

Natural, Living, Raw Milk

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Societies and cultures enjoyed the benefits of fresh, natural raw milk for thousands of years prior to and during the advent of industrialized nations. The *Bulgars* were known to live way past the age of 100 routinely with diets consisting of dairy and fermented dairy products as first brought to light by the Russian microbiologist, Ilya Metchnikoff, at the turn of the 20th century. Metchnikoff was the first to allude to what we now know as “probiotics”. Weston Price¹ studied the *Swiss* whose diet consisted of a large amount of dairy and spoke of their excellent health and physique. Dr. J. R. Crewe in his 1929 essay “*Real Milk Cures Many Diseases*” wrote, “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”.

Prior to and during the emergence of the industrialized nation states, many cultures and societies lived mainly on milk and its products. They maintained superior health and longevity on such diets, *living in virtual total absence of the chronic diseases that reach epidemic levels in today's society, such as heart disease, diabetes and obesity.*

◆ Milk Production in the 19th Century Industrialized Nations

In the early 19th century factory farming methods coincided with the industrial revolution and explosion in city growth. A population transition from rural to urban areas created greater demand for milk and marked the proliferation of what became known as “distillery swill milk” dairies. Robert Hartley in his landmark 1842 book² explains the nature of milk production in that era. Dairy farms were right next to distilleries and the fermented grains (stillage, distillery slop and brewery grains) were used for feeding cows. The unnatural diet alongside the unnatural habitat the cows were kept in as well as unscrupulous farming practices produced inferior quality milk. Further, such milk became a vehicle for the diseases of squalor that emerged and became widespread in the 19th century industrialized nation state, given the fact that diseased individuals were handling the milk at all levels of production and supply. Milk was also transported on trains for hundreds of miles, allowing the opportunity for further contamination. All these factors led to milk, alongside water, becoming a major source of disease – something previously unknown in history. Tuberculosis, Cholera, Typhoid and other diseases were spread through the medium of milk.

◆ The Medical Milk Commission and Certified Raw Milk

In the early 1890s, Henry L. Coit, an American physician started a movement called the “Medical Milk Commission” to engineer a naturally clean milk supply. This was at the time when pasteurisation of milk had just began as a measure to artificially clean up the milk supply.

¹ “*Nutritional and Physical Degeneration*”, Weston A. Price, 1939.

² “*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*”, Robert Hartley 1842.

Along with forty-two other physicians, his efforts led to “Milk Commissions” being set up all over America. In the UK, similar efforts were being made by Henry Ashby, a paediatrician and public health officer, in the 1890s. These physicians recognized the superiority of natural, raw milk and were concerned that pasteurisation would simply justify the production of inferior quality milk. They set up requirements for production of “certified raw milk” and farms abiding by such controls and measures and agreeing to inspection by the commission were exempted from pasteurisation of their milk by state regulatory bodies. In fact, such farms were producing certified raw milk with bacterial quality better than today’s “Grade A Pasteurised Milk” in the US. Their herds were tested for bovine tuberculosis and the bacterial count per cubic centimetre of their milk was not allowed to contain more than 10,000 bacteria³ upon delivery to the consumer. Today’s “Grade A Pasteurised Milk” is not allowed to contain more than 15,000 bacteria per cubic centimetre. A 1917 book by Henry Macnutt, called “*The Modern Milk Problem*” provides a good treatment of this subject and shows the quality of certified raw milk being produced at the time. Incidentally, Wheelbirks Farm in Northumberland was amongst the first to take up tuberculosis testing in the 1920s in England. Therefore, despite inferior quality milk being responsible for much disease, clean, natural, quality milk was being produced and was available to those prepared to pay a premium throughout the early 20th century. The slogan of the American Association of Medical Milk Commissions (1908) was “**Pure Milk is Better Than Purified Milk**”.

◆ Raw Milk As A Cure For Disease

At the same time that the “distillery slop milk” was the vehicle for many diseases, many physicians across Europe and America were using fresh, **raw milk from cows fed on pasture** to cure and treat disease. There are many printed works on this subject from the 17th to the 20th centuries⁴. In the early 20th century, three works stand out. “*Real Milk Cures Many Diseases*” by Dr. J. R. Crewe, an essay in the “Certified Milk Magazine” in 1929. “*Milk Diet As A Remedy For Chronic Illness*” by Dr. Charles Porter, first published in 1905 and reached a 13th 1926 edition, and “*The Miracle of Milk*” by Bernarr Macfadden, published in 1923. Dr. Charles Porter, whose book is the most detailed, treated around 18,000 patients over a period of 40 years. He states,

“A course of four weeks⁵ should ordinarily be sufficient to cure any of the following diseases: Nervous prostration, general

³ The presence or absence of bacteria is not actually a measure of milk safety. These are the natural friendly bacteria that exist in milk in abundance.

⁴ 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. See “*A Very Brief History of Milk as Medicine*” Andrew Bernstein, 2001.

⁵ This involved consuming nothing but pure, fresh, raw milk throughout the day whilst maintaining complete rest, with access to plenty of fresh air.

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, arteriosclerosis (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, leucorrhoea, enlargement of prostate gland, tobacco, morphine and cocaine habits, gallstones, and liver disorders, rheumatism, kidney disease, and the first stage of consumption [tuberculosis]”.

Dr. Charles Porter also says, regarding asthma,

“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.”

Recent scientific studies provide confirmation for Dr. Porter’s use of milk as a curative in relation to asthma and allergies.

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.”

◆ Milk Components

Milk has well over a hundred different components, some of the more significant ones can be mentioned here. **Immunoglobulins:** These are otherwise known as “antibodies”, cow’s milk contains IgA, IgG, IgM, IgE, IgD – five immunoglobins that confer a passive immunity to the

consumer. **Enzymes:** Milk contains many enzymes, the most well-known of which are galactase, peroxidases, catalase, amylase, lipase, lactase and phosphatase. They help to digest the protein, fat and carbohydrate content in milk. **Growth Factors:** IgF-1 and IgF-2. 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. IgF-1 mediates many, but not all of the growth-promoting effects of Growth Hormone (GH). **Leukocytes:** These are white blood cells and they help eliminate antigens from the blood. **Antibacterials:** *Lactoferrin*. 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. *Lactoperoxidase*. This is a glycoprotein demonstrating antibacterial activity. Cow milk contains 20 times more of this than human milk. Studies demonstrate that harmful bacteria, such as E.Coli, Listeria, and Staph.Aureus are held at bay (and destroyed) by milk's lactoperoxidase system⁶. There are also other antibacterial factors such as lysozymes. **Nutritive Elements:** Then there are proteins (casein and whey), fats and carbohydrates (galactose, lactose etc.), along with many minerals and vitamins, including calcium, Vitamins B₁₂, and Vitamin C. The above is a very simplistic overview of what milk contains, it is a very complex substance. In essence, cow's milk very closely resembles human blood not surprising since milk is made from the cow's blood itself. In natural, living, raw milk, all of the nutritive and protective elements are **100% metabolically available**.

◆ Raw Milk Is Living, Alive – Lactic Acid Bacteria

Raw milk contains an abundance of what are called **lactic acid bacteria**. These bacteria populate the gut and are fundamental to the immune system. In fact, they are an integral part of the gut (which makes up around 80% of the entire immune system and the lactic acid bacteria both stimulate and modulate it)⁷. *There are more bacteria in your gut than there are cells in your entire body*. You may have heard of the term “probiotics” being used in the marketing of yoghurt drinks as health foods. Milk contains these lactic acid bacteria in abundance, before they are wiped out by pasteurisation.

◆ Effects of Pasteurisation on Natural, Living, Raw Milk

What is the effect of heat treatment of milk at 65°C for 30mins and at 71.7°C for 15 seconds? Well first, all the lactic acid bacteria are killed. All of the breakdown products from dead bacteria remain in the milk. So we lose the natural “probiotic” element. The white blood cells in milk are turned to pus. In Europe, post-pasteurised market milk is allowed to contain 400,000 pus cells per cubic centimetre (in the US, 750,000). The antibacterial activity of milk is destroyed⁸ with significant reduction in the activities of lactoferrin, lactoperoxidase and lysozymes and reduction in the immunoglobulins (antibodies) that confer passive immunity.

⁶ See, for example: 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

⁷ R. Herich and M. Levkut titled, “**Lactic acid bacteria, probiotics and immune system**” *Vet. Med. – Czech*, 47, 2002 (6): 169–180

⁸ 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.

The whey proteins are malformed and partially denatured due to the heat. Around 90% of the enzymes are irreversibly denatured. This leads to problems in milk digestion for many people, since the enzymes that would otherwise digest protein, fat and carbohydrate are mostly gone. The absence of lactic acid bacteria means the enzyme lactase cannot be synthesized for digestion of lactose. This is what leads to so called “lactose-intolerance” in some people. Vitamin C loss can be anything from 20-50%⁹. The enzyme phosphatase¹⁰ is totally destroyed – this is used for calcium absorption, and thus not all calcium from milk is actually absorbed by the body. Whereas, natural, living, raw milk is 100% metabolically available to the body, pasteurisation leads to a significant reduction in the metabolic availability of milk so treated. The process of homogenisation, another step following pasteurisation to prevent cream from rising, leads to the presence of greater amounts of rancid fats in the milk.

◆ Why Do Health Professionals Warn Against Milk Consumption?

There are very large number of people that warn against cows' milk consumption. Prominent amongst them is Frank Oski MD, a former head of Paediatrics at John Hopkins University, who wrote a book “*Don't Drink Your Milk!*”, first published in 1983. This is the most significant book referred to by opponents of cow's milk consumption in general. He brings references from published literature in a variety of journals from across the world and makes a fairly good case, **so long as he is speaking about pasteurised milk from conventional dairies and not raw, natural, living milk** – a distinction that Mr. Oski, unfortunately, does not readily make. Oski has also published research papers.

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”

Oski's 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, renal disease, skin rash, and vomiting amongst others to the consumption of “Grade A Pasteurised Milk”. The only issue with the book is that Oski has failed to distinguish between natural, raw milk and pasteurised milk and gives the impression all milk is the same.

◆ Milk, Heart Disease and Diabetes

Thirty years ago, Dundee scientist J.C. Annand did pioneering research linking heated milk proteins to heart disease. More recent research is supporting his findings. And there is a large body of evidence associating diabetes in children to exposure to cow's milk at an early age.

P. Rank, **Milk and Arteriosclerosis**. *Medical Hypotheses*, 20, No. 3 (1986), 317-338. “Milk consumption is related to arteriosclerosis”,

⁹ It is well documented that infants fed only on pasteurised milk in the early 20th century would develop scurvy whereas those fed on raw milk would not. Research confirmed loss of Vitamin C content after pasteurisation.

¹⁰ The total destruction of alkaline phosphatase in milk is the standard test for ensuring successful pasteurisation in the dairy industry.

“Recent landmark studies confirm a previously suspected close correlation between milk intake and arteriosclerotic heart disease”. Annand J.C. **Denatured bovine immunoglobulin pathogenic in atherosclerosis**. *Atherosclerosis*, 1986 Mar;59(3):347-51. Annand J.C. (1972) **Further evidence in the case against heated milk protein**. *Atherosclerosis*, vol.15, no.1 (Jan.), pp. 129-133. 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.”. 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. “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 problems arise with treated, processed milk **and not** natural, living, raw milk, as proven by the empirical evidence of thousands of years of milk consumption in cultures and societies.

◆ Raw Milk Safety and Food Poisoning

While there is much concern about food-poisoning from raw milk, food-poisoning in general in the UK increased by around 700% in just 20 years between 1978 and 1998, the greatest incidence of which is in produce and poultry. This trend is common across the developed world. Infections occur due to meats, poultry, water, produce (salad vegetables) and milk (whether pasteurised or raw), from pets, from cloths used in takeaways and restaurants. In fact, infections even occur from sands in beaches, and from water used for recreational use. Thus, while there is a risk from raw milk, it is by no means unique to raw milk – it is something common to all foods and involves factors which are controllable. Current legislation requires raw milk providers to be certified and approved by state authorities. *Such farms must meet all state and national legal requirements for their milk – which is inclusive of herd testing for tuberculosis and brucellosis, and milk testing for “pathogenic” bacteria (staphylococcus and salmonella), somatic cell, and coliform counts as well as routine unannounced inspections by the Dairy Hygiene Inspectorate (DHI)*. As raw milk retains its inherent immunity, infections, if they occur, will be limited and moderate. **Conversely, with pasteurised milk, as the inherent immunity in milk has been destroyed, post-pasteurisation contamination of milk can have large-scale and lethal consequences**. The single largest outbreak involving pasteurised milk was in Illinois (1985) affecting almost 200,000 people. In Massachusetts (2008) there were three deaths and a miscarriage from contaminated pasteurised milk caused by Listeria which is now known to survive the pasteurisation process (the inherent immunity in raw milk would have killed it off). Another case in Japan (2000) involved 15,000 people and in the UK (1979), 3500 were affected in an outbreak involving pasteurised milk delivered to schools in the Dunstable area. These are only some examples from many.

So, raw milk or pasteurised milk? The decision is yours ... just make sure it is a well-informed one!

Note: A small number of people whose guts are imbalanced and have never had raw milk before may need to adjust to it over a couple of days.. This leaflet is for education only and does not constitute specific medical advice.