac_cts_june_08.pdf

This is data for around five years and in that period, they never tested for E.coli, or any other "pathogens" once. They are tested by BSK Laboratories (http://www.bsklabs.com/). All their cows are fed on grass and kept outdoors, not in barns, and are treated very well. They are not even milked in fixed structure barns, they are milked on the fields. What cows are fed on and how they are treated ultimately affects their milk quality and safety.

Another dairy that I know of that in 40 years, having had *3 billion glasses* worth of their milk consumed, have never had a single case of proven food-borne illness associated with it.

Another dairy in Colorado, called Guidestones that produces raw milk has far superior quality raw milk compared to conventional dairy milk even after it has been pasteurised. High quality dairies in the US generally have 5000 standard plate counts (SPC) per ml and 10 colony forming units of bacteria (coliforms) per ml AFTER pasteurisation, whereas Guidestone averages 102 SPC, and 6 coliforms respectively[63]. And the great thing is that this raw milk still has its inherent immunity that will prevent growth of "pathogenic" bacteria, unlike pasteurised milk which, following pasteurisation is at serious risk of contamination, the consequences of which can impact hundreds of thousands of people.

This superiority in the milk is achieved by feeding cattle what they naturally eat, leaving them in their natural habitat and maintaining excellent hygiene standards throughout the entire process of milk acquisition and bottling. There are hundreds of farms like this all over the developed countries producing such milk – all in accordance with state and national legal requirements.

This is milk as Allaah placed it in the creation. This is "*labanan khaalisan* لبنا خالصا". This is the milk that Ibn al-Qayyim spoke of, and this is the milk that cures disease, and is the milk used by the likes of Dr. Porter, Dr. Crewe and others, and enjoyed by nations and societies for thousands of years.

[63] From diagnostic tests performed by Colorado Veterinary Diagnostic Laboratories, College of Veterinary Medicine and Biochemical Sciences, Colorado State University.

Pasteurised, homogenised milk is not this milk. It is inferior, "pathogen-containing" milk that must undergo pasteurisation to save people from its consequences. It's bad milk cleaned up for human consumption. Even then "pathogens" survive the pasteurisation process, and where food poisoning occurs with pasteurised milk, it can potentially affect hundreds of thousands of people (and has done so in the past) – a much more dangerous situation.

To produce clean, safe milk from only pasture-fed cows would put most of the dairy industry out of business almost immediately.

In short, this is the purest, freshest, safest and cleanest milk available, routinely tested for all the "pathogenic" bacteria –coming out with zero all the time, and enjoyed by tens of thousands of people, without a single proven case of food-borne illness from it, after tens of millions of servings. The science and historical record is on the side of clean, fresh, pure, natural, living milk from cattle fed on pasture, kept healthy in their natural environment. And this milk is available for whoever seeks it. There are farms in the US, UK, Europe that feed their cattle on pasture and maintain all state and national legal requirements for hygiene, safety and bacterial testing.

Health and Safety Concerns Regarding Fresh, Raw Milk

There are numerous health concerns brought against "raw milk", and amongst them are the abundant historical records of the association of bovine tuberculosis, campylobacter infection (a form of bacteria) and brucellosis (undulant fever) with raw milk. It is said that there are an abundance of epidemiological[64] studies in this regard. Whilst bearing in mind everything that has preceded, the following clarifications can be made with respect to these concerns.

The Non-Issue of Tuberculosis

Enforced testing has now made the problem of tuberculosis and brucellosis a non-issue[65] and authorities report an apparent virtual elimination. This is a decades old problem that has been solved and is bygone. As I am speaking of milk that is provided under state and national legal requirements, the issue of bovine tuberculosis and brucellosis is not really relevant as routine testing eliminates the risk.

Let me quote you directly from the Department for Environment Food and Rural Affairs (DEFRA, UK), "*Herds that produce raw milk for sale (i.e. unpasteurised) are subject to more regular bTB tests than other herds, which should ensure infectious cattle are not present in the herd*."

All farms providing raw milk are bound by legal requirements to test all herds for tuberculosis and undulant fever (brucellosis). Herds MUST be officially tuberculosis and brucellosis free.

I quote you from an official government, local council information leaflet addressed to farmers titled "Bovine TB and Your Milk", published February 2006:

> **Will I be allowed to keep selling milk?** Yes, unless you sell it to the public unpasteurised (see below). By law, raw milk from herds in England and Wales which are suspected of having bovine TB must not be sold for humans to drink unless it has been heat-treated first.
>
> **What if I sell unpasteurised milk or milk products?** You will not be allowed to continue to sell your own unpasteurised milk or unpasteurised milk products (such as cream, yoghurt, cheese and so on) for humans, even if bovine TB is only suspected, until your herd is shown to be free of TB. If you do sell unpasteurised milk or milk products you should contact an Officer within the Food Team (01594 810000) to discuss the situation.

Thus, the issue of tuberculosis (and brucellosis) is not relevant.

But lets add more to this, to make this absolutely a non-issue. The same leaflet I've just quoted from states, regarding the meat of TB cattle:

> Meat inspectors will inspect the carcase at the slaughterhouse. It is rare for any problem related to bovine TB to be seen in the meat. The meat inspectors will remove any affected parts of the carcase **and the rest of the carcase will normally pass as fit for humans to eat unless another problem is found which makes it unfit**.

[64] Epidemiological studies look at disease transmission at the population level and cannot be used to establish cause and effect in relation to disease in specific cases. It is a statistical correlation tool used to make associations.
[65] See further below for legal requirements on raw milk provision that are enforced by state and national public health service authorities.

So the meat of cattle with TB will not be affected, and it is fit for consumption. Likewise, the mycobacterium bovis (bovine TB) **will NOT** pass through the blood membrane barrier into the milk. If you check the scientific facts, bovine tuberculosis in the animal does not pass into the milk of the cow nor into its meat, internally. It only occurs if the udder becomes infected due to disease progression over time and then physical contamination of the milk occurs. Enforced routine testing now totally eliminates the likelihood of this happening. I want to make this more concrete with research from New Zealand. An official research institute organisation published a report titled, "**Risk Profile: Mycobacterium Bovis In Milk Prepared as part of a New Zealand Food Safety Authority contract for scientific services**", and on page 18, the authors state,

> Tuberculosis is a notifiable disease in New Zealand. An analysis of the incidence of human tuberculosis caused by M. bovis using data from Wellington Hospital from 1983 to 1990 found that an average of 7.2% of cases of tuberculosis were caused by this organism (Brett and Humble, 1991). **The most common organ affected was the lung (pulmonary tuberculosis) which suggests that the disease was not caused by contaminated meat or milk**. Instead it was suggested that the primary source may be exposure to animals in regions of New Zealand where M. bovis is endemic in cattle, deer and feral animals.

Bovine TB is caught via close contact with animals. To catch it from contaminated milk is extremely rare. From the same report on page 21:

> **Unpasteurised milk was only implicated in one tuberculosis case in each of the years 1998 and 1999, with the linkage not being confirmed in either case. If this linkage was assumed to be valid this would equate to a milk-related rate of M. bovis infection of 0.03/100,000, placing this food-hazard combination in the lowest incidence category**.

And then on page 24:

> Risks associated with milk. If it is assumed that approximately 3% of all notified cases of tuberculosis in New Zealand are caused by infection with M. bovis (see Section 6.1), then the current incidence of tuberculosis caused by this organism is approximately 0.3 per 100,000. **However there is no evidence that these infections are caused by transmission in milk; in fact, as the most commonly affected organ is the lung, it is most likely that infections are acquired by inhalation**.

Lets go to another study to show how hard or easy it is to catch bovine tuberculosis from an infected herd:

- Smith GE, Cawthorne D, Jarvis R, Synnott MB, Cooper R, Hampton C, Allen M. North Staffordshire Health Authority, Heron House, Stoke-on-Trent, UK. **Results of follow-up of human contacts of bovine tuberculosis in cattle during 1993-7 in North Staffordshire**. *Epidemiol Infect. 2001 Aug;127(1):87-0.* "The purpose of the study was to describe the results of follow up of human contacts of bovine tuberculosis. The bovine tuberculosis cases occurred on farms in North Staffordshire between 1993 and 1997. **A total of 162 people were identified as having close contact with cattle diagnosed as having bovine tuberculosis, or who had drunk unpasteurized milk from a herd with bovine tuberculosis**. A retrospective review of chest clinic notes was performed. One hundred and thirty-eight people attended for follow up, and Heaf test results, necessity for chest X-ray and further clinical follow-up are described. **No case of human Mycobacterium bovis infection was identified**."

OK, so we have 162 people in close contact with a bovine tuberculosis infected herd, drinking the raw milk, all over a period of four years – and not a single case of infection. And lets go to one more study from the US:

- Winthrop KL, Scott J, Brown D, Jay MT, Rios R, Mase S, Richardson D, Edmonson A, MacLean M, Flood J. Division of Tuberculosis Elimination, Centers for Disease Control and Prevention, Atlanta, Georgia, USA. **Investigation of human contacts: a Mycobacterium bovis outbreak among cattle at a California dairy**. *Int J Tuberc Lung Dis.2005 Jul;9(7):809-13*. "BACKGROUND: In May 2002, a Mycobacterium bovis outbreak occurred among cattle at a California dairy. We investigated to determine whether persons were infected after working with the cattle or drinking their raw milk. METHODS: We identified persons with potential contact with infected cattle, including dairy workers, their family members, and slaughterhouse workers. Persons were given a tuberculin skin test (TST), and their occupational and milk-drinking habits were recorded. RESULTS: Of 88 potential contacts, 78 (90%) were given a TST; 33 (43%) had positive TST results, of whom 32 were Mexican-born (RR 15.8, 95%CI 2.3-108.8). **No persons had active tuberculosis**. Eighteen (72%) dairy workers, 11 (27%) family members, and four (33%) slaughterhouse workers had positive TST results. **After adjusting for Mexican-birth and age, dairy workers were no more likely to have positive TST results than others (adjusted RR 1.2, 95%CI 0.6-2.1)**. Forty-one (62%) dairy staff and their family members drank raw milk from the dairy; 21 (51%) had positive TST results and were Mexican-born. **All 13 US-born raw milk drinkers had negative TST results**. CONCLUSION: **A high prevalence of positive TST results was documented among workers at the affected dairy, although results were not independently associated with contact with infected cattle or milk products**. Further assessment of California dairy workers should be considered"

As you are aware, a positive skin test (TST) only proves exposure, and most likely immunity the vast majority of the time. It does not prove active disease, and false positives are also occasional. To determine active tuberculosis following a positive skin test, other diagnostics have to be carried out. Bearing that in mind lets have a look at these very revealing results.

Not a single person had active tuberculosis. Those workers in the dairy directly exposed to the cattle on a daily basis *did not have any greater risk* of having a positive skin test (i.e. only proving exposure) compared to others who did not have exposure to the cattle. The US born raw-milk drinkers did not even test positive for exposure to mycobacterium bovis.

Bovine tuberculosis represents a very tiny fraction of the overall incidence of tuberculosis (one two-hundredths of all cases in humans from sample stats in the UK in 2006 by way of example), and it occurs in those with close contact with animals.

The overwhelming majority is human tuberculosis and in the past, milk was a medium of transmission for human TB due to TB sufferers working directly with milk collection and contaminating the milk via coughing or milking by hand. It was closed system milking machine systems put in use around the 1920s and 1930s on a wide scale that were responsible for the virtual elimination of the contamination of milk through direct human contact. It was mostly advances and changes to sanitation, hygiene and milk collection practice that eradicated a large part of the problem, *and not pasteurisation on its own*.

Further, there is very little direct evidence, if any at all, that *bovine tuberculosis* is caught from drinking raw milk, even though this is commonly claimed. Sure, milk was previously the medium of transmission for human tuberculosis, but as for humans contracting bovine tuberculosis, there is little direct evidence. I would like to see evidence for even one laboratory proven case. The risk is certainly there, if the udder area of an affected cow has lesions and which can lead to milk contamination, but in terms of direct concrete evidence, I would like to see **a clinically proven case** of *bovine tuberculosis* in a human from raw milk consumption.

Incidentally, Robert Koch way back at the turn of the 20th century demonstrated that the human and bovine bacteriums were not identical and not transmissible. He stated, "The human subject is immune against infection with bovine bacilli", though this caused a lot of controversy, and was subject to much deliberation and debate at the time. Today it's now known that the bovine, human and avian mycobacteria are indeed different, and contrary to the fearmongering that is spread, it is very rare for humans to get bovine TB. The only cases found are in a small fraction of those in direct close contact with cattle, (and the medium of transmission is inhalation of aerosol from the animal and not raw milk). Or it is in those with HIV, or those who have alcohol and steroid abuse, in other words immunocompromised individuals. As people routinely get exposure to bovine tuberculosis and never contract the disease, the same with human tuberculosis, the more important underlying issue is one of general immune strength.

Here is a "Department for Environment, Food and Rural Affairs" (DEFRA, UK) statement, "*There are minimal occupational health risks arising from bTB.*" This agrees with the studies I cited earlier.

Let me now quote from an official government commissioned report published in February 2008, put together by Tony Wilsmore and Nick Tayler from the University of Readings, "Veterinary Epidemiology and Economics Research Unit". On pages 7-8:

> 1.48. Despite the resurgence of bTB in UK cattle herds, **no associated rise in the number of cases in man has been noted**. Disease due to human M. bovis infection usually occurs as a result of reactivation of previously acquired infection in older patients, in whom drinking unpasteurised milk in the past is the probable[66] source of infection, or as a result of infections acquired overseas by immigrants to GB (SE3017). **Since 1990, only one case has been documented in the UK of confirmed, indigenous human M. bovis infection recently acquired from an animal source**.
>
> 1.49. **Person-to-person transmission is very rare**. After identification of two epidemiologically-linked cases of human M. bovis infection through routine laboratory and surveillance activities, all patients identified with M. bovis infection in the Midlands from 2001-05 (n=20) were assessed by DNA fingerprinting (VNTR and spoligotyping), with additional interviews for patients with a clustered strain. A cluster of six cases was identified. The clustered cases were young and UK-born; five patients had pulmonary disease, and one patient died due to M. bovis meningitis, **with four patients possessing factors predisposing to tuberculosis[67]. All patients had common social links through visits to bars in two different areas**. **With the exception of the first case, there was an**

[66] That's "probable" not proven. This type of language is very common when we are speaking about unpasteurised milk. So this is a shot in the dark with no real evidence. But read later in the paragraph, towards the end …
[67] Regarding this case, the Health Protection Agency, gave factors for the spread, "Four of the patients had weakened immune systems through either HIV infection, diabetes or misuse of alcohol or steroids, which may have made them more susceptible to the infection." – as reported by the BBC.

> **absence of farming links or consumption of unpasteurised dairy products, suggesting that person-to-person transmission had occurred** (Evans et al., 2007).

That pretty much sums up the situation, and its an official government commissioned report that we are taking it from. The "first case" they are speaking about was not from raw unpasteurised milk but direct contact with the animal.

Given all of the above, and enforced routine testing, the tuberculosis issue is easily put to rest. The same applies to brucellosis, it's a non issue for the same reasons. As I have said previously, your view on this issue is heavily skewed towards historical factors and precedents now no longer in existence or relevant, and there is undue exaggeration and fear-mongering not supported by any facts or real evidence.

Food-Poisoning Associated with Campylobacter Has Increased Exponentially Independently of Raw Milk Consumption

Campylobacter is currently the commonest stated "cause" of food-poisoning in the UK, and also in the US. That's clearly not because of raw milk, and this fact sheds a slightly different light on your statement above.

Campylobacter came into prominence in the mid-1970s whilst previously being unheard of, and in a twenty-year period from 1978-1998 it's food-poisoning incidence **increased by 600%-900% according to official government reports** (depending on which source you look at). *So clearly this had little to do with raw milk*[68].

There are numerous routes of transmission for campylobacter and they include the drinking of contaminated water; recreational use of environmental waters; sand on holiday beaches (30-60% of UK beaches contaminated); direct contact with farm animals, direct contact with household pets, especially young dogs and cats with diarrhoea illness; poultry is a major source of transmission; external packaging of retail products that contaminate ready to eat foods; red meats, especially offal such as liver and kidney (50-70% contamination); both raw and unpasteurised milk; barbecue meat; salad vegetables and cloths in retail food shops and restaurants. Campylobacter is fairly ubiquitous[69]. A UK government official report called "Bacterial Food Poisoning" suggests that poultry is the cause of two-thirds of all infections. A study carried out during 1999-2000 found that 70.7 percent of chicken and 14.5 percent of turkey samples from Washington, DC grocery stores was infected with campylobacter[70]. All of this information is taken from official government reports.

An abstract in a February 9th edition of the journal Microbiologia (1993) says regarding campylobacter, "***Pets, water, and contaminated foods are the main sources of sporadic infections in humans, and no single animal food source can be excluded as a potential vehicle for infection of humans***". Thus, it is

[68] It's more to do with increased antiobiotic resistance that graduates through the society due to the prevalent use of antiobiotics in animals destined for consumption, in addition to the use of antibiotics in medication. Whilst previously these bacteria would have done no harm, they have now started to affect immunocompromised individuals in the form of acute gastric illnesses, and their occurrence increases over time as antibiotic resistance increases over time. This has little to do with raw milk, and in fact it has little to do with the bacteria itself. This is an entire different subject, and I won't open it up here.

[69] This information was taken from a paper by the Health Protection Laboratory Agency, Manchester Royal Infirmary.

[70] Zhao C, et al. Applied and Environmental Microbiology, 2001:67(12):5431-5436 http://aem.asm.org/cgi/content/abstract/67/12/5431

the most common cause of food borne illness, and is best known for contaminating meats, poultry and produce. Another local government information leaflet states about campylobacter, "***Campylobacters are so widely distributed in nature that there is no prospect of reducing the reservoir of bacteria***" and the same statement is found in numerous published papers in journals such as "International Journal of Biometeorology", and European Workshop reports on Environmental Diseases.

Food-poisoning in general, from a variety of "pathogenic" bacteria in all developed nations is on the rise as is clear from all available statistics. So despite being more hygienic and having greater sanitation and better living standards, and increased government regulation, food-poisoning is still increasing substantially.

This is more likely explained by rising levels of immunosuppression in developed nations as a result of poor nutrition, sterilised, processed industrial food, medication and lifestyle habits coupled with **anti-microbial resistance**. All of this decreases host resistance to what would normally be harmless bacteria in normal healthy persons. The increase in worldwide food-poisoning is not because of the bacteria *per se*, but due to an interplay of many factors *of which the bacteria is only one*.

Here are some papers dealing with antimicrobial resistance of campylobacter:

- W.J. Snelling, M. Matsuda, J.E. Moore and J.S.G. Dooley. **Campylobacter jejuni**. *Letters in Applied Microbiology Volume 41 Issue 4, Pages 297 - 302*. "This review describes characteristics of the family Campylobacteraceae and traits of Campylobacter jejuni. **The review then focuses on the worldwide problem of C. jejuni antimicrobial resistance** and mechanisms of pathogenesis and virulence. Unravelling these areas will help with the development of new therapeutic agents and ultimately decrease illness caused by this important human pathogen".

- Aarestrup FM, Engberg J. **Antimicrobial resistance of thermophilic Campylobacter**. Vet Res. 2001 May-Aug;32(3-4):311-21. "Campylobacter has become the leading cause of zoonotic enteric infections in developed and developing countries world-wide. **Antimicrobial resistance has emerged among Campylobacter mainly as a consequence of the use of antimicrobial agents in food animal production**. Resistance to drugs of choice for the treatment of infections, macrolides and fluoroquinolones has emerged as a clinical problem and interventions to reduce this are recommended. Resistance to fluoroquinolones and macrolides is mediated by chromosomal mutations. Resistance to other relevant antimicrobial agents, mediated by acquired resistance genes, has not become widespread so far. **However, resistance genes originating from both Gram-positive and Gram-negative bacterial species have been found, showing the potential for acquired resistance to emerge in Campylobacter**."

In addition to this to all of this, E. Coli has been shown to survive on coins for 7-11 days at room temperature; Salmonella enteritidis can survive 1-9 days on pennies, nickels, dimes and quarters; and Salmonella enteritidis can also survive on glass and Teflon for up to 17 days[71].

This shows that we are exposed to "pathogens" on a daily basis—on surfaces, in water and in most of the food we eat. They are everywhere and ubiquitous. In the US, Sweden and UK, there have been

[71] Jiang and Doyle. Journal of Food Protection 1999;62(7):805-7
http://www.ingentaconnect.com/content/iafp/jfp/1999/00000062/00000007/art00018

incidences of campylobacter outbreaks affecting from 250 to 3000 people from the water supply. There are so many exposure routes so such bacteria.

The point is, let's get some real perspective into the situation and see the true realities. When we see things in this way, it paints an entirely different picture from the one that necessitates scare-mongering away from the food that Allaah described as "***labanan khaalisan*** **لبنا خالصا**", the food that I am speaking about.

So lets say for arguments sake, that there are proven cases of food-poisoning associated with raw milk from cattle fed on their natural diet. With the ubiquity of such bacteria, its going to happen. It's inevitable with all foods. You get it with water, meat, poultry, spinach, tomatoes, lettuce and so on and so on. It has to be put into perspective.

This is a more realistic and true picture of the situation. It's nothing extraordinary. Let's just put something in here for the record in relation to raw tomatoes and spinach:

Notice the following in the raw spinach news article below:

- The headline "Food Safey: No Guarantees"
- The outbreak was across half of the United States with 26 states affected
- Five people died, all in different states

Food safety: No guarantees

USA TODAY — Photo by Richard Green, The Californian

Spinach recall: 5 faces. 5 agonizing deaths. 1 year later.

2006 SPINACH RECALL: ROOTS OF A TRAGEDY

- **Overview:** Looking back at an E. coli outbreak that killed 5
- **Investigation:** Calif. plant conditions lacking, probe says
- **Changes:** Scare spurs new food safety efforts
- **E. coli:** Where it comes from and how it kills
- **Tell us:** Do you worry about eating "pre-washed" spinach right out of the bag?

HOW THE E. COLI OUTBREAK IN FRESH SPINACH UNFOLDED

July 2006

22: Baby spinach on Paicines Ranch in central California is first watered.

August

15: Natural Selection plant in California bags Paicines Ranch spinach; it goes mostly into Dole bags.

16: Dole spinach goes to distribution centers in Marina, Calif., and Springfield, Ohio, and then to other points from coast to coast.

31: Ruby Trautz, 81, of Bellevue, Neb., dies.

By Elizabeth Weise and Julie Schmit, USA TODAY

Ruby Trautz was the first to die.

On Aug. 27, 2006, the 81-year-old Nebraska woman was rushed to the hospital. She was in so much pain that morphine was administered. Four days later, she succumbed to a food-borne infection later identified as a virulent strain of E. coli.

YOUR THOUGHTS: Do you worry about eating "pre-washed" spinach right out of the bag?
REPORT: Investigation of an E. coli outbreak associated with Dole pre-packaged spinach (pdf)
INDEX: Environmental investigation reports

Two weeks after Trautz's death, on Sept. 14, the Food and Drug Administration took an unprecedented step: It told Americans to stop eating bagged spinach, a staple of healthy diets, until its safety could be assured. A day later, the FDA extended the warning to include all fresh spinach and almost as quickly, it vanished from grocery shelves, salad bars and menus.

By this time, two more people had died.

FIND MORE STORIES IN: United States | California | Oregon | Food and Drug Administration | Nebraska | Omaha | University of Georgia | Bellevue | Sales | Center for Food Safety | Creighton University Medical Center | Michael Doyle | Natural Selection Foods

Before the outbreak of E. coli O157:H7 was over, at least five people were dead after painful, bloody illnesses. More than 205 others in 26 states had endured a sickness that left them vulnerable to future health problems. And the agricultural industry, government regulators and consumers were shaken by the vulnerability of America's system for delivering fresh produce to markets.

FDA News

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Media Inquiries:
Michael Herndon, 301-827-6242
Consumer Inquiries:
888-INFO-FDA

FDA Finalizes Report on 2006 Spinach Outbreak

The Food and Drug Administration (FDA) and California's Department of Health Services (CDHS) today released a joint report on an extensive investigation into the causes of an E.coli O157:H7 outbreak last fall that was associated with contaminated Dole brand Baby Spinach and resulted in 205 confirmed illnesses and three deaths. The inquiry was conducted by the California Food Emergency Response Team (CalFERT), a team of experts from FDA's district office in San Francisco and CDHS. They were assisted by experts from the Centers for Disease Control and Prevention (CDC) and Animal and Plant Health Inspection Service of the U.S. Department of Agriculture.

The investigators successfully identified the environmental risk factors and the areas that were most likely involved in the outbreak, but they were unable to definitely determine how the contamination originated.

"The probe was a notable effort by federal, state and local officials," said Robert E. Brackett, Ph.D., director of FDA's Center for Food Safety and Applied Nutrition. "It yielded valuable information we can use to determine how best to reduce the likelihood of similar outbreaks."

The report describes the painstaking detective work of the investigators following the first reports from CDC in September 2006 of an apparent outbreak of E.coli O157:H7 linked to the consumption of bagged spinach. The probe initially focused on the processing and packaging plant of Natural Selection Foods, LLC in San Juan Bautista, CA, where the contaminated products had been processed.

The next focus of the inquiry was the source of the spinach in 13 bags containing E.coli O157:H7 isolates that had been collected nationwide from sick customers. Using the product codes on the bags, and employing DNA fingerprinting on the bacteria from the bags, the investigators were able to match environmental samples of E.coli O157:H7 from one field to the strain that had caused the outbreak. Potential environmental risk factors for E.coli O157:H7 contamination at or near the field included the presence of wild pigs, the proximity of irrigation wells used to grow produce for ready-to-eat packaging, and surface waterways exposed to feces from cattle and wildlife.

Because the contamination occurred before the start of the investigation, and because of the many ways that E.coli O157:H7 can be transferred -- including animals, humans, and water -- the precise means by which the bacteria spread to the spinach remain unknown.

FDA continues to work closely with its federal, state and local partners to keep produce safe from bacterial contamination. In August 2006, the agency announced an initiative called "Leafy Greens" that focuses attention on the produce, contamination agents, and other areas of potential public health concern associated with such products. Recently, FDA recently issued a draft final guidance, "Guide to Minimize Microbial Food Safety Hazards of Fresh-cut Fruits and Vegetables", which recommends measures to prevent microbial contamination during the processing of fresh-cut produce.

Earlier this week the agency explored issues involved in the safety of fresh produce in a public hearing held in California, and it plans to hold a similar hearing on April 13, 2007 in Maryland. The goal of both events is to solicit and share information about the recent outbreaks, the involved and associated risk factors, and measures the agency could adopt to advance the safety of fresh produce.

Although washing produce would not have prevented the recent E-coli outbreak involving spinach, washing can reduce the risk of contamination from some other causes. FDA advises consumers that all produce should be thoroughly washed before eating.

Note, the statement that washing produce would not have prevented the E-coli outbreak involving spinach.

INTERNATIONAL
Herald Tribune
THE GLOBAL EDITION OF THE NEW YORK TIMES
Americas

Tainted spinach sickens 100 in U.S.

By Julia Preston and Carolyn Marshall Published: SUNDAY, SEPTEMBER 17, 2006

SALINAS, California: Packaged spinach salad disappeared from store shelves across the United States over the weekend as investigators searched for the source of bacterial contamination that had sickened over 100 people.

Officials said Saturday that the number of people affected by the E. coli outbreak stood at 102 in 19 states, up from 94 on Friday.

David Acheson, director of food safety at the Food and Drug Administration, reported no additional deaths beyond one that had occurred in Wisconsin.

Agency officials announced Friday that they had detected an "epidemiological link" between the outbreak of infections of E. coli O157:H7 and spinach produced by Natural Selection Foods, a company that grows and packages fresh greens in San Juan Bautista, California, and is best known for its organic brand, Earthbound Farm.

But company executives and health officials emphasized Saturday that no E. coli bacteria had been found in Natural Selection plants or on any salad the company had distributed.

Acheson

Today in Americas

In a quiet church rebellion, Massachusetts parishioners keep the faith

Obama picks outsider to lead CIA

Ex-Guantánamo detainee describes torture

said federal officials did not know how or when the spinach had been contaminated. "We advise consumers not to eat fresh spinach or fresh- spinach-containing products until further notice," he said Saturday night.

The advice applies to food at restaurants and supermarkets, he said.

Federal officials initially advised consumers not to eat fresh spinach that had been packed in plastic bags. But Acheson said consumers should avoid eating fresh spinach in general because it might have come from such packages before it was displayed or served.

"Consumers may not be aware that the spinach available to them was prepackaged," he said.

Growers and scientists are beginning to grasp the serious difficulties the agency faces in trying to pinpoint the source of the bacteria and eliminate it from the food supply. Health and agriculture experts said E. coli could creep into fresh leafy food at many points, from the field to the packing plant to the store.

SEPTEMBER 16, 2006 | POSTED BY PRITZKER | RUOHONEN | |

E. COLI AND SPINACH: FDA UPDATE

The multi-state E. coli outbreak linked to spinach was initially thought to involve only bagged spinach. **The FDA has issued an update that warns consumers not to eat any fresh spinach or product with fresh spinach in it.** The number of states involved in the E. coli outbreak has risen from 8 to 19, including the states of California, Connecticut, Idaho, Indiana, Kentucky, Maine, Michigan, Minnesota, Nevada, New Mexico, New York, Ohio, Oregon, Pennsylvania, Tennessee, Utah, Virginia, Washington, Wisconsin, and Wyoming.

Below is the FDA update of the E. coli outbreak linked to fresh spinach. Pritzker | Ruohonen is reprinting it here as a public service. To contact the firm, **call toll-free at 1-888-377-8900**, e-mail fhp@pritzkerlaw.com or fill out our online consultation form.

FDA Statement on Foodborne E. coli O157:H7 Outbreak in Spinach
Update: Saturday, September 16, 2006
The U.S. Food and Drug Administration (FDA) will continue to provide the public with regular updates on the E. coli O157:H7 outbreak each day until further notice.

Case Reports
To date, 102 cases of illness due to E. coli infection have been reported to the Centers for Disease Control and Prevention (CDC), including 16 cases of Hemolytic Uremic Syndrome (HUS) and one death. Illnesses continue to be reported to CDC. This is considered to be an ongoing investigation.

Symptoms of E. coli O157:H7 Illness
E. coli O157:H7 causes diarrhea, often with bloody stools. Although most healthy adults can recover completely within a week, some people can develop a form of kidney failure called HUS. HUS is most likely to occur in young children and the elderly. The condition can lead to serious kidney damage and even death.

States Affected
There are 19 confirmed states (versus 20 reported yesterday). The case originally attributed to Tennessee was, in fact, in Kentucky. States reporting illnesses include: California, Connecticut, Idaho, Indiana, Kentucky, Maine, Michigan, Minnesota, Nevada, New Mexico, New York, Ohio, Oregon, Pennsylvania, Utah, Virginia, Washington, Wisconsin, and Wyoming.

Food Poisoning From Lettuce, Spinach, Other Leafy Greens on the Rise

Date Published: Wednesday, March 19th, 2008

BOOKMARK ... PRINT THIS ARTICLE SEND TO A FRIEND

Leafy greens have become one of the most common sources of **food poisoning** outbreaks in the US, a new study says. What's more, research suggests the growing number of food borne illnesses associated with lettuce, spinach and other greens cannot simply be attributed to Americans' growing love of salads.

In the past several years, outbreaks of E. coli and Salmonella from fresh vegetables have become an increasing problem. In fact, one of the biggest E. coli outbreaks in recent years was attributed to fresh spinach. In September 2006, bagged fresh baby spinach sold by the Dole Food Company was linked to an E. coli outbreak that was blamed for the deaths of three people and illness in 200 others. Since then, several other recalls of E. coli contaminated lettuce and other greens have made headlines.

Such outbreaks have prompted the **Centers for Disease Control** (CDC) to study the frequency of leafy green-related food poisoning incidents. To that end, the CDC analyzed data from its food borne disease outbreak surveillance system reported between 1973 and 2006. The CDC findings were reported earlier this week at the International Conference on Emerging Infectious Diseases in Atlanta.

According to the CDC, of the 10,421 food borne disease outbreaks reported during the 13-year period, 502 (4.8 percent) were associated to leafy greens. Most of these outbreaks (58.3 percent) involved Norovirus, followed by Salmonella (10.4 percent) and E. coli (8.9 percent).

The increase in food poisoning incidents tracked back to leafy greens was well ahead of the increase in the consumption of such vegetables seen during the same 13 year period. According to the study's abstract, "during 1986-1995, US leafy green consumption increased 17.2 percent from the previous decade. During the same period, the proportion of all food borne disease outbreaks due to leafy greens increased 59.6 percent. Likewise, during 1996-2005 leafy green consumption increased 9.0 percent and leafy-green associated outbreaks increased 38.6 percent." The CDC researchers said that these numbers indicate that the rise in such food poisoning incidents can't be seen as a consequence of Americans consuming more greens.

Notice the statistical information on the rise of outbreaks. Between 1986 to 1995 leafy green consumption increased by 17.2 percent. YET, the proportion of all food-borne illnesses from leafy greans, increased 59.6 percent. **That's a 350 percent rise over the actual consumption of leafy greens**. What caused that?

And between 1996-2005 leafy green consumption increased 9.0 percent but outbreaks increased 38.6 percent! **That's a 430 percent rise over the actual consumption of leafy greens**. What is going on?

People are getting sicker and sicker and more immunosuppressed as a combined result of poor nutrition (low nutrition-value diets which are high in processed and factory foods), medications including antibiotics, and lifestyle factors. Thus, they are more prone to food-borne illness because of the state and condition of their intestines (lots of toxic, undigested sludge) – a reflection on their immunity – provides the particular terrain and environment, the disease condition, for "infections" to arise.

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Salmonella outbreak linked to raw tomatoes strikes about 150

Updated 6/9/2008 8:40 PM | Comments 54 | Recommend 47 E-mail | Save | Print | Reprints & Permissions | RSS

Enlarge Shari Vialpando, Las Cruces Sun-News via AP

Lauro Campos, executive chef at the Double Eagle restaurant in Mesilla, N.M., takes extra precautions to avoid contamination after the Food and Drug Administration on Wednesday issued an alert that a salmonella outbreak had been linked to large uncooked tomatoes in New Mexico and Texas.

■ RED ALERT

▪ **Tomatoes pulled:** McDonald's, Wendy's, Burger

By Elizabeth Weise, USA TODAY

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What's this?

The Food and Drug Administration said Sunday that 145 to 150 people in 16 states have been sickened by salmonellosis, which has been linked to the consumption of raw red tomatoes.

The FDA initially issued a warning June 3 about tomatoes in New Mexico and Texas. Saturday, officials expanded the warning nationwide.

There were 25 hospitalizations but no deaths. The cause is a rare strain of salmonella called Salmonella Saintpaul.

"We're trying to get an answer as quickly as possible as to where these tomatoes came from," says David Acheson, director of the FDA's Food Safety and Security Staff.

The FDA hasn't been able to track the source of the contaminated tomatoes to a single grower or packer or even a specific geographic area. It is working with the Centers for Disease Control and Prevention, state health departments and the food industry to track the cause of the outbreak.

FIND MORE STORIES IN: Washington | California | Texas | Oklahoma | Arizona | Virginia | Illinois | Colorado | Connecticut | Indiana | Wisconsin | Oregon | Utah | Kansas | New Mexico | Idaho | Food and Drug Administration | Prevention | Centers for Disease Control | Roma | Food Safety | David Acheson | Salmonella Saintpaul

States reporting illnesses linked to the outbreak include Arizona, California, Colorado, Connecticut, Idaho, Illinois, Indiana, Kansas, New Mexico, Oklahoma, Oregon, Texas, Utah, Virginia, Washington and Wisconsin.

So should we say raw tomatoes and raw spinach should be banned – given that even washing them would not necessarily have prevented the food-borne illnesses and associated deaths? The fact is that tomatoes and spinach, in their raw form can and do kill people.

Keeping Things in Perspective and in Context

Of all foods, milk (both pasteurised and non-pasteurised) has the lowest incidence of reported food-borne illnesses (0.2%). On ***a case-by-case basis***, persons consuming milk from any source (raw or pasteurised) are: 30 times more likely to become ill from fruits and vegetables 13 times more likely to become ill from beef 11 times more likely to become ill from chicken 10 times more likely to become

ill from potato salad 2.7 times more likely to become ill from non-dairy beverages[72]. I've mentioned milk generically here to put your statement above into a wider and more realistic context. Food poisoning happens all the time. Its not such a big deal that there are cases arising from milk (pasteurised or raw). It's like any other food. In fact, the only way to reduce the risk of food-borne illness to zero is to stop eating. We don't see people trying to ban raw tomatoes and raw spinach, or calling for their pasteurisation despite the fact that thousands of people actually become very sick and many cases die from it.

- Dennis G. Maki, M.D. **Don't Eat the Spinach — Controlling Foodborne Infectious Disease**. *N Engl J Med. 2006 Nov 9;355(19):1952-5*. "First it was hamburger, then municipal water, apple cider, swimming in the lake, the day-care center, the petting zoo . . . and now, spinach. Is nothing safe? Between August 19 and September 5, 2006, symptomatic enteritis from Shiga toxin–producing Escherichia coli O157:H7 infection was reported in 199 persons in 26 states in association with consumption of fresh spinach or spinach-containing products from commercial brands processed by Natural Selection Foods of San Juan Bautista, California. One hundred two of these persons (51%) had been hospitalized as of October 6, and 31 (16%) had acute renal failure from the hemolytic–uremic syndrome or thrombotic thrombocytopenic purpura, which had developed in 29% of the affected children (<18 years of age), 8% of the affected adults 18 to 59 years of age, and 14% of the affected adults 60 years of age or older. Three persons with confirmed cases had died by mid-October: two elderly adults and a 2-year-old with the hemolytic–uremic syndrome".

People get poisoning through all these different routes. When we consider these facts, it paints an entirely different picture to the one implied in your statement above, which is that raw milk (from cattle fed on their natural diets) is somehow unique and pronounced in food borne illnesses and is extremely and inherently dangerous. That's not an accurate picture of the reality. It's a distortion of the reality.

This bearing in mind all along that I am not speaking about the "*raw milk intended for pasteurisation*" that is distillery slop and swill milk, I am talking about real, fresh, raw, natural, pure milk, that which Allaah placed in the creation, "***labanan khaalisan*** **لبنا خالصا**".

[72] Please review the data in MMWR Vol 45, No SS-5, a special report on food borne illness statistics. http://www.cdc.gov/mmwr/PDF/ss/ss4505.pdf

Regarding Public Health and Safety

Public health concerns are often cited in relation to the "***labanan khaalisan*** **لبنا خالصا**", the pure natural, milk mentioned in the Qur'aan and the curative cow's milk mentioned in the Sunnah. Likewise, incidences of infection due to raw milk in developing countries are also raised.

The provision of raw milk by farmers is **under strict safety regulations** precisely for the same public health concerns mentioned.

It is *currently legal* for raw milk to be sold and bought on farm premises, and as there are *strict legal requirements* that are more stringent than for milk that is ultimately destined for pasteurisation, raw milk is of much superior quality. Hygiene standards *are enforced much more rigorously on farms providing raw milk* than farms producing raw milk collected and destined for pasteurisation, and health of cows is far superior to those in conventional grainfeed and slop dairies. I suggest you study the legal ordinances regarding this issue. I'll make a quick summary here.

Currently raw milk supply must be from a herd that is *officially* tuberculosis and brucellosis free. Herds have to be routinely tested. So the concern about tuberculosis and brucellosis is a non-issue. Animal health rules must be met via veterinary supervision. Hygiene rules apply to holding and milking premises in the diary, and are inspected to monitor compliance. The raw milk must comply with standards for total bacterial counts and coliforms. After packaging, it must also meet standards for staphylococcus, salmonella and other "pathogens". This is how it is regulated in England and Wales. All of this is from official Food and Standards Agency documents.

The same is the case in US where only certified raw milk farms are allowed to provide fresh, raw milk, and requirements are much more stringent than for milk destined for pasteurisation. Official microbiological testing occurs regularly on all farms providing raw milk. Compliance to the requirement that raw cows' drinking milk must be free of "pathogenic" micro-organisms and their toxins at levels that harm is monitored.

In the US, all farmers providing raw milk have to be registered and certified, and there milk is tested weekly for "pathogens" including- Listeria monocytogenes, Salmonella spp, E-coli O157H7 and Staph aureus, as well as undergoing the general "Grade A" tests of somatic cell count, plate count, preliminary incubation bacterial count and coliform tests applicable to all dairies.

The articles on **HealthyMuslim.Com** are in relation to raw fresh milk from cows fed on grass from farms that meet legal requirements of safety and bacterial and "pathogen" testing. Which is perfectly legal and regulated by strict safety standards that have been put there by the authorities due to it being an issue of public health importance. This milk has never, ever been implicated in any "epidemic", I am speaking here of an "epidemic", unlike pasteurised milk. Pasteurised milk, due to its very nature is extremely dangerous when the right circumstances come together, as I will show shortly, inshaa'Allaah.

With respect to the developing world, it is not clear why the context is shifted to the developing world. The real underlying factors behind food-borne illness and deaths in the developing world are primarily two in number: **malnutrition and sanitation**.

With proper nutrition and sanitation in general, disease incidence and death would rapidly decrease, and food-borne illnesses would not be as pronounced or severe. The occurrence and severity of a food-

borne illness depends on the host environment. In the third world it is malnutrition that is the greatest factor, which makes the individual's host environment more susceptible.

People in the third world are affected greatest by contaminated water, poor sewage facilities, lack of refrigeration in general – and there is nothing unique about unpasteurised milk specifically. These are nutrition, sanitation and hygiene issues, and just as they apply to water, meat and produce, they also apply to milk.

Thus, the raising of food-poisoning incidents in the third world, have their own specific circumstances and contexts, and cannot really be cited in the context of raw, fresh milk obtained from licensed farms, meeting all state and national legal requirements for the provision of their milk.

Pasteurised Milk Outbreaks of Food Poisoning

It is also claimed that unlike "raw milk", food-poisoning and infections from pasteurised milk are more or less unknown. Regarding this a number of points can be made:

First, this position is one that is wrong and one that is based upon misinformation or lack of information. One reason for this is that if you don't look you don't find. Another main reason is that if a food poisoning outbreak occurs due to pasteurised milk, it won't be plastered all over the media and it won't be assumed or suspected as a cause without question. However, if it was tied to raw milk, it would be plastered all over the media and would be immediately implicated.

I know of many cases where subsequent laboratory testing proved otherwise. In fact I have previously looked at over 100 cited cases of claimed association of raw milk with food-poisoning. There is a systematic bias against fresh, pure raw milk. It is immediately assumed as the cause as soon as someone recalls having consumed raw milk in a case of food-poisoning, and all other sources are discounted.

Then an epidemiological study that is not free from design bias can be conducted to make a statistical link. In cases I have looked at, biological testing subsequently disproves such associations. Now this does not mean that food-poisoning never takes place with raw milk (from cattle fed on pasture). For sure it can, but this should be viewed with fairness in the context of food-borne illnesses in general, and comes back down to environmental, handling and processing issues, and not to the inherent quality of the milk itself – this is pretty much universal to all foods.

Second, in developed nations there are frequent outbreaks of food poisoning from pasteurised milk. This is due to contamination post-pasteurisation or due to "pathogen" heat-resistance to pasteurisation itself. Another factor is increased resistance of "pathogens" to acidity (due to what conventional "dairy cattle" are fed) and which human stomach acidity cannot subsequently deal with, should there be pasteurisation failure, or pasteurisation resistance. Post-pasteurisation contamination is when some of the "*raw milk destined for pasteurisation*" (that inferior quality milk) accidentally mixes with milk already pasteurised, thereby contaminating it.

Pasteurised Milk Outbreaks in the UK

In the UK there have been outbreaks due to pasteurised milk in Cumbria in 1999, with 111 people affected reported in a Sunday Times edition of February 2000. Another 1992 outbreak affecting 100 people is mentioned in the Communicable Disease Review report of 7th March 1997. A Journal of Hygiene paper in 1981 describes an outbreak involving pasteurised milk affecting 250 schoolchildren with campylobacter enteriits. Nine cases of VTEC E.Coli O157 associated with pasteurised milk in Preston in 1999, again from a CDR report. Another 1994 outbreak in West Lothian, affecting 60 people, one fatality involving E.coli O157. In "**Bacterial Infections of Humans, Epidemiology and Control**", by Alfred S. Evans, Philip S. Brachman, on page 865 he mentions a 1990 case of food-poisoning in the UK affecting 36 people traced to Yersinia Enteroclitica in pasteurised milk.

Official statistics from the Food Standards Agency show 10 pasteurised milk outbreaks from 1992-1999 including salmonella, campylobacter and E.coli.

From another food-poisoning litigation legal source that provides more details:

- There was a 1979 outbreak involving pasteurised milk and affecting 3,500 people in the UK. The British Medical Journal said about this, "In an extensive outbreak affecting 3500 individuals (mainly children under 8 years old) a statistical association was shown between drinking free school milk and the development of symptoms. Pasteurization of milk from the large dairy in question had failed in the week before the outbreak. There was no other linking factor." This occurred in the Luton, Dunstable area.
- A campylobacter outbreak affecting 23 people in 1992 associated with pasteurised milk.
- And another in the same year involving 110 people, again with campylobacter and pasteurised milk in the UK.
- Another case involving campylobacter and 12 people in 1995,
- And an E.coli O157 case affecting 114 people in 1999.

There are lots of cases of poisoning from pasteurised milk in which it is established that pasteurisation did not fail, and often, where there were no verifiable breaches in processing.

- *An Outbreak of Yersinia enterocolitica O:8 Infections Associated with Pasteurized Milk.* The Journal of Infectious Diseases 2000;181:1834–1837
- *Multidrug-resistant Salmonella Typhimurium Infection from Milk Contaminated after Pasteurization*. Emerging Infectious Diseases Vol. 10. No.5, May 2004. CDC online publication[73]

Pasteurized Milk Epidemic: Massive outbreak of antimicrobial-resistant salmonellosis traced to pasteurized milk – Almost 200,000 Affected

- *Massive outbreak of antimicrobial-resistant salmonellosis traced to pasteurized milk.* JAMA. 1987 Dec 11;258(22):3269-74[74] – Number of people affected around 185,000! This was a huge **epidemic**. From the paper, "Two waves of antimicrobial-resistant Salmonella typhimurium infections in Illinois totaling over 16,000 culture-confirmed cases were traced to two brands of pasteurized 2% milk produced by a single dairy plant… **Two surveys to determine the number of persons who were actually affected yielded estimates of 168,791 and 197,581 persons, making this the largest outbreak of salmonellosis ever identified in the United States**".

Pasteurized Milk Epidemic: Interstate Yersinia Enterocolitica Outbreak – Hospitalizations and Appendectomies

Another interstate **epidemic** involving Yersiniosis from the Mortality and Morbidity Weekly Report (MMWR) September 24, 1982 / 31(37);505-6, published on the Center for Disease Control (CDC website) recounts:

- Between June 11 and July 29, 1982, a large interstate outbreak of enteritis caused by Yersinia enterocolitica occurred. State health departments became aware of a potential problem when hospitals reported increased numbers of Y. enterocolitica isolates. **Epidemiologic investigation implicated milk pasteurized at a plant in Memphis, Tennessee, as the vehicle of infection**. One hundred seventy-two culture-positive Y. enterocolitica infections were

[73] http://www.cdc.gov/ncidod/EID/vol10no5/03-0484.htm
[74] http://www.ncbi.nlm.nih.gov/pubmed/3316720?dopt=Abstract

identified: 67 in the Little Rock, Arkansas, area; 80 in Memphis, Tennessee, and its northern Mississippi suburbs; and 25 in the Greenwood, Mississippi, area. One hundred forty-eight (86%) patients had enteric infections with diarrhea and/or abdominal pain, usually accompanied by fever; 24 patients had extra-intestinal infections of throat, blood, urinary tract, central nervous system, and wounds. Forty-one percent of cases occurred among children less than 5 years of age. Most patients required hospitalization, and 17 underwent appendectomies. The epidemic strain is agglutinated most strongly by antisera to Y. enterocolitica O groups 13 and 18. **Separate case-control studies in each city showed that drinking milk pasteurized by a milk plant in Memphis was associated with illness (in Little Rock, p = 0.03; in Memphis, p = 0.01; in Greenwood, p = 0.004)**. Overall, 71% of cases and 39% of controls recalled drinking milk from the plant in the 2 weeks before onset of symptoms.

In the above report, the accompanying editorial states:

- "In this investigation pasteurized milk was epidemiologically implicated as the vehicle of transmission of Y. enterocolitica. The temporal and geographic clustering of cases and the negative cultures of subsequent lots of milk are consistent with contamination of a single lot. The mechanism of contamination is unknown...Y. enterocolitica generally does not survive standard pasteurization (5); however, if present in large enough numbers, viable Yersinia may persist after pasteurization (4-6). Once present in a pasteurized product, the organism grows well at refrigeration temperature (7). **Therefore, pasteurization and proper handling of pasteurized milk may not ensure against enteric disease due to Y. enterocolitica**."

A Pasteurised Milk Outbreak Affecting 93 People in Pennsylvania and New Jersey

- Sonja J. Olsen; Michelle Ying; Meghan F. Davis; Marshall Deasy; Ben Holland; Larry Iampietro; C. Michael Baysinger; Frances Sassano; Lewis D. Polk; Betty Gormley; Mary Jane Hung; Keith Pilot; Maria Orsini; Susan Van Duyne; Shelley Rankin; Carol Genese; Eddy A. Bresnitz; Joseph Smucker; Maria Moll; Jeremy Sobel. **Multidrug-Resistant Salmonella Typhimurium Infection From Milk Contaminated After Pasteurization**. *Emerg Infect Dis 10(5):932-935, 2004*. "An outbreak of multidrug-resistant Salmonella enterica serotype Typhimurium infections occurred in Pennsylvania and New Jersey. A case-control study implicated pasteurized milk from a dairy, and an inspection indicated the potential for contamination after pasteurization. Dairy cattle are the likely reservoir, and milk may be an important vehicle of Salmonella transmission to humans."

So we have the same "dairy cattle", which are the abused, sick dairy cattle fed on unnatural diets. Such dairy environments contain plenty of "pathogens", and that's leaving aside the inferior quality of the raw milk that is produced.

More Outbreaks Due To Pasteurised Milk

And here are some more cases from the CDC (Center for Disease Control) website with pasteurised milk associated outbreaks.

- Dalton CB, Austin CC, Sobel J, Hayes PS, Bibb WF, Graves LM, et al. **An outbreak of gastroenteritis and fever due to Listeria monocytogenes in milk**. *N Engl J Med 1997;336:100–5*.

- Ackers ML, Schoenfeld S, Markman J, Smith MG, Nicholson MA, DeWitt W, et al. **An outbreak of Yersinia enterocolitica O:8 infections associated with pasteurized milk**. *J Infect Dis 2000;181:1834–7*.
- Centers for Disease Control and Prevention. **Standardized molecular subtyping of foodborne bacterial pathogens by pulsed-field gel electrophoresis. Atlanta: U.S. Department of Health and Human Services.** *CDC; 1998*.
- Anderson ES, Ward LR, Saxe MJ, de Sa JD. **Bacteriophage-typing designations of Salmonela Typhimurium**. *J Hyg(Lond) 1977;78:297–300*.
- Glynn MK, Bopp C, Dewitt W, Dabney P, Mokhtar M, Angulo FJ. **Emergence of multidrug-resistant Salmonella enterica serotype Typhimurium DT104 infections in the United States**. *N Engl J Med 1998;338:1333–8*.
- Helms M, Vastrup P, Gerner-Smidt P, Molbak K. **Excess mortality associated with antimicrobial drug-resistant Salmonella Typhimurium**. *Emerging Infectious Diseases 2002;8:490–5*.
- Centers for Disease Control and Prevention. **Shigellosis outbreak—Florida**. *MMWR Morb Mortal Wkly Rep 1966;15:441–2*.
- Centers for Disease Control and Prevention. **A common-source outbreak of Salmonella newport—Louisiana**. *MMWR Morb Mortal Wkly Rep 1975;24:413–4*.
- Black RE, Jackson RJ, Tsai T, Medvesky M, Shayegani M, Feeley J, et al. **Epidemic Yersinia enterocolitica infection due to contaminated chocolate milk**. *N Engl J Med 1978;298:76–9*.
- Centers for Disease Control and Prevention. **Salmonella gastroenteritis associated with milk—Arizona**. *MMWR Morb Mortal Wkly Rep 1979;28:117–20*.
- Tacket CO, Narain JP, Sattin R, Lofgren JP, Konigsberg C Jr, Rendtorff RC, et al. **A multistate outbreak of infections caused by Yersinia enterocolitica transmitted by pasteurized milk**. *JAMA 1984;251:483–6*.
- Fleming DW, Cochi SL, MacDonald KL, Brondum J, Hayes PS, Plikaytis BD, et al. **Pasteurized milk as a vehicle of infection in an outbreak of listeriosis**. *N Engl J Med 1985;312:404–7*. "**Conclusions These results support the hypothesis that human listeriosis can be a foodborne disease and raise questions about the ability of pasteurization to eradicate a large inoculum of L. monocytogenes from contaminated raw milk**."
- Centers for Disease Control and Prevention. **Salmonellosis from inadequately pasteurized milk—Kentucky**. *MMWR Morb Mortal Wkly Rep 1984;33:505–6*.
- Birkhead G, Vogt RL, Heun E, Evelti CM, Patton CM. **A multiple-strain outbreak of Campylobacter enteritis due to consumption of inadequately pasteurized milk**. *J Infect Dis 1988;157:1095–7*.

A survey of numerous US government official websites, and compiled statistics from numerous sources, including food poisoning litigation sources will also show the following instances relating to pasteurised milk (some overlap with instances already mentioned above):

- 1945 1,492 cases for the year in the US
- 1945 outbreak, 300 cases in Phoenix, Arizona.
- 1945 Several outbreaks, 468 cases of gastroenteritis, 9 deaths, in Great Bend, Kansas
- 1966 Florida - Shigella flexneri - 97
- 1976 Outbreak of Yersinia enterocolitica in 36 children, 16 of whom had appendectomies, due to pasteurized chocolate milk
- 1975 Louisiana - Salmonella Newport – 49
- 1976 New York - Y. enterocolitica - 38
- 1978 Arizona - S. Typhimurium - 23

- 1978 1 outbreak, 68 cases in Arizona
- 1982 172 cases, with over 100 hospitalized from a three-Southern-state area.
- 1983 1 outbreak, 49 cases of Listeriosis in Massachusetts
- 1984 August, 1 outbreak S. typhimurium, approximately 200 cases, at one plant in Melrose Park, IL
- 1984 November, 1 outbreak S. typhimurium, at same plant in Melrose Park, IL
- 1984 Kentucky - S. Typhimurium - 16
- 1985 March, 1 outbreak, 16,284 confirmed cases, at same plant in Melrose Park, IL
- 1985 197,000 cases of antimicrobial-resistant Salmonella infections from one dairy
- 1985 1,500+ cases, Salmonella culture confirmed, in Northern Illinois
- 1986 Vermont - Campylobacter jejuni - 35
- 1993 outbreaks statewide, 28 cases Salmonella infection
- 1994 outbreaks, 105 cases, E. Coli & Listeria in California
- 1994 Illinois - L. monocytogenes - 45
- 1993 outbreak of Salmonella enteritidis in over 200 due to pasteurized ice cream in Minnesota, South Dakota and Wisconsin
- 1995 outbreak, 3 cases in California
- 1995 outbreak of Yersinia enterocolitica in 10 children, 3 hospitalized due to post-pasteurization contamination
- 1995 Vermont, New Hampshire - Y. enterocolitica - 10
- 1996 outbreaks Campylobactor and Salmonella, 48 cases in California
- 1997 outbreaks, 28 cases Salmonella in California
- 2000 Pennsylvania, New Jersey - S. Typhimurium – 93
- 2005 Colorado - Campylobacter jejuni - 40
- 2006 California - Campylobacter jejuni - 1,644
- 2008 Massachussets – Listeria – 4 cases, 2 deaths, 1 miscarriage

Pasteurised Milk Kills Three in 2008 in the State of Massachussets – Pasteurisation Heat Resistant Listeria Monocytogenes

This is by no means exhaustive and only covers the US. Here is a news report on the last outbreak listed above from early this year (January 2008):

1.11.2008 8:38 am

Latest Listeria Outbreak Linked to Pasteurized Milk?

Culprit May Be More Resistant to High Temperatures

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By Karen Berner

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The Department of Health in Massachusetts reported 4 human cases of listeria infection over the past 6 months. Two deaths and one miscarriage were linked to this disease by way of "DNA fingerprinting" of retail milk samples from a local dairy farm.

Do Buy Store Brand Items

Photo: Sean Locke / Getty Images

Listeria is a common soil organism that can cause disease or death when consumed. Pregnant women, children and those with weakened immune systems, such as the elderly, are at greater risk for this sometimes deadly disease. Symptoms include high fever, severe headaches, neck stiffness and nausea.

The milk in question was pasteurized. Focus is now on whether or not there was a defect in the process or if this particular strain of Listeria was more resistant to high temperatures that ordinarily would have killed the deadly bacteria.

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Excellent Comment from well-informed, well-read individual who clearly understands what we would refer to as "labanan khaalisan"

dneeper wrote:
This should come as no surprise

It really should come as no surprise that a heat-resistant strain of a pathological bacteria has evolved, and is a logical outcome to the nearly one hundred years of pasteurization - artificially removing heat-intolerant bacteria opens up a biological niche for heat-tolerant bacteria and encourages their evolution. Mark McAfee of California's Organic Pastures dairy has claimed that one of the reasons that UHT ("ultra-pasteurized") milk has become so prevalent in the commercial industry is that too many strains of heat-tolerant bacteria have evolved and the standard plate counts after normal pasteurization do not meet legal requirements. Ultra-pasteurization is the equivalent of a neutron-bomb, essentially making the milk inhospitable to any form of bacterial colonization. UHT milk doesn't even need to be refrigerated since nothing will grow in it - but why would you want to drink it? The solution is a return to traditional high-quality unpasteurized real milk from grass-fed cows. Clean raw milk has a full complement of beneficial probiotic bacteria that out-competes pathological bacteria such as Listeria monocytogenes, and is absolutely delicious as well. However, this kind of milk can't be produced by cows in commercial feedlots and confinement dairies, and can only be obtained from cows raised on pasture and intended for human consumption. Organic Pastures raw milk is available in stores in California, but consumers in other states need to obtain their clean raw milk on the farm or through legal contracts such as cow or herdshares.

friday, january 11, 2008 at 12:24:37 pm

Dairy linked to 3 deaths, miscarriage

Updated 1/9/2008 6:38 PM | Comment | Recommend

Enlarge By Nancy Palmier, AP

Three elderly men have died of the bacterial infection listeriosis linked to contaminated milk produced at Whittier Farms. The family-owned business has shut down production temporarily.

BOSTON (AP) — At Whittier Farms dairy, the fifth-generation owners brag of the quality of their Holstein cows and still deliver milk right to your door, in glass bottles. Customers like the products because they are a hormone-free taste of old New England.

But health officials now say three elderly men have died and at least one pregnant woman has miscarried since last June after drinking bacteria-contaminated milk from the dairy's plant in Shrewsbury, about 35 miles west of Boston.

All were infected with listeria, which is extremely rare in pasteurized milk. It is more often found in raw foods, such as uncooked meat and vegetables, and processed foods such as soft cheeses and cold cuts.

The outbreak is believed to be only the third time listeria has ever been linked to pasteurized milk in the United States, said Dr. Alfred DeMaria, state director of communicable disease control.

"We know something is going on; we just don't know what it is," DeMaria said. "We just need to find out how the bacteria is getting into the milk."

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Listeria bacteria are often present in manure and are commonly found in soil and water. Pasteurization is supposed to kill listeria.

Tests at the Whittier Farms plant found nothing wrong with its pasteurization process, deepening the mystery.

Health investigators are now looking at the cooling and bottling machinery, including the connecting pipes, for the source of the bacteria, DeMaria said. Investigators have taken about 70 samples from vents, ceilings, floors, tanks, bottle-washers, bottles and other equipment.

"We're focusing on every inch of contact with the milk products," DeMaria said.

The dairy, which distributes milk under various brand names to homes and stores across central Massachusetts and also operates a 500-acre farm in the town of Sutton, has suspended operations until the source of the contamination is pinpointed.

The Whittier family has declined to be interviewed. In a statement posted in the window of its dairy store and in a letter to its customers, the farm said it is "extremely concerned about the situation" and is cooperating with the investigation.

Health officials say about 2,500 serious listeriosis cases are reported in the United States every year, 20 to 40 of them in Massachusetts. Symptoms include fever, nausea and diarrhea.

Listeria can cause serious illness or death in pregnant women, newborns, the elderly and patients with compromised immune systems. Healthy adults and children generally recover.

A 1983 outbreak in Boston that was believed to have been caused by pasteurized milk led to 14 deaths.

So the record in 2008 was at least 3 deaths and one miscarriage caused by **pasteurised milk**, and none from raw milk intended for direct consumption – considering that in the entire US there are many hundreds of thousands (*as an extremely conservative estimate*[75]) of people in the 27 states, where raw milk is available, consuming *scores of millions of servings annually*. As I have said before, pasteurised milk is EXTREMELY dangerous, because it's natural immunity has been destroyed. Hence, any contamination after pasteurisation is potentially fatal. With raw milk, the severity of the illness is generally restricted, because the inherent immunity in the milk prevents growth of the "pathogenic" bacteria, if it hasn't actually destroyed them to begin with.

- PITT W. M., HARDEN T. J., HULL R. R. **Antibacterial activity of raw milk against Listeria monocytogenes**. *Australian Journal of Dairy Technology 1999, vol. 54, no2, pp. 90-93*. ***Raw bovine milk was shown to contain anti-Listeria monocytogenes activity***. L. monocytogenes inoculated into raw milk at 37°C to give an initial bacterial concentration of approximately 10,000 cfu/mL multiplied at a reduced rate for approximately 12 hours **and then rapidly lost viability**. **Fifty-six hours after the inoculation of raw milk, no viable cells of L. monocytogenes were detectable**. **The anti-Listeria system was most active in raw milk incubated at 37°C. *The activity was reduced at lower temperatures of 25°C, 7°C and 4°C; by heating the milk at 72°C for 15 seconds (pasteurisation)*; and by storing the milk at 4°C for 4 to 6 days**. ***These preliminary results require further study to elucidate the mechanism of anti-Listeria activity in raw milk and also to determine the role of antimicrobial systems in the control of pathogenic and spoilage micro-organisms in milk products***.

A great study. Note their statement, "*The activity was reduced at lower temperatures … and by heating the milk at 72°C for 15 seconds (pasteurisation)*". Pasteurisation does destroy the inherent immunity of the milk.

Raw Milk Naturally Occurring Lactic Acid Bacteria (Destroyed By Pasteurisation) Inhibit Listeria and Salmonella

An amazing study, please read it with utmost care:

- L. A. Nero , M. R. de Mattos , M. de Aguiar Ferreira Barros , M. B. T. Ortolani , V. Beloti and B. D. G. de Melo Franco. **Listeria monocytogenes and Salmonella spp. in Raw Milk Produced in Brazil: Occurrence and Interference of Indigenous Microbiota in their Isolation and Development**. *Zoonoses and Public Health Volume 55 Issue 6, Pages 299 – 305*. "**This study aimed to verify the occurrence of Listeria monocytogenes and Salmonella spp. in raw milk produced in Brazil**. On account of the poor microbiological quality of this product, possible interference from the indigenous microbiota in these pathogens was also evaluated. **Two-hundred and ten raw milk samples were collected in four important milk-producing areas in Brazil, tested for L. monocytogenes and Salmonella spp. presence, and for enumeration of indicator microorganisms: mesophilic aerobes, total coliforms and Escherichia coli**. **The interference of the indigenous microbiota in the isolation procedures was also tested, as well the frequency of naturally occurring raw milk strains with antagonistic activity against both pathogens**. **The pathogens were not isolated in any raw milk sample, but poor microbiological quality was confirmed by the high levels of indicator microorganisms**. When present at high levels, the indigenous microbiota generated an evident interference in the methodologies of L. monocytogenes and Salmonella spp.

[75] Considering that in California alone there are at least 100,000 and growing consumers of fresh, raw milk.

> isolation, mainly when the pathogens appeared at low levels. Three-hundred and sixty raw milk strains were tested for antagonistic activity against both pathogens, and 91 (25.3%) showed inhibitory activity against L. monocytogenes and 33 (9.2%) against Salmonella spp. **The majority of the antagonistic strains were identified as Lactic Acid Bacteria species**, mainly Lactococcus lactis subsp. lactis and Enterococcus faecium[76], known by antimicrobial substance production."

Amazing! They were not even able to isolate Listeria or Salmonella from 210 raw milk samples. The reason? The naturally occurring lactic acid bacteria (such as the Lactococcus and Enterococcus) were out-competing the "pathogens", showing antagonistic and inhibitory activity. Cook the milk to 72°C, you destroy all this antagonistic activity from the lactic-acid bacteria and you destroy the natural immune elements (lactoperoxidase, lysozyme, complement system, etc. etc.), and you are now left with extremely dangerous pasteurised milk where "pathogenic" bacteria can have a field day. If even one "pathogenic" bacteria survives pasteurisation (and Listeria monocytogenes has been shown to do so) then that "pathogenic" bacteria can multiply and have a field day because all the lactic acid bacteria have been zapped.

Anti-Bacterial Systems Present in Raw, Natural, Living Milk

A few more studies showing the various anti-bacterial systems present in raw, fresh, natural, living milk (destroyed by pasteurisation).

- RODRIGUEZ E., GONZALEZ B., GAYA P., NUNEZ M., MEDINA M. **Diversity of bacteriocins produced by lactic acid bacteria isolated from raw milk**. *International Dairy Journal 2000, vol. 10, no1-2, pp. 7-15*. Bacteriocin-producing lactic acid bacteria were isolated from 298 samples of raw ewes', goats' or cows' milk. Eighty-two bacteriocin producers were phenotypically and genotypically identified as L. lactis subsp. lactis (59 isolates), L. lactis subsp. cremoris (2 isolates), L. lactis subsp. lactis biovar diacetylactis (6 isolates), E. faecalis (7 isolates), E. faecium (1 isolate), L. paracasei subsp. paracasei (4 isolates), L. plantarum (1 isolate) and Leuconostoc spp. (2 isolates). By means of PCR-techniques, nisin was characterized in 39 of the 67 bacteriocin-producing lactococci and lacticin 481 in 23 isolates, some of which presented antilisterial activity. Enterocin AS-48 was produced by four enterococcal isolates. Four non-identified bacteriocins produced by 16 isolates showed a broad inhibitory spectrum. Nisin-producing lactic acid bacteria were the most abundant, but lacticin 481-producing lactococci and AS-48-producing enterococci were found at relatively high rates.

[76] This is a lactic-acid bacteria and shows inhibition of L. Monocytogens.

Garcia, E., De Paz, M., Gaya, P., Medina, M. Nuñez, E., 1997. **Inhibition of Listeria innocua in Machengo cheese by bacteriocin producing Enterococcus faecalis INIA 4**, *Milchwissenschaft, 52, 667 - 670*.

Farias, M.E., Nuñez de Kairuz, M., Sesma, F., Palacios, J., de Ruiz Holgado, A.P., Oliver, G., 1999. **Inhibition of Listeria monocytogenes by the bacteriocin enterocin CRL35 during goat cheese making**, *Milchwissenschaft, 54, 30 - 32*.

Panagiotis Chanos & D. Ross Williams. Department of Forensic and Biomedical Sciences, University of Lincoln. ***Isolation and characterization of anti-Listeria bacteriocin producing lactic acid bacteria and their bacteriocins from raw milk***. *162nd Society of General Microbiology (SGM) Meeting Edinburgh International Conference Centre April 2008.*

- P Gaya, M Medina and M Nuñez. **Effect of the lactoperoxidase system on Listeria monocytogenes behavior in raw milk at refrigeration temperatures**. *Appl Environ Microbiol. 1991 November; 57(11): 3355-3360*. Activity of raw milk lactoperoxidase-thiocyanate-hydrogen peroxide (LP) system on four Listeria monocytogenes strains at refrigeration temperatures after addition of 0.25 mM sodium thiocyanate and 0.25 mM hydrogen peroxide was studied. **The LP system exhibited a bactericidal activity against L. monocytogenes at 4 and 8 degrees C**.

- Eyassu Seifu, E. M. Buys, E. F. Donkin and I. M. Petzer. **Antibacterial activity of the lactoperoxidase system against food-borne pathogens in Saanen and South African Indigenous goat milk**. *Food Control Volume 15, Issue 6, September 2004, Pages 447-452*. The effect of the lactoperoxidase (LP) system on the growth and survival of Escherichia coli, Staphylococcus aureus, Listeria monocytogenes and Brucella melitensis was determined in goat milk samples kept at 30 °C for 6 h. **The LP system exhibited a bactericidal effect against L. monocytogenes and Br. melitensis both in Saanen and Indigenous goat milks. The LP system was bactericidal against S. aureus in Saanen goat milk and bacteriostatic against S. aureus in Indigenous goat milk. However, the LP system was bacteriostatic against E. coli both in Saanen and Indigenous goat milks. The results of this study suggest the potential of the LP system to control the growth of food-borne pathogens in goat milk**.

More on Heat Resistance of Listeria Monocytogenes

I already alluded to heat-resistant "pathogenic" bacteria emerging now as a result of pasteurisation. Conventional dairy milk (*raw milk destined for pasteurisation*) routinely tests for pathogens. That's why it simply must be pasteurised. Fresh, pure, raw, natural milk however, has been proven to not test for a single pathogen after tens of millions of gallons in farms that use best practice, in compliance with state and national legal requirements.

Here is a paper raising questions about effectiveness of pasteurisation.

- David W. Fleming, M.D., Stephen L. Cochi, M.D., Kristine L. MacDonald, M.D., Jack Brondum, D.V.M., M.S., Peggy S. Hayes, B.S., Brian D. Plikaytis, M.S., Marion B. Holmes, B.S., A. Audurier, Ph.D., Claire V. Broome, M.D., and Arthur L. Reingold, M.D. **Pasteurized Milk as a Vehicle of Infection in an Outbreak of Listeriosis**. *N Engl J Med. 1985 Feb 14;312(7):404-7*. "Between June 30th and August 30th, 1983, 49 patients in Massachusetts acquired listeriosis. Seven cases occurred in fetuses or infants and 42 in immunosuppressed adults; 14 patients (29 per cent) died. Of 40 Listeria monocytogenes isolates available for testing, 32 were serotype 4b. Two case-control studies, one matching for neighborhood of residence and the other for underlying disease, revealed that the illness was strongly associated with drinking a specific brand of pasteurized whole or 2 per cent milk (odds ratio = 9, P less than 0.01 for the neighborhood-matched study; odds ratio = 11.5, P less than 0.001 for the illness-matched study). The association with milk was further substantiated by four additional analyses that suggested the presence of a dose-response effect, demonstrated a protective effect of skim milk, associated cases with the same product in an independent study in another state, and linked a specific phage type with the disease associated with milk. The milk associated with disease came from a group of farms on which listeriosis in dairy cows was known to have occurred at the time of the outbreak. Multiple serotypes of L. monocytogenes were isolated from raw milk obtained from these farms after the outbreak. At the plant where the milk was processed, inspections revealed no evidence of improper pasteurization. **These results support**

> **the hypothesis that human listeriosis can be a foodborne disease and raise questions about the ability of pasteurization to eradicate a large inoculum of L. monocytogenes from contaminated raw milk**."

This proves that pasteurised milk is MUCH more dangerous that fresh, pure, natural, raw milk from grass-fed cattle that is routinely tested for absence of "pathogens". The reason is clear. Cattle left in their natural habitat and natural diet are not sick cows. They are healthy vibrant cows and thus almost never shed "pathogens" neither in their milk, nor in their faeces. Unlike conventional dairy cows that, by the very nature of what they are used for, are routinely sick and are routinely administered antibiotic through the feed. Thus, raw milk from these cows MUST be pasteurised – and the above study acknowledges that even then, there are questions as to whether pasteurisation is sufficient to ensure milk safety.

Initially pasteurisation at the early part of the 20th century was at around 65°C for a much longer time period. They then realised this wasn't doing the job, so they increased it to 71.7°C, but recognizing that this will alter the milk quality, they reduced the time period to just 15 seconds. That's called "high temperature, short time" (HTST) pasteurisation which is the one more or less universally used. Now, even this is not sufficient. In some countries such as Australia for example, pasteurisation is done between 74-78°C for 30 seconds.

Other notable quotes from the above study:

- "Because the milk implicated in this outbreak was apparently properly pasteurized, the question of when it became contaminated assumes some importance. **Although postpasteurization contamination cannot be excluded, it seems unlikely for two reasons: multiple inspections of the plant did not reveal a potential source, and it is difficult to postulate a mechanism whereby postpasteurization contamination occurring over an extended period would have affected only whole milk and not skim milk, since both were processed with the same equipment each day**."
- "**On the other hand, intrinsic contamination of the milk and survival of some organisms despite adequate pasteurization is both consistent with the results of this investigation and biologically plausible**"
- "…preliminary experiments have indicated that, as compared with other bacteria, **L. monocytogenes is quite resistant to heat**…"
- "…In fact, a relatively small infectious dose may explain why all the adult patients in this outbreak were immunocompromised; studies have shown that immunosuppressed animals are more susceptible than immunocompetent animals to a small inoculum of L. monocytogenes…"
- "…Our results suggest that milk (in addition to raw vegetables) should be considered a possible vehicle of infection in sporadic listeriosis…." – they are referring here to "pasteurised" milk.
- "…Our results also suggest that although pasteurization is a highly effective method of eliminating bacterial pathogens from milk, **it may not always be 100 per cent effective**…".

At the very end of this study, the authors state, "*It is important to remember the potential benefits of this food product and the amount of human illness caused by consumption of unpasteurized milk.*" By this they mean that just because the survival of L. monocytogenes can cause illness in immunosuppressed people, that should not detract from the potential benefits of this pasteurised milk. An argument that can be made even more forcefully for raw milk from grass-fed cattle in their natural habitat meeting state legal requirements for safety. That argument would be even stronger than for pasteurised milk.

And in contrast they point out how much illness has been caused by "unpasteurized milk" – "*and the amount of human illness caused by consumption of unpasteurized milk*". It should be made clear that certainly these authors will never be able to demonstrate any significant amount of human illness arising from fresh, natural, pure raw milk coming from cattle fed on their natural diet, left in their natural habitat and complying with all state and national legal requirements for plate counts, coliforms and pathogen tests.

Massive Staphylococcus Aureus Food Poisoning in Japan – 14,700 People Reported Ill

Another massive outbreak, from Japan's biggest dairy company. They were taking old returned milk, remixing it with "raw milk destined for pasteurisation" in the storage vat and had faulty pipes containing S. aureus in their plant. ***Despite pasteurisation of the milk*** there were more 14,500 reported cases of food-poisoning. Clearly malpractice, but it shows that even pasteurisation does not offer safety where such circumstances arise. Later research revealed that small amounts of enterotoxin that was released by the S. aureas into the milk during production was associated with the disease outbreak.

- **Japan's Snow Brand Milk Sickens 14,700**. *Dairy Foods. August 1, 2000*. OSAKA, Japan-- Some 14,700 people were sickened and one elderly woman may have died of complications from tainted milk and yogurt produced by Snow Brand Milk Products Co., Japan's largest dairy.Japan's worst food safety crisis began June 28 when four children in Osaka fell ill. The toll quickly rose among people consuming two of Snow Brand's low-fat milk brands and some calcium-enriched products, which apparently were infected with the staphylococcus aureus bacterium at the Osaka plant.
- From another source: "Late June 2000, Japanese consumers fell ill after drinking milk. On 30 June 2000, 1152 patients had reported ill, with vomiting, nausea and diarrhoea as the main symptoms. On 6 July, the number of patients had risen to 10,780, and 159 patients had been admitted to hospital for treatment. On 7 July, the reported number of patients had increased to 12,928, and on 11 July to 14,000. A total of 14,555 persons were reported ill. Epidemiological research revealed that milk from Snow Brand Food Co Ltd, Japan's biggest dairy company, was the source of the intoxication. Laboratory analysis showed that Staphylococcus aureus enterotoxin was present in a number of packages of milk. Further investigation of the manufacturing plant revealed rather poor hygiene standards. The two chief infringements were: 1)Use of loose pipe connections, not included in the automatic cleaning and disinfection system. Large numbers of S. aureus organisms were detected in these pipes. Some pipes had not been cleaned for three weeks. 2) Reworking of returned milk. Packages of returned milk were opened by hand and stored in a separate tank which could not be cooled and which was not included in the automatic cleaning and disinfection system. The return milk was mixed with raw milk, and packed ***after pasteurisation***."
- **Snow recycled milk into 'new' products.** *Japan Times. Wednesday, July 12, 2000*. "The city and police suspect toxins were produced after low-fat milk contaminated with staph was mixed in the tank. ***According to investigations, low-fat milk produced at the factory underwent final adjustment in the tank before it was pasteurized***."
- Tetsuya Ikeda, Naoto Tamate, Keiji Yamaguchi,1 and Sou-ichi Makino. **Mass Outbreak of Food Poisoning Disease Caused by Small Amounts of Staphylococcal Enterotoxins A and H**. *Appl Environ Microbiol. 2005 May; 71(5): 2793–2795*.
- T. ASAO, Y. KUMEDA, T. KAWAI, T. SHIBATA, H. ODA, K. HARUKI, H. NAKAZAWA and S. KOZAKI. **An extensive outbreak of staphylococcal food poisoning due to low-fat milk in Japan: estimation of enterotoxin A in the incriminated milk and powdered skim milk**. Epidemiology and Infection (2003), 130:33-40 Cambridge University Press. An

extensive outbreak of staphylococcal food poisoning occurred in Kansai district in Japan. As many as 13 420 cases frequently ingested dairy products manufactured by a factory in Osaka City. The main ingredient of these dairy products was powdered skim milk manufactured by a factory in Hokkaido. Staphylococcal enterotoxin A (SEA) ([less-than-or-eq, slant]0·38 ng/ml) was detected in low-fat milk and approx. 3·7 ng/g in powdered skim milk. The total intake of SEA per capita was estimated mostly at approx. 20–100 ng. The assumed attack rate was considerably lower than those reported in previous outbreaks. ***SEA exposed at least twice to pasteurization at 130 °C for 4 or 2 s retained both immunological and biological activities, although it had been partially inactivated***. The present outbreak was unusual in that the thermal processes had destroyed staphylococci in milk but SEA had retained enough activity to cause intoxication.

Pasteurised Milk Strengthens Bacterial Resistance to Anti-Microbial Agents

An amazing study, showing that pasteurised milk which has its inherent immunity destroyed, allows E.Coli to develop anti-microbial resistance. This explains why when outbreaks occur with pasteurised milk, the illnesses are more violent in people who have been taking antibiotics, and tend to become epidemics, given the right circumstances. Just look at how much the minimal inhibitory concentration was increased for each of the anti-microbial agents after being in pasteurised milk.

- Peng Y, Hernandez RL, Crow RR, Jones SE, Mathews SA, Arnold AM, Castillo EF, Moseley JM, Varela MF. **Pasteurized whole milk confers reduced susceptibilities to the antimicrobial agents trimethoprim, gatifloxacin, cefotaxime and tetracycline via the marRAB locus in Escherichia coli**. J Dairy Res. 2008 Nov;75(4):491-6. We inoculated pasteurized whole milk with Escherichia coli strains GC4468 (intact marRAB locus), JHC1096 (Delta marRAB), or AG112 (Delta marR), and incubated each overnight at 37 degrees C. All strains were then recovered from the milk cultures, and susceptibilities to antimicrobial agents were determined by the E-test strip method (CLSI). Cells of strain GC4468, prior to culturing in milk, were susceptible to trimethoprim, gatifloxacin, cefotaxime and tetracycline. **After culturing GC4468 in pasteurized milk**, however, the **minimal inhibitory concentrations** (MICs) **increased 1.4-fold for trimethoprim** (P0.05), **1.5-fold for gatifloxacin** (P0.05), **2.0-fold for cefotaxime** (P=0.008), and **1.4-fold for tetracycline** (P0.05). After culturing GC4468 on milk count agar **the MICs were enhanced 3.4-fold for trimethoprim** (P0.05), **10-fold for gatifloxacin** (P=0.001), **7.1-fold for cefotaxime** (P=0.011), and **40.5-fold for tetracycline** (P=0.074), but exhibiting tetracycline resistance with a mean MIC of 74.7+/-18.47 microg/ml (CLSI). The MICs of the antimicrobial agents for JHC1096 cells after culturing in pasteurized whole milk were indistinguishable (P0.05) from baseline MICs measured before culturing in the same type of milk. **Thus, Esch. coli cells harbouring the marRAB locus exhibit reduced susceptibilities to multiple antimicrobial agents after culturing in pasteurized whole milk**.

With raw milk on the other hand, the level of "pathogenic" bacteria would be limited by the protective effect of the milk's inherent immunity, and existence of other competing good bacteria. This is why I make the point again that contamination of pasteurised milk is extremely dangerous and can lead to very large epidemics, and the resulting illnesses tend to be severe, especially in immunosuppressed people on medication or antibiotics.

Pathogenic Bacteria Cells Can Remain Metabolically Active After Pasteurization

Does pasteurisation create more problems than it actually solves in a modern context? The next paper highlights a problem in that even after pasteurisation, bacteria can still remain metabolically active. And this is only one of many papers highlighting such a concern.

- Thusitha S. Gunasekera, Anders Sørensen, Paul V. Attfield, Søren J. Sørensen, and Duncan A. Veal. **Inducible Gene Expression by Nonculturable Bacteria in Milk after Pasteurization**. *Appl Environ Microbiol. 2002 April; 68(4): 1988–1993*. "Milk pasteurization was introduced as a public health measure in order to destroy human pathogens and eliminate or reduce the activities of spoilage microorganisms. Bacillus spp. and Clostridium spp. are the organisms most likely to survive pasteurization as a consequence of their ability to form heat-resistant endospores. However, non-endospore-forming bacteria, including the pathogens Mycobacterium paratuberculosis and Listeria monocytogenes, can also survive pasteurization... Either pasteurized-milk samples were obtained directly from an HTST (72°C for 15 s) commercial pasteurization unit of a dairy plant in Sydney, or milk was pasteurized in the laboratory by the test tube holder method ... ***The results demonstrate that a substantial portion of cells rendered incapable of forming colonies by heat treatment are nevertheless metabolically active and able to transcribe and translate genes de novo. This observation is important because it highlights a potential problem for milk quality and safety***."

Everything I have mentioned above, establishes that contrary to popular opinion, pasteurised milk does not actually have an impeccable record in terms of food-poisoning. And this is besides the very strong evidence of pasteurised milk being a causative factor in allergies, atopy, asthma, heart disease, diabetes amongst others.

Today's pasteurised milk is mostly inferior quality milk from cattle of inferior health, fed on unnatural and inferior diets aimed at maximising milk yield (rather than superior milk quality). The resulting product simply must be pasteurised. Such cattle will be prone to illness and thus will be routinely shedding "pathogens" in faeces. Pasteurisation makes this inferior milk safe to drink, but increases the risk of post-pasteurisation contamination affecting potentially tens, if not hundreds of thousands of people – as a result of the destruction of milk's natural immunity components.

An Excellent Research Paper from Czechoslovakia on Pasteurization of Milk and Microbial Contaminants

I want to quote from this excellent study as it highlights much of what I have already touched upon previously.

Binderova, E., and D. Rysanek. 1999. **Microbial contaminants of milk processed by high-temperature short-time pasteurization**. Veterinarni Medicina 44:301-307.

> "The aim of the study was to determine whether the high temperature, short-time (next HTST) pasteurization method can be applied in the production of market milk and to assess the effects of this method on milk quality. Samples of raw and pasteurized milk were collected repeatedly from four pasteurization facilities in three dairies using the HTST method of heat processing for the production of curds and cheeses".

HTST is heating at 71.7°C for 15 seconds, the standard pasteurisation procedure.

> "One part of the samples was processed immediately after their delivery to the laboratory and the other was examined after 5 days of storage at +6 degrees C. The examinations included the determination of total count, psychrophilic and coliform bacteria, mould, yeast, Bacillus cereus and Staphylococcus aureus counts and the detection of Salmonella sp., Listeria monocytogenes, Escherichia coli, and Escherichia coli serotype O157 : H7. Standard (ISO) methods were used. The rate of bacterial contamination of raw milk intended for HTST pasteurization, expressed in terms of total and coliform bacteria counts, is shown in Tab. IA. It is evident that total bacteria counts considerably exceeded the limits laid down in the EC Regulations No. 46/92 and in recommendations of the Czech Standard CSN 57 0529. Rather surprising were also the unacceptably high counts of coliform bacteria. The rate of contamination of raw milk by psychrophilic bacteria, moulds and yeasts is shown in Tab. IB. The counts of psychrophilic bacteria exceeded the recommendations of Czech Standard (CSN 57 0529) several times".

Bearing in mind that this is "raw milk intended for pasteurisation", destined to become "market milk", and is from conventional dairies, the above results are not really surprising at all. This is the inferior quality milk that I've been talking about previously that simply MUST be pasteurised.

> "The increased counts of mesophilic aerobic, facultatively anaerobic and psychrophilic bacteria in raw milk tested immediately after withdrawal indicate an unsatisfactory sanitation regime and varying hygienic conditions upon milk collection transport and storage in dairies".

Pay attention to this, they are criticising the existing standards of hygiene in milk collection, transport and storage. So we have two issues, the inferior quality milk produced that is infested with "pathogens" (which is tied to what the cattle are fed and how they are kept) and the unhygienic conditions surrounding the collection, processing and transportation processes.

> "No limits for mould and yeast counts have been laid down and therefore the respective data are only illustrative. Tab. IC shows the contamination of *raw milk intended for pasteurization* by the major causative agents of foodborne infections. Of great importance is particularly the contamination by Escherichia coli including the serotype O157 : H7. Salmonellae were undetectable in all the samples under examination *The contamination by the other pathogenic agents cannot be regarded as dangerous*."

Again, they are talking about "raw milk intended for pasteurisation" – the inferior quality milk that is being "cleaned up" to make it safe for consumption. The last sentence is important as it raises a point that I've deliberately not addressed until now, in order not to confuse matters. That raw milk contains certain "pathogenic" bacteria does not actually make it unsafe to drink. These agents are widespread in the environment and found in most foods, and would not do any harm at the levels in which they are found.

> "Data on bacterial contamination of milk after the mild pasteurization is shown in Tabs. IIA-IIC. Unacceptable psychrophilic and coliform bacteria counts were found in 14 and 20% of the samples respectively. As can be seen in Tab. IIC, the unacceptable samples included also those contaminated by Escherichia coli incl. the serotype O157 : H7. Owing to the bacterial contamination, ***the HTST pasteurization is not suitable for the production of market milk***."

Just goes to prove what I have established previously. Here they are saying more than what I have said myself. Pasteurisation is not suitable for the production of market milk for Czechoslovakia. In other words, pasteurisation could not produce safe milk from the "*raw milk intended for pasteurisation*".

> "Tab. IIA also shows marked differences among the dairies and individual samplings indicating the possibility to reduce the contamination rate by observation of technological rules during the transport, take-over and handling of milk prior to heat processing."

So what are they suggesting? Well they are suggesting rules to ensure reduction of contamination risk – after having stated clearly that pasteurisation is not suitable for the production of market milk.

> "Considering the high rate of bacterial contamination of raw milk immediately before pasteurization, the HTST method of pasteurization cannot be recommended for the production of market milk in the Czech Republic."

They've said it again, pasteurisation cannot solve the problem if the milk is inferior quality, "pathogen" infested milk to begin with.

> "A high rate of contamination of raw milk intended for the HTST method of pasteurization was found, although, in general, the quality of milk purchased from farmers in the Czech Republic is very good."

So let's get the picture clear then, the farm milk (intended for pasteurisation) is supposedly of decent quality, but it gets contaminated during transport and handling prior to heat processing – and pasteurisation won't do the job thereafter. So in Czechoslovakia, they have to focus more on stricter hygiene standards as the more significant factor affecting market milk quality.

> "**The HTST method of pasteurization would increase the hazard of foodborne infections and intoxications, particularly those for which Listeria monocytogenes and strains of serotype O157 : H7 Escherichia coli are responsible**."

So what they are saying is that pasteurisation would make the milk more dangerous. This means that as pasteurisation does not destroy all the "pathogenic bacteria" those that survive will have a free reign to multiply, since all the good bacteria and the inherent immune systems in the raw milk (along with the associated enzymes) are destroyed. This makes pasteurised milk extremely dangerous, as they have rightly alluded to here, and that is why you see huge ***epidemics*** from pasteurised milk, involving hundreds of thousands of people.

> Shelf life of HTST pasteurized milk would be very short and its sensoric properties unacceptable. Therefore, the HTST method of pasteurization is not currently used in the production of market milk in the Czech Republic.

So what does the issue come back down to?

Producing good quality milk to begin with and ensuring good hygiene protocols post production. Exactly what our doctors and physicians from the late 19th century were doing to produce fresh, natural, living, clean, safe milk. Exactly what dairies like Organic Pastures are doing, and likewise dairies all over the US, Europe and UK – fresh milk from pasture fed cows in their natural habitat that never shed any pathogens.

Revisiting Food-Poisoning From "Raw Milk"

At this point I want to revisit the issue of food-poisoning from raw milk to make an important point I have alluded to before. As I have pointed out, there are different types of "raw milk", they are not all the same in quality and type.

- In many cases where the food-poisoning was associated with "raw milk", it was actually milk for which pasteurisation had "failed" or was "inadequate", and this often referred to as still being "raw milk". They frequently use the terms "inadequate pasteurisation" or "pasteurisation failure" despite the fact that there was no firm evidence of that – its just used as a plausible explanation[77]. **And then this is referred to, very deceptively and confusingly as "raw milk" in a very generic sense in case reporting**. Individuals without knowledge of this matter and who don't know any better would think that there is only one raw milk and that it is very dangerous. Historically speaking, the overwhelming majority of instances of food-poisoning occurred from the inferior milk that I have alluded to many times previously. In reality, it is raw milk produced out of cattle fed distillery grains, stillage (thin-slop), bird-feathers, meat from other animals and a variety of other unnatural foods. From tests conducted over 30% of milk from such cattle routinely test positive for "pathogens". It's inevitable, they are sick cows, are prone to disease and will routinely carry such pathogens. Where similar practices are found in dairy farms of whatever size, the associated risk will be relative to the degree of departure from totally natural dairy farming (feeding on grass, kept in the open, kept naturally healthy etc.)

- In other cases, where "raw milk destined for pasteurisation" – i.e. the inferior, grain-fed, milk of conventional dairy farms – has accidentally mixed with milk that had already been pasteurised, this too would be associated with "raw milk" in reporting. Its true, it was "raw milk" – but this is the inferior, pathogen containing raw milk that I have spoken of extensively in this paper – that which Hartley spoke of in 1840s, that which became the medium of the spread of disease throughout the 19th and early 20th centuries – and that which appears to be the same quality milk being produced now, supposedly being rendered safe through pasteurisation. While it may kill off "pathogens" to prevent acute gastric illness, the long term consequences of heat treated milk are of much greater concern, given the available evidence.

Conversely, the raw milk that I am speaking of is that which is obtained from only pasture fed cows, in their natural habitat, complying with all state and national laws regarding hygiene standards, "pathogen" testing and cell counts.

With respect to this type of milk I have yet to see any evidence making a clinically proven association between it and food-poisoning. I have already given you an example of the Organic Pastures dairy which after rechecking the data - in eight years of provision of fresh, raw milk from cows kept in fields, fed on pasture - have not led to a single proven incidence of food-poisoning, after tens of millions of annual servings in tens of thousands of regular customers. And wal-hamdulillaah, there are farms in many places that produce such milk in full compliance with legal requirements, in the UK, Europe, the US and elsewhere.

[77] In many cases, there was no detected failure in pasteurisation or breakdown in safety protocols. They assume that it must have been post-pasteurization contamination. This still does not discount the possibility of heat-resistant pathogens surviving pasteurisation being responsible.

Thus, if there is any significant body of evidence that links food-poisoning to fresh, pure, natural milk as Allaah placed it in the creation, "***labanan khaalisan*** **لبنا خالصا**", the very specific milk that I am speaking about on **HealthyMuslim.Com**, from farms meeting state and national legal requirements, then I would like to see it. I am not denying that it can take place or that it has never taken place. For sure it can, but then that would be viewed in a wider context of food-poisoning in general from all foodstuffs and is not something that should be singled out.

An Excellent and Pertinent Research Paper on the Subject of Foodborne Pathogens in Milk

The following is an excellent paper which provides a very fair treatment of the subject, with an acknowledgement that

- Pasteurisation does not afford complete safety.
- The nature of what cattle are fed determines whether they shed pathogens or not in their milk or faecal content.

This goes back to what I was saying before, that conventional dairy cattle milk frequently, and routinely tests for pathogens, so it must be pasteurised. Note that the following research paper is addressing issues of concern in the dairy industry and there are some revealing things, which I will comment upon in the footnotes.

- Oliver SP, Jayarao BM, Almeida RA. Food Safety Center of Excellence and Department of Animal Science, 59 McCord Hall, The University of Tennessee, Knoxville, TN 37996, USA. **Foodborne pathogens in milk and the dairy farm environment: food safety and public health implications**. *Foodborne Pathog Dis. 2005 Summer;2(2):115-29*. "ABSTRACT: Milk and products derived from milk of dairy cows can harbor a variety of microorganisms and can be important sources of foodborne pathogens. The presence of foodborne pathogens in milk is due to direct contact with contaminated sources in the dairy farm environment and to excretion from the udder of an infected animal. **Most milk is pasteurized, so why should the dairy industry be concerned about the microbial quality of bulk tank milk?**[78] There are several valid reasons, including (1) outbreaks of disease in humans have been traced to the consumption of unpasteurized milk **and have also been traced back to pasteurized milk**, (2) unpasteurized milk is consumed directly by dairy producers, farm employees, and their families, neighbors, and raw milk advocates, (3) unpasteurized milk is consumed directly by a large segment of the population via consumption of several types of cheeses manufactured from unpasteurized milk, (4) entry of foodborne pathogens via contaminated raw milk[79] into **dairy food processing plants** can lead to persistence of these pathogens in biofilms, and subsequent contamination of processed milk products and exposure of consumers to pathogenic bacteria, (5) **pasteurization may not destroy all foodborne pathogens in milk**[80], and (6) inadequate or faulty pasteurization will not destroy all foodborne pathogens. **Furthermore, pathogens such as Listeria monocytogenes can survive and thrive in post-pasteurization processing environments, thus leading to recontamination of dairy products**. These pathways pose a risk to the consumer from direct exposure to foodborne pathogens present in unpasteurized dairy products as well as dairy products that become re-contaminated after

[78] As has been established previously, pasteurisation allows the production of cheap, inferior quality milk, the concern of doctors and physicians opposing pasteurisation over 100 years ago. The researchers here are raising these points to show that the industry should in fact be concerned about such issues as it relates to dairy practice, which includes the nature of the feed. As milk is collected from conventional dairies and put into a "bulk tank" at a processing centre, if one lot of milk is contaminated from one farm, that means all the milk in the "bulk tank" with become contaminated too.

[79] This is raw milk intended for pasteurisation, which is the inferior quality milk that needs cleaning up to make it safe.

[80] This is firmly established and evidence has been provided for it in this paper. This highlights that pasteurisation is not the best solution. A natural, clean, safe milk supply is the best solution. It is available right now, as it was available over 150 years ago, to this day. This way, there will not be the risk of heat-resistance and acid-resistant "pathogens" that are associated with disease.

pasteurization. The purpose of this communication is to review literature published on the prevalence of bacterial foodborne pathogens in milk and in the dairy environment, and to discuss public health and food safety issues associated with foodborne pathogens found in the dairy environment. **Information presented supports the model in which the presence of pathogens depends on ingestion of contaminated feed followed by amplification in bovine hosts and fecal dissemination in the farm environment**. The final outcome of this cycle is a constantly maintained reservoir of foodborne pathogens that can reach humans by direct contact, ingestion of raw contaminated milk or cheese, or contamination during the processing of milk products. Isolation of bacterial pathogens with similar biotypes from dairy farms and from outbreaks of human disease substantiates this hypothesis."

This is a great paper. The key thing is that they state, "***Information presented supports the model in which the presence of pathogens depends on ingestion of contaminated feed followed by amplification in bovine hosts and fecal dissemination in the farm environment***". This is why as I have said, conventional dairy cattle routinely test for "pathogen" shedding. This is clearly to do with their feed and habitat. Go back and take a look at the information I provided on what dairy cattle are fed on today. Conversely, you will not find any pathogens in cattle fed on their natural diet in their natural habitat. Not in their milk, not in their faeces, and not even in the farm itself – as has been proven by farms that implement best practice, such as Organic Pastures, a dairy I have referred to earlier. This proves that a naturally clean, safe milk supply is present, and in fact has always been present, in parallel to the emergence and prominence of "swill milk". *Thus, farms that maintain good hygiene standards, and feed their cattle on grass, will not have problems with "pathogens" in their milk*. This is proven to be the case. Inherent immunity in the milk will take care of the situation if pathogens are found.

When the authors say, "*These pathways pose a risk to the consumer from direct exposure to foodborne pathogens present in unpasteurized dairy products as well as dairy products that become re-contaminated after pasteurisation*" you have to bear in mind that this is applicable to conventional dairies that are producing "distillery, brewery" and "feedlot" milk.

Let me emphasize this issue by quoting another research paper that touches upon the issue of "pathogens" in dairy environments:

- Catherine W. Donnelly. Department of Animal Science, University of Vermont, Burlington 05405. **Concerns of Microbial Pathogens in Association with Dairy Foods**. *Journal of Dairy Science Vol. 73 No. 6 1656-1661*. Recent outbreaks of foodborne disease linked to Salmonella, Listeria, and Yersinia have highlighted consumer awareness of microbiological problems in the food supply. Such outbreaks affirm the need for improved testing, environmental monitoring, and epidemiological surveillance. This paper reviews the entry of microbial pathogens into foods, with an emphasis on dairy products, by examining the contribution of the processing environment to microbial contamination. Numerous surveys, including a recent audit of **dairy processing plants** in Vermont, have revealed common foci of environmental contamination by Listeria and Yersinia persistent within dairy processing environments. **With respect to dairy products, the bacterial pathogens discussed in this manuscript share a common source, raw milk**. Characteristics possessed by Salmonella, Listeria, and Yersinia are compared and contrasted. In the case of Listeria, this bacterium's role as a newly emerged foodborne pathogen is discussed. Finally, the economic consequences associated with foodborne disease are highlighted, and future prospects related to foodborne illness are presented.

I've highlighted the appropriate sentence, "*With respect to dairy products, the bacterial pathogens discussed in this manuscript share a common source, raw milk*" to show that the "raw milk" being referred to here is that inferior, pathogen infested raw milk that comes from sick cows, on an unnatural diet, in an unnatural habitat, fed on distillery grains and "slop". This milk is being taken to "*dairy processing plants*", so the researcher is right, that the source is actually "raw milk", it is "*raw milk ultimately destined for pasteurisation*" and dairies such as these will have "pathogenic" bacteria all over the place, ***by necessity of the nature of what the cattle are fed and how they are kept***.

Conversely, with farms providing real milk, that is raw milk from naturally healthy cows fed on their natural food (grass, shrubs, plants) you will not have the same type of environment. This is because such cows will not shed "pathogens" – *free is Allaah from that such natural milk should be inherently harmful*. I'd like to quote you an owner of a farm that I have previously mentioned in this paper, Mark Mcafee, who provides fresh, raw milk to around 50,000 people every day in California, and has been doing so for the past eight years – that's tens of millions of servings – and has never tested positive once for "pathogenic bacteria" – not in the milk, not in the faeces, not even in the dairy environment – and all this is on record and acknowledge by state authorities:

> "All foods carry a risk. Pasteurized milk killed three people in MA last year because of Listeria. So do not believe for one minute that dead foods means zero risk. Raw milk is one of the safest foods available. There have been no deaths associated with raw milk intended for human consumption in the last 30 years. The CDC data that is quoted includes pasteurization failures and raw cheeses. This is not data related to raw milk tested and labeled and regulated for human consumption. Raw milk is tested and then retested again and again for pathogens. We can not even get pathogens to grow in raw milk in lab conditions. They die off rapidly. Pathogens love to thrive and live in pasteurized milk. This is because pasteurized milk has no enzymes or beneficial bacteria to control pathogens that can enter pasteurized dead milk after processing. Raw milk is alive with good bacteria that kill bad bacteria and the environmental conditions that prevail in a raw milk creamery have been shown to be free of the harmful bacteria found in sterilized pasteurization creameries. In one study, it was shown that 60% of the creameries that pasteurize milk in Australia had listeria found in their environmental tests. **No pathogens have ever been found in a creamery environmental study at OPDC in eight years of intensive testing. Not one pathogen ever**."

This shows that when you leave cattle upon their natural diets, in their natural habitats and keep them healthy, and not try to artificially inflate the milk yield, you get completely safe, fresh, pure, natural, living milk. Pasteurisation is simply not necessary for this milk. That's why nations and societies have enjoyed this milk for thousands of years without problems.

I would like to quote another longer letter which nicely sums up many of the things I have presented in this paper, and I'll put it under its own heading in the next section.

On The Safety of Raw Milk

A letter written to the Colorado Department of Public Health, by Mark Mcafee, owner of Organic Pastures Dairy. Raw dairy producers are under intense scrutiny and thus any false or wild claims will land them in a lot of trouble.

> "The Colorado Department of Public Health
> Denver, Colorado
>
> Dear Sirs,
>
> I have been requested to share with you our commercial organic raw milk production and sales experience. For the last four years, Organic Pastures Dairy has produced a full line of raw organic dairy products for retail sale (300 stores including Wholefoods) and consumption here in California. **The state of California (CDFA) monitors and tests all of our raw dairy products multiple times per month**. **The state has never found one pathogen (salmonella, E. coli O157:H7 or listeria) in any of our products. Even more interesting is the fact that not one human pathogen has ever been found in the hundreds of environmental swabs that have been taken in our plant facility**.
>
> **Dr. Caterina Berge, DVM and PhD candidate at UC Davis, tested our milk cow's fresh manure and did not find any human pathogens. That's right. . . no Salmonella**. She was able to show that when antibiotics are not ever used on the herd (as stipulated in the organic standards) and when cows are not stressed (grass-fed and kept healthy) they simply do not slough off pathogens in their manure. **The data collected at Organic Pastures was quite different from that found at other dairies. The typical conventional milk tank had either salmonella or E. coli O157:H7 detected about 30 percent of the time. In comparison, Organic Pastures has never had one pathogen, ever**.
>
> To study this issue further, Organic Pastures contracted with BSK[81] labs in Fresno to perform multiple challenge and recovery tests on our raw milk and raw colostrum. **When 7 logs (10 million counts) of pathogens were added to one-milliliter samples of organic raw milk they would not grow**. In fact they died off. The salmonella was so badly out-competed that it could not be found less than 24 hours later. The listeria drop was less dramatic and was similiar to the E. Coli O157:H7 samples that were studied, but they also did not grow and declined substantially over time. The lab concluded: "... **organic raw milk and colostrum do not appear to support the growth of pathogens** ..."[82].

[81] http://www.bsklabs.com

[82] An interesting study: H. P. Bachmann and U. Spahr. Swiss Federal Institute of Technology, CH-8092 Zurich, Switzerland. Federal Dairy Research Institute, CH-3097 Liebefeld-Bern, Switzerland. **The Fate of Potentially Pathogenic Bacteria in Swiss Hard and Semihard Cheeses Made from Raw Milk**. *Journal of Dairy Science Vol. 78 No. 3 476-483*. "This study examined the ability of potentially pathogenic bacteria to grow and to survive during the manufacture and ripening of Swiss hard and semihard cheese varieties made from raw milk. The results show that hard cheeses are hygienically safe; 1 wk after fabrication, the inoculated pathogens (Aeromonas hydrophila, Campylobacter jejuni, Escherichia coli, Listeria monocytogenes, Pseudomonas aeruginosa, Salmonella spp., Staphylococcus aureus, and Yersinia enterocolitica) could no longer be detected. At the age of commercial ripeness, the semihard cheeses were free from the inoculated pathogens and their toxic metabolites, except for L. monocytogenes, which survived the manufacturing and ripening process"… "…Because of the synergistic effect of active antimicrobial enzyme systems of fresh raw milk, antagonistic starter culture flora, fast

During the period 2000 through 2004 there were several listeria-related food recalls in California associated with pasteurized milk products and ice cream. **During this same period more than 12 million servings of Organic Pastures products were consumed and not one person complained of illness and not one pathogen was ever found either by the state, FDA or Organic Pastures**.

This begs the bigger question. What is it that causes raw milk to kill pathogens? Just in the last 24 months, the FDA has approved lactoferrin as an approved method of treatment for pathogen reduction in beef slaughter plants. Raw milk naturally has levels of this enzyme-based pathogen killer. **Pasteurization inactivates this and other enzymes that kill pathogens. These enzymes include lactoferrin, xanthine oxidase, lactoperoxidase, lysozyme and nisin. There are other interrelated enzymes and beneficial bacteria that also act on the pathogens to inhibit their growth. All of these systems are destroyed by pasteurization**.

It is no wonder that dairy plants that pasteurize must be kept absolutely spotless. There are no remaining safety systems in the processed milk.

I will be presenting my experiences and the factual references that I have mentioned here during my verbal address in Colorado on May 19th.

Our company ships product all over the world. **We have been inspected by the FDA and the FDA has also never found a pathogen**. It may seem strange to say or claim this, but Mother Nature is right, her blue print is right on point. **It is mankind that has added variables that cause much of the concern for pathogens in our current market systems**. Our consumers are made ill by pasteurized milk products and the additives and processing methods.

Our consumers share their testimonials with us every day. Asthma, allergies, arthritis, immune-related disorders, autism, ADD, Crohn's disease, rare enzyme deficiencies … the list goes on and on. In each of these cases raw milk or raw dairy products makes a dramatic improvement in health. There have been cases when patients have been written off by modern medicine only to return to perfect health after drinking raw colostrums and raw dairy products.

It is imperative that the citizens of our nation, not just California, have an informed choice in foods. If raw milk was so horrible then why is it that raw milk has such an incredibly safe record here in California and in Colorado? I would argue that since we have been in business there have been many listeria recalls and food outbreaks with pasteurized milk … but none with organic raw milk.

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acidification, antimicrobial effect of lactic acid, and high curd cooking temperatures, potentially pathogenic bacteria do not survive fabrication of Swiss hard cheese varieties produced under good manufacturing practices." Note in this study that they affirm all of the protective enzymatic systems as being a very strong barrier to "pathogenic" bacteria, should they occur in raw milk. In making the cheese, they obviously had to heat the milk (to around 45°C, but the point is that raw milk has inherent immunity that will knock out "pathogenic" bacteria. Listeria Monocytogenes survives even pasteurisation at 71.7°C, so the fact that it survived during this cheese-making process is not surprising.

> As an American we can buy raw eggs, raw meat, raw fresh juices, so why not raw dairy products? Show us one case of disease related to natural raw dairy products in Colorado or California. They are very hard to find. They are nearly all related to pasteurizer failure, not *raw dairy products intended for consumption*[83]…
>
> Our products have what Mother Nature intended, a diversity of good bacteria and a wide range of essential enzymes including lactase for lactose digestion and phosphatase that is essential for the utilization of calcium.
>
> One reason raw milk is so much easier to digest compared to pasteurized milk is due to the presence of lactase, the enzyme that breaks down milk sugar and which many humans are unable to produce. The experts I have spoken with deny the presence of lactase in raw milk; however, it is the friendly bacteria in raw milk that facilitate the creation of lactase in the intestine where it is needed. That is why lactose-intolerant people can drink raw milk without a problem. Pasteurization kills these friendly bacteria.
>
> Please call 1-877-Raw Milk and I would be happy to discuss these experiences and the hard data that backs them up. Feel free to call Organic Pastures and ask for the lab tests results. **You will find zero pathogens detected at any time from any test**.
>
> I look forward to your questions. I am dedicated to sharing information, education and the building of understanding relationships. In fact we place our most sensitive bacteria data at our website for all the world to see at www.organicpastures.com[84]…
>
> I have a medical background having served as a certified paramedic and medical educator for the Fresno County Health Department for 16 years and having run more than 14,000 911 calls… Most kind regards, Mark McAfee, Founder, Organic Pastures"

What McAfee has said here regarding his consumers is by no means uncommon. I've already told that you there are thousands of testimonials from people consuming raw milk, and you can find them all over the place, and being reported in news articles and reports. An article in the *Belfast Telegraph, Tuesday, 6 November 2007*:

> At the Chelsea Farmers Market, raw milk is one of the most popular dairy products. And at Meadow Cottage Farm, a Surrey supplier, demand is outstripping supply. "We sell 50 litres a day but customer demand just seems to keep growing," says Celia Haynes of Meadow Cottage, which specialises in unpasteurised milk and cream produced by the family's herd of Jersey cows. "We don't just get local customers coming to the farm - people travel for miles, and buy in bulk. Unpasteurised milk has a rich but refreshing flavour which adults and children seem to love."
>
> It's not just about the taste, though. One study published in The Internet Journal of Asthma, Allergy and Immunology found that raw milk reduced children's risk of suffering allergy-related conditions by up to 40 per cent. There are overall nutritional benefits, too. Proponents say that unpasteurised milk is so packed with nutrients that it's a virtual superfood. Unlike heat-treated milk, it is full of beneficial gut bacteria, known to improve

[83] I.e. as opposed to "raw milk intended for pasteurisation".
[84] See here for example http://www.organicpastures.com/pdfs/Bac_cts_june_08.pdf

digestion and immunity. Raw milk contains a full complement of folic acid, B vitamins, vitamin C, omega-3 fatty acids and other nutrients that are partially or completely destroyed in pasteurisation. Raw milk drinkers also benefit from digestive enzymes, as well as something called Wulzen factor, a compound that combats arthritis and arterial stiffening. Some people with a history of digestive tract problems such as Crohn's disease swear by the curative powers of unpasteurised milk; others praise its nutritional value and its ability to strengthen the immune system.

But the farmers who make it say that their raw milk is made to a strict standard. John Barron, of Beaconshill Farm in Herefordshire, points out that stringent regulations to ensure the safety of raw milk tend to mean that the cows are significantly healthier than those on commercial farms. “The simple fact is, we've never had a single case of food poisoning,” he says…

..The research has certainly been promising so far. Prompted by figures showing that children growing up on farms are less likely to develop allergies, scientists at the University of London gave children a couple of glasses of raw milk a week. They found that it seemed to cut their chances of developing hay fever by 10 per cent and eczema by 38 per cent. They also looked at blood samples from 4,700 primary-school children in Shropshire, and found that raw milk drinkers, most of whom lived on farms, had 60 per cent lower levels of immunoglobulin E - an antibody that the body's immune system pumps out in huge quantities on exposure to an allergen. Levels of histamine, another chemical that is released by cells during an allergic reaction, were halved.

These findings aren't news to raw milk producers: their customers report real improvements to their children's skin and respiratory health. “Our customers are convinced the milk is good for their health,” says Barron. “Many have reported improvements to allergy symptoms in themselves or their children while drinking unpasteurised milk. Others have found that bloating and other digestive difficulties have settled down.”

Of course, all of this would simply be dismissed as mere anecdotal quackery, but to the followers of the Prophetic Medicine, it is the truth and an affirmation of the greatness of Allaah the Most High, and of the perfection in His creation.

The Messenger of Allaah (sallallaahu `alayhi wasallam) said, “***Drink cow’s milk, for indeed it ruminates on every herbage, and it is a cure for every disease***”

And Ibn al-Qayyim said,

> “**The medicine of the followers of the Prophet is more sound and more beneficial than that of any others. Thus the medicine of the followers of the Seal and Master and Leader of the prophets, Muhammad bin ‘Abdullaah, (sallallaahu alayhi wasallam) is the most perfect medicine, the soundest and the most beneficial. This will only be recognised by one who knows both the medicine of other people and that of the followers of the Prophet (sallallaahu alayhi wasallam) and then compares them, whereupon the difference will become clear to him**”. (Zaad al-Ma’aad 3/380)

Why A Large Body of "Health Professionals" Warn Against Milk

Finally, its worth mentioning a group of people made up of a large number of doctors, paediatricians and others who warn against consumption of milk absolutely, and claim that it is not suitable for human consumption and inherently dangerous. The reason they have taken this position is due to what they see of widespread allergy, sickness and acute and chronic disease associated with cow's milk.

Their mistake is that they have not distinguished between "*pasteurised cow's milk*" from conventional dairies (which is more or less what the vast majority of people are consuming) and between the milk that Allaah placed in the creation, milk from cows fed on herbage, left in their natural habitat, "***labanan khaalisan*** **لبنا خالصا**" – and thus they have entered into extremism in this regard.

So I say that cow's milk from pasture fed cattle, kept in good health, in their natural habitat will produce safe and healthy milk that is a perfect food and a cure for every disease. Extremism is entered into when the issue of which specific milk we are speaking about is not clarified. Most of the milk produced today in mass-production dairies is not the milk that is healthy, safe, beneficial and curative. Thus a large group of people fail to distinguish between inferior milk that is pasteurised, homogenised – and is associated with much disease – from the very versatile, natural, living, unprocessed milk that is devoid of harm (short or long-term) and is full of much benefit.

I have a book in front of me, "**Don't Drink Your Milk**" by a Frank. A. Oski, a former head of John Hopkins University Head of Pediatrics. This is the most significant book referred to by opponents of cow's milk consumption. He brings great references from published literature in a variety of journals from across the world and makes an extremely strong case. **I actually agree with him**, so long as he is speaking about pasteurised milk from conventional dairies. He also has published papers too.

- Oski, F.A. **Is bovine milk a health hazard?** *Pediatrics (1985 Jan) 75(1 Pt 2):182-6*. "The consumption of whole milk after the first year of life should be discouraged because of its potential role in a variety of disorders including atherosclerosis, recurrent abdominal pain of childhood, cataracts, milk-borne infections, and juvenile delinquency".

His book is very well referenced and he attributes most childhood health problems including acne, anemia, anti-social behaviour, asthma, bloating, recurrent bronchitis, congestion, cramps, diabetes, diarrhea, ear infections, eczema, hay fever, hives, juvenile rheumatoid arthritis, lactose intolerance, leukaemia, renal disease, skin rash, and vomiting as just a partial list, to the consumption of "Grade A Pasteurised Milk". This attribution has a good and strong basis in the research literature.

I've think I've written enough to put across my position – even though, I've only touched the surface in establishing fresh, raw, pure, natural living milk's superiority and benefit's over heat treated, processed milk - and I will now summarise the various issues and incorporate some conclusions.

Summary

- The milk that Allaah placed in the creation and which he referred to as "***labanan khaalisan*** **لبنا خالصا**" has benefits which are more than just purported. They are firmly established by the Book and the Sunnah, and the use of fresh, pure, natural milk is from the Prophetic Medicine.

- This milk has been enjoyed by nations and societies for thousands of years and was recognised for its health and curative properties – prior to the invention of refrigeration, pasteurisation and homogenisation.

- The medicinal properties are textually stated in the Sunnah for fresh, natural, living milk that comes from cows fed on pasture (grass, shrubs, plants).

- This natural, living milk has been successfully used for treating a very wide range of chronic diseases, and its use as such was well known in Europe and the US in the 19th and early 20th centuries.

- This milk will always be available, a blessing from Allaah the Most High, when people leave the cattle upon the natural state that they were created upon and treat them in the manner they ought to be treated in diet and habitat.

- The growth of cities in industrialized nations in the 19th century brought about unprecedented conditions. People lived in poor hygiene and poverty and diseases were already widespread. This growth of cities meant an increase in demand for produce and food, including milk.

- As a result the milk supply industry flourished. Dairies sprang up and were operating with really terrible standards of hygiene, employing diseased people in jobs involving direct contact with milk intended for consumption. The milk produced in that time was dirty, inferior, slop milk from cattle fed unnatural diets and kept in unnatural conditions. Milk transportation was via train over hundreds of miles without refrigeration.

- Because of these factors milk became a medium, alongside water, for the transmission of already existing human diseases. All diseases arising from the milk supply were mainly human in origin. There were very rare incidences of *bovine* tuberculosis in humans. The overwhelming majority of disease that was milk-borne was human in origin.

- Prior to widespread use of pasteurisation concerned doctors in the US set up movements to bring about a reform in the milk supply. They believed in a naturally clean milk supply, recognizing full well the superiority of fresh, natural, clean milk.

- These same doctors opposed pasteurisation due to their insight that it will simply allow dairies to continue producing the same inferior quality, slop milk and will not really solve the real underlying problems. What they feared was unfortunately true then, as it is now.

- The certified milk movement of these doctors was born and brought about good reforms in hygiene. They produced milk 100 years ago that was as good as today's US "Grade A" milk whose requirements are detailed in the Pasteurised Milk Ordinance. These doctors recognised the value of fresh, raw, clean milk and its medicinal properties.

- Pasteurisation was not necessarily adopted for safety reasons. There was a complex interplay of factors, and it grew more out of social reasons, than out of purely and primarily public health concerns. There was much opposition to it, mostly from doctors.

- The certified milk movement was responsible for bringing hygiene reforms in the dairy industry, and this was the seed, the very beginning of what would eventually lead to the Ordinance that we have today.

- Pasteurisation prevented disease transmission from dirty inferior milk. Certified raw milk produced clean milk. These two separate routes – even though their protagonists opposed each other - actually became merged as part of state and national policy over the decades.

- It was already established that a clean and safe raw milk supply can be achieved and actually was achieved at standards similar to today's "Grade A" milk.

- As a result of the implementation of these reforms including pasteurisation, transmission of human diseases such tuberculosis, scarlet fever, typhoid and so on, over the decades after World War II gradually died out, and now they are unheard of.

- While pasteurisation is given the credit for disease reduction – and which is true – the great role played by the certified milk movement of Henry Coit and the "Medical Milk Commission" in creating a genuinely clean milk supply is not readily acknowledged. It can be argued that this played a more significant role than pasteurisation since state authorities had exempted certified raw milk from compulsory pasteurisation laws.

- The historical precedents unique to the 19th and early 20th centuries, in the context of which pasteurisation was adopted are now longer with us. It is possible to engineer a clean raw milk supply, but this is only achievable with cattle fed on their natural diet and kept in their natural habitat.

- All conventional dairy milk must continue to be pasteurised as a matter of utmost public safety, since it is next to impossible to create safe milk from sick cattle fed on unnatural diets in unnatural habitats. Raw milk from such a source is extremely dangerous. Contemporary dairies share very similar characteristics to the distillery slop milk dairies of the 19th century.

- All contemporary concerns regarding the so called danger of raw milk are skewed towards historical precedents that are largely bygone and thus, largely irrelevant.

- In this last point I am referring only to raw milk from cows fed on their natural diet in a natural habitat. I am not speaking about conventional raw milk – in that regard, this milk must be pasteurised, and safety concerns about it are valid, and continue to apply – even though the pasteurisation process is still not enough to prevent huge epidemics from occurring.

- The above proves the point that pasteurisation is a process that just allows dangerous, inferior milk to be produced. A clean, safe, raw milk supply would not have these problems.

- A clean, raw milk supply from cattle fed on herbage (grass, shrubs, plants) in their natural habitat, meeting all state and national legal requirements for public safety is currently available and it has an impeccable safety record, when researched into in detail.

- This same, fresh, natural, raw milk that Allaah placed in the creation and which He referred to in His Book as "***labanan khaalisan*** **لبنا خالصا**", has been available for thousands of years and will continue to be available inshaa'Allaah, a bounty and favour from Allaah, to those who seek it and seek its curative properties.

- There are heat-resistant bacteria surviving pasteurisation that cause Listerioris. There are also acid-resistant bacteria such as E. Coli, that have developed acid resistance due to the diet of conventional dairy cattle. This is an emerging problem being recognised in dairy science circles.

- Cattle fed on their natural diets in their natural habitats overwhelmingly do not shed "pathogens".

- Cattle fed on their natural diets, treated as they ought to be, produce "***labanan khaalisan*** **لبنا خالصا**" which is a cure for every disease, and fresh, pure, raw, natural, living milk was used widely in the 19th and early 20th century to cure a very broad range of diseases.

- This highlights the superiority of the Prophetic Medicine above and over the medicine of the physicians, contemporaries included.

- Pasteurised milk can be extremely dangerous when post-production contamination takes place and it has proven to take place.

- Pasteurised milk is associated with the greatest and largest epidemics of food-borne illnesses in general, involving hundreds of thousands of people and associated with many deaths. This is because all inherent immunity of the milk is destroyed by pasteurisation thus, any contamination thereafter allows "pathogens" to multiply unhindered, leading to much more violent gastric illnesses – and deaths.

- Leaving gastric illnesses to one side – pasteurised homogenised milk is tied to heart disease, diabetes, allergies and a great deal of suffering connected to chronic conditions. There is ample evidence for this – right down to the molecular level.

- On the balance of all available evidence, consumption of pasteurised homogenised milk is a health-hazard. Prior to the 20th century (before wide scale adoption of pasteurisation) heart disease was very uncommon – despite diets rich in dairy, cheeses and butter, not just in Europe and US, but in many different nations and societies. With milk being pasteurised and then homogenised heart disease and other chronic illnesses saw big rises in all developed nations.

- Heat treatment of milk leads to malformed milk proteins, as well as denaturation of enzymes. This leads to allergic reactions to susceptible individuals. Even if these changes are subtle and slight, the impact upon health can be very significant and tangible.

- **HealthyMuslim.Com** is advocating fresh, natural, clean milk from grass-fed cattle from licensed farms in compliance with all state and national legal requirements for the production

of their milk. As this is a matter of public safety, governments such as those of the UK and Wales and states in the US, and countries in the EU have revisited this issue numerous times over the decades, and have continued to allow the sale of raw milk, with the enforcing of strict standards.

A Few Thoughts

It's not hard from all the preceding evidence for the sound intellect to arrive at clear cut certainties in this issue with a little reflection.

Firstly, if the Messenger (sallallaahu alayhi wasallam) said, "***Drink cow's milk, for indeed it ruminates on every herbage, and it is a cure for every disease***" – and if we know that nations, societies and cultures have been living on diets consisting largely of milk for centuries, such as:

- The Arabs – who used to rely largely upon fresh camel's milk and about whom the Encyclopaedia Brittanica from the early 20th century states that they are finest race in physical terms, their diet being mainly milk and milk products.

- The Swiss living in remote valleys, and about whom Weston Price says in his monumental and amazing book, "Nutritional and Physical Degeneration" published in 1939 (and of which I have a copy) that their food was from cattle and goats which provided milk and meat.

- The Bulgars who routinely lived over the age of 100 (going well into the 120s, and 130s, and and some reports claim past the 140s) living largely upon milk and fermented milk products and who were studied by Ilya Metchnikoff, the Russian, at at the turn of the 20th century who first brought attention to what are today known as "probiotics" in the Bulgarian diet.

To name just a few, and we know that chronic diseases such as diabetes, heart disease, allergies and asthma were pretty much unknown to those cultures and societies living on a large share of dairy in their diet. But conversely, today we are informed by a large body of scientific evidence that milk is associated in many developed nations with diabetes, heart disease, allergies and atopies (amongst others). Clearly there has got to be something different between the milk that previous cultures were consuming and the milk that contemporary "civilized" cultures are consuming.

If this milk is disease-associated, then clearly it can't be the curative milk that is referred to in the Prophetic Sunnah. So the question is – why is it different?

This paper should have answered that question inshaa'Allaah.

Secondly, When we realise that despite the 19th and 20th centuries being the era in which milk became perhaps the largest medium of food-borne illness, a significant number of European and American physicians were successfully using the "milk cure" to cure tens of thousands of people of a large variety of unconnected chronic illnesses. And they were using clean, fresh, raw, pure milk –this shows clearly that the same curative milk mentioned in the Sunnah was available, despite the corruption in the milk supply.

When we find today, emerging evidence of the protective and curative effect of unpasteurised milk in relation to allergies and asthma – and mountains of empirical evidence of the curative effect of natural, unprocessed, fresh milk – be that in the Western nations in relation to fresh, cow's milk, or in the Arab lands of camel's milk – then we have dependable body of evidence, which given the historical facts alone, is extremely worthy of consideration and which also shows that the curative cow's milk in the Sunnah is still available for whoever seeks it.

Thirdly, if there are dairies in existence today, that are serving tens of millions of servings of fresh, natural, raw cow's milk to tens of thousands of customers and have been doing so for years and years, without a single *proven* case of food-poisoining – then this clearly shows that the "***labanan khaalisan*** **لبنا خالصا**" of the Qur'aan and the curative, fresh, raw, natural cow's milk can be produced and is being produced. It all comes down to dairy farming practice. Thus, if it is available, and it surely is, in many countries, then what is there to prevent a Muslim, placing tawakkul upon His Lord, adopting the explicitly stated ways and means, and signifying Tawheed in all of that, hoping for cure thereby?

There are many other thoughts and reflections from everything that has preceded but this is just by way of illustration …

Concluding Remarks and Observations

Firstly: It is necessary to distinguish between the "raw milk" that is the "***labanan khaalisan* لبنا خالصا"** mentioned in the Qur'an and mentioned in the Sunnah as being curative, from the inferior, low quality "*raw milk destined for pasteurisation*" that we mostly have in today's mass-dairy production, and which in reality is not much different from the distillery slop and swill milk of the 19th century, in its essence. The distinction in quality between raw milk *intended* for *consumption* and raw milk *destined* for *pasteurisation* is made on **HealthyMuslim.Com**.

Secondly: It is unbefitting for any person, regardless of background or orientation, to make statements that question the inherent benefits of the "***labanan khaalisan* لبنا خالصا**"[85] mentioned in the Qur'aan and the curative power of fresh, natural, unprocessed, living cows' milk mentioned in the Sunnah, with statements such as "*It has yet to be demonstrated that raw milk has any beneficial health effects*…".

Thirdly: It is necessary to distinguish between inherent qualities of natural pure, fresh, real, living milk and between environmental hygiene and safety issues, *the lack whereof can affect the safety of all foods without exception*. In this regard, fresh, pure, raw milk is just like any other food, such as water, processed milk, poultry, meat, spinach, tomatoes and other produce. It is possible to produce fresh, natural, raw milk in a completely clean environment, but human errors can always lead to contamination. These factors affecting food quality and safety affect all foods and are controllable. We need to look at this issue fairly and realistically and without bias, distortion and excessive scare-mongering. The "raw milk" that I am speaking about, retains its inherent immunity and has displayed a far superior safety record. That safety record spans over many thousands of years at least, and is supported by religious text – that's when we are talking about "***labanan khaalisan* لبنا خالصا**" – fresh, raw, natural, living, raw milk from cattle fed on herbage – not today's inferior quality conventional dairy milk in its raw form[86].

Fourthly: As I am speaking specifically of raw milk from pasture fed cows, in their natural habitat from farms complying with state and national legal requirements for safety and hygiene, inclusive of testing for bovine tuberculosis, brucellosis, somatic cell counts, coliforms and "pathogen", I need evidence of this milk, with this description and qualification, being implicated in any food-poisoning outbreak.

If there is such evidence (and I don't deny that there maybe some), then it has to be **laboratory confirmed.** I have examples of many epidemiological studies claiming associations between raw milk and food-poisoning, subsequently shown to be false by biological testing in the laboratory.

If we have a laboratory confirmation, I then want **verification that the farm was indeed feeding cattle on their natural diet (grass, shrubs, plants)** as opposed to distillery grain, slop, meats, grains and other unnatural foods and that there was no breakdown in hygiene or safety procedures.

If this is verified too, then we are in a much better position in terms of all available credible evidence in each claimed incident of food poisoning to evaluate *the true and real overall threat* to public safety of this fresh, pure, natural milk, from cattle on their natural diet, in their natural habitat – "***labanan khaalisan* لبنا خالصا**" as it has been referred to in the Qur'an.

[85] Synonymous with my definition of the type of raw milk that I am speaking of.
[86] With regard to "organic milk", a lot of the bigger dairies are taking advantage of the lax "organic" laws in order to sell the same inferior quality milk using feedlot cattle and push out the smaller farmers.

Fifthly: Every verse in the Qur'an relates to Tawheed. Ibn al-Qayyim said, "Rather, we say, with a comprehensive, all-inclusive statement that indeed, every single verse in the Qur'aan comprises Tawheed, is a wtiness to it and calls to it." (Madaarij us-Saalikeen 3/417). The verse in Surah an-Nahl, "**And verily! In the cattle, there is a lesson for you. We give you to drink of that which is in their bellies, from between excretions and blood, pure milk (*labanan khaalisan* لبنا خالصا); palatable to the drinkers**" relates to the Tawheed of Allaah.

Allaah has placed an 'ibrah (lesson) in the cattle and what they produce of fresh, raw, pure, living milk. The 'ibar in the Qur'an are there to indicate Allaah's ruboobiyyah, His hikmah, his right to be worshipped amongst other things. Imaam Ash-Shanqeetee (rahimahullaah) says, "*Allaah explained in this noble verse that in cattle there is a lesson that shows the uniqueness (tafarrud) of the one who created them, and who made their milk to be pure from what is between blood and excretion, and that He alone is worthy of being worshipped, obeyed and not disobeyed*." Allaah has placed cure, healing, great benefits and manifest goodness in the fresh, unprocessed milk of cows that was recognized by nations and societies for thousands of years. The Sunnah has explicitly stated this cure, and Ibn al-Qayyim has alluded to it too. All of this is in relation to natural, pure, unprocessed, non-pasteurised, non-homogenised milk from cattle that feed on herbage (grass, shrubs, plants). Milk as it has always been.

The pursuit of such a blessing (of fresh, natural, pure milk) for its beneficial and curative properties – is from the adoption of the ways and means (asbaab), the acceptance and implementation of which, in the appropriate manner, is an affirmation of Tawheed. Thereafter, subsequent gratefulness to Allaah is a matter connected to the actualisation of the Tawheed of Allaah, and all of this is an affirmation and belief in the Prophetic Medicine which constitutes a completion and perfection of the Divine guidance.

Ibn al-Qayyim said, "***As for the physical medicine (for treating the bodily ailments) then it came as a perfection of his Divine Law (Sharee'ah)*** …" (Zaad al-Ma'aad 4/22).

That's where I'm coming from and it is the reason I am speaking of and bringing about awareness of "***labanan khaalisan*** لبنا خالصا", "… *a cure for every disease*", for whoever wants to seek it, seeking the bounty of his Lord – whilst at the same time, taking advantage of the use of modern technology to ensure a safe supply.

Sixthly: Fresh, raw, camel's milk is routinely drunk in the Arab lands, and the Arabs pursue it due to it being from the Prophetic Medicine as well as being customary to their culture. Their consumption of this milk for medicinal purposes and their hoping for cure is a signification by them of Allaah's greatness and His Tawheed. There are plenty of available reports of people suffering from chronic disease being cured with this Prophetic medicinal cure. Similar to camel's milk, anyone who seeks fresh, natural, living cow's milk, out of belief in the *asbaab* (ways and means Allaah has created) affirming Tawheed thereby, and affirming the superiority of the Prophetic Medicine is likewise signifying the greatness of Allaah and His Tawheed in his pursuit.

Seventhly: In light of the *religious, scientific and historical* facts on the issue of the curative milk of the Sunnah and Prophetic Medicine, I am advocating the, "***labanan khaalisan*** لبنا خالصا" of the Qur'an and doing so on the basis of the advice of the Messenger (sallallaahu alayhi wasallam), "***Drink cow's milk, for indeed it ruminates on every herbage, and it is a cure for every disease***" – this being fresh, raw, natural, living milk as it has always been. Environmental factors affecting hygiene and safety are factors external to the milk itself, are common to all foods, and are controllable.

These Sharee'ah texts are referring to non-pasteurised, non-homogenised, unprocessed, fresh, pure, living, real, natural milk from cattle fed on their natural diet in their natural habitat – milk as it has always been – which Allaah blessed previous nations and societies with, and which Allaah will continue to bless people with, those who are fortunate enough to recognize it and seek it.

We are speaking about "***labanan khaalisan*** ***لبنا خالصا***" which cures and heals – not the inferior quality milk produced by conventional dairies which is associated with disease.

Eighth: The advice given on the issue of milk is based upon the Prophetic statement, "*Seek (medicinal) treatment with cow's milk*…" and "… *for it is a cure for every disease*". I have established, historically and scientifically that this milk is not pasteurised, homogenised milk, but natural, fresh, living, real, pure milk. This is synonymous with the "***labanan khaalisan*** ***لبنا خالصا***" of the Qur'aan. And that this milk has always been available and continues to be available – a bounty and favour from Allaah.

As this is the *asl (the base foundation and rule)*, namely that milk has always been fresh, natural, raw, living, curative and beneficial over heat-treated, pasteurised milk, it is upon the scientists and physicians to bring their proof that this is not the case, *historically, religiously, and scientifically*.

They need to bring proof that milk from cattle fed on their natural diet, in their natural habitat acquired in a hygienic setting, instead of being "pure" and "beneficial" and "a cure for all disease", is in fact the cause of disease and is dangerous to the public, in its *inherent nature* – exclusive of environmental factors of hygiene – **which are controllable and affect all foods equally**.

Ninth: The saying of Allaah, the Most High, "***labanan khaalisan*** ***لبنا خالصا***" (pure, natural, *living* milk) in Surah an-Nahl (16:66), and the saying of the Messenger((sallallaahu alayhi wasallam), "***Seek (medicinal) treatment with cow's milk***…" "… ***for it ruminates upon every herbage and is a cure for every disease***", and the saying of Ibn al-Qayyim, "***Milk is at it's best when freshly milked***. …" and "… ***it (milk) is praised and creates good blood…***" and the promotion and advocation of such milk for its curative properties, firmly established by thousands of years of empirical evidence, as well as contemporary scientific studies, is not a bizarre theory.

Important Final Notes For Consideration

As we come to the end of this paper there are a few points that should be considered by the reader:

- This paper is not intended as medical advice for any specific medical or disease condition. It is purely educational. We accept no liability for anyone acting upon any information contained within this document. It is purely for your education. You are encouraged to do your own research.

- We are establishing the fact that raw, natural, fresh milk (as qualified and defined in this paper), as it has always been in the creation – from cattle fed on their natural diet, in their natural habitat – is safe and beneficial for human consumption, and that this has been so for thousands of years prior to the widespread use of pasteurisation.

- As such anyone wishing to pursue such milk – of their own volition – should, in a modern context, make verifications to ensure that the raw (fresh, pure) milk is of quality and is from

licensed farms that are subject to state and national legal requirements for hygiene and milk quality and safety testing.

- In the absense of the availability of organic raw, natural, fresh milk (as qualified and defined in this paper), the options are **organic pasteurised, non-homogenised milk**. Thereafter, **pasteurised, non-homogenised milk**. Having said that, you will not be receiving the full benefits of raw, natural milk, consdering that the beneficial lactic acid bacteria have been wiped out, 90% of the enzymes are irreversibly denatured and immune elements have been diminished – even if the milk is organic and from grass-fed cows.

Closing Remark

And Allaah is the Knower of all affairs, and He knows best. May prayers and salutations be upon the Messenger of Allaah, His family and companions.

10th January 2008