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**Attachments:** This submission is based on the supplementary report in favour of raw milk by Dr.doc

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**FSANZ: Applications and Submissions - Submission**

Tuesday, 2 March, 2010

1. **Assessment Report Number:** Proposal P1007.
2. **Assessment Report Title:** Primary Production & Processing Requirements for Raw Milk Products.
3. **Organisation Name:** Better Health for us & our children consumer group.
4. **Organisation Type:** Health Interest Group
5. **Representing:** Approximately 300 raw milk consumers in and around Brisbane.
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**12. Submission Text:** My wife and I have been consuming raw milk products upon the advise of Dr Ruth Cilento for some 10 years now. In view of the overwhelming evidence of the nutritional value of raw milk products we think it is time the ridiculous ban on these products was lifted. Our submission is based on the work of Dr William Campbell Douglass JR., M.D. & Dr Aajonus Vonderplanitz, Ph.D. Nutrition, Nutritional Scientist, who have been successfully pointing out the corrupt activities of big business in attempting to mislead the world public into believing raw milk products are dangerous to our health when it is quite the reverse. We have noticed some of the recent comments from FSANZ show that FSANZ has also been mislead. Please get the real expert, microbiologist Dr Ron Hull (Ex CSIRO), to come in to discuss the whole issue with you.

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## ASSESSMENT OF PROVEN HEALTH BENEFITS ASSOCIATED WITH RAW MILK.

### a. BACTERIAL, VIRAL & PARASITICAL RESISTANCE AND NUTRITIVE VALUES FROM DRINKING RAW MILK

A letter from the Pennsylvania Bureau of Foods and Chemistry left no doubt about their confidence in raw milk, "I can think of no incident in Pennsylvania in the past twenty years in which raw milk was determined to have been the cause of human illness."<sup>45</sup>

From 1958-1999, there had **not** been **one outbreak caused by raw milk in California**, and only speculative sporadic occurrences. In 1958, a Salmonella-outbreak of 11 cases was blamed on certified raw milk but "no Salmonella was ever found in batches of the milk consumed or in the herds."<sup>46</sup>

**Californians enjoyed 50 years of raw milk consumption without a single outbreak.**

**Raw milk contains enzymes and antibodies that make milk less susceptible to bacterial contamination**, such as nisin, and lacto peroxidase that inhibits the growth of Salmonella.

Pasteurisation destroys or neutralises these antibacterial properties. Dold, H., Wizaman, E., and Kleiner, C. wrote in their abstract, "[Raw] Human or cow milk added to an equal volume of agar did not support the growth or allowed only slight growth of B. diphtheriae Staph. Aureus, B. coli, B. prodigiosus, B. pyocyaneus, B. anthracis, streptococci, and unidentified wild yeast."<sup>47</sup>

**The 'inhibin's' in cow's milk are inactivated by heating between 60-70 degrees C. for 30 minutes.** Attempts have not been made to identify the natural antiseptics."

#### **Example of Protective Qualities of Raw Milk, Even When It Is Dirty**

In the course of my research, I visited dozens of dairies. As you know from cleaning your car, spraying the surface with a hose is ineffective. The surface must be wiped. The same is true of a cow teat. This was demonstrated to me quite dramatically at a dairy producing milk destined to be sold raw. The hose was taken and the teats sprayed in the usual manner. A white towel from the stack was used to wipe one of the four teats. Plenty of mud and manure could be seen on the towel. If those teats aren't cleaned properly, and they often were not in those other dairies, that mud and manure went in the milk. They pasteurised it, but how many people want faeces, mud, and urine in their milk even though it is heated by pasteurisation?

**Jack Mathis, President of Atlanta's Mathis Dairy**, was invited to inspect the dairy at the Atlanta City Prison Farm and make suggestions for modernisation. He said, "It looked more like an outhouse than a milking parlour." Manure on the cow's hindquarters was running over the teats, the milking apparatus, and into the milk. From the milking machine, the milk ran into an open ten-gallon can by hose. "You couldn't see the top of the can for the flies," Mathis said. "It was like a bee hive with flies walking in and out of the can."

Mr. Mathis assumed that the milk was for the prison farm pigs, but it wasn't. It went directly to a cooler in the prison dining hall, complete with cow and fly manure and fly carcasses. It was simply strained through the cooler and then drunk by the prisoners. **No case of pathogenic contamination** occurred that was **caused by the raw milk in 10 years**. If raw milk is such a danger, why didn't any one get sick? Because, raw milk has bacterial inhibitors. Pasteurised milk does not.

**The British journal the Lancet** reported, "**Resistance to tuberculosis increased in children fed raw milk instead of pasteurised**, to the point that in five years only one case of pulmonary TB had developed, whereas in the previous five years, when children were given pasteurised milk, 14 cases of pulmonary TB developed."<sup>48</sup>

<sup>43</sup> Northwest Medicine, June, 1938, as abstracted by Clinical Medicine and Surgery, "The Increase of Scurvy," 42, 12:598, December 1938.

<sup>44</sup> The determination of ascorbic acid in commercial milks, Journal of Nutrition, 18,6:619-626, December 1939.

<sup>45</sup> Private communication, August 9, 1979.

<sup>46</sup> Raw Certified Milk and Food borne Illness, 1998.

<sup>47</sup> Z. Hyt. Inf., "Antiseptic in milk," The Drug and Cosmetic Industry, 43,1:109, July, 1938.

Raw milk also contains an anti-viral agent. In 1997, British studies showed that some mysterious substance in the aqueous portion of the **raw milk**, below the cream layer, **works against viral infections**.<sup>49</sup> **Formula and boiled milk do not contain this virus-fighting agent.**

**Raw milk as a vermifuge:** James A. Tobey, Doctor of Public Health, Chief of Health Services for the Borden Company, wrote about the successful **use of raw milk in the treatment and prevention of worms in humans**.<sup>50</sup> We know that worms flourish on starch but have a tough time surviving on protein. **Hegner** proved experimentally that a diet consisting largely of the raw protein casein, the principle **protein of milk**, will often lead to a total **elimination of worms**.<sup>51</sup>

**Phosphatase** is **essential** for the **absorption of calcium** and is **plentifully present in raw milk** but *completely destroyed by pasteurisation*. Phosphatase is an essential agent to the proper development of a strong skeletal structure.

The enzyme **lipase aids in the digestion of fats**. It is **plentiful in raw milk** but destroyed by pasteurisation.

#### **b. MEDICAL MILK THERAPY – PREVENTION AND REVERSAL OF DISEASE FROM DRINKING RAW MILK**

One of the most remarkable and important discoveries in medicine, the incredible healing power of fresh raw milk, goes unnoticed by the medical profession. No one knows who first used raw milk as a therapeutic agent, probably the Egyptians. **Hippocrates**, the father of medicine, **prescribed raw milk for tuberculosis**. **William Osler**, the **most respected physician** of the early 20th Century, said, "A rigid [raw] milk diet may be tried ... this plan in conjunction with rest **is most efficacious**." And then he quoted Cheynes, "Milk and sweet sound blood differ in nothing but colour: **Milk is blood**."

**Dr. J.E. Crewe**, from the Mayo Foundation, Rochester, Minnesota, presented his findings on the therapeutic uses of raw milk before the Minnesota State Medical Society in 1923. Although Dr. Crewe's experiments were on the feeding of raw milk for disease, **the key**, he injects, **is not milk but raw milk**. Dr. Crewe reported, "While milk is widely used and recommended as an article of diet, it is seldom used by regular physicians exclusively as an agent in the treatment of disease. **For fifteen years I have employed the so-called [raw] milk treatment in various diseases ... the results obtained in various types of illnesses have been so uniformly excellent** that one's conception of disease and its alleviation is necessarily modified."<sup>52</sup>

His report was met with apathy and indifference, saying, "The **method** itself is **so simple** that **it does not greatly interest medical men**."<sup>53</sup> The fact that many diseases are treated and Successful results ignored leads almost to disrespect."

#### **c. INFANT SAFETY AND HEALTH BENEFITS FROM FEEDING RAW MILK**

**Johns Hopkins University and the University of Maryland** found that **raw cow's milk contains 2½ times more of the enzyme-like factor IgG** than pasteurised milk. This important enzyme **inhibits rotavirus** organisms that cause **diarrhoea in infants**.

The sister in charge of **St. Vincent's hospital** was very concerned about the **high death rate among infants from gastroenteritis**. She asked **Dr. Paul B. Cassidy, M.D.** for his advice and he recommended a switch from pasteurised to raw milk. The raw critics predicted that there would be a catastrophic increase in infant deaths from feeding infants raw milk. The **death rate in infants from gastroenteritis quickly fell by 94%**, from a high of 89 in 1922 to less than 5 per year.<sup>54</sup> until the use of raw milk was stopped. Raw milk was extremely popular among leaders in medicine before World War II. The prestigious **Hartford Hospital** used only certified milk, most of it raw, "in the artificial feeding of infants, for expectant and nursing mothers, and *for all other cases*."

<sup>48</sup> The Lancet, p. 1142, May 8, 1937

<sup>49</sup> Matthews, et al, The Lancet, December 25, 1976, pp. 1387.

<sup>50</sup> Ibid., April, 1935.

<sup>51</sup> Science, 75:225, February 20, 1932; JAMA, April 9, 1932; JAMA 83:83, 1924.



It has been known since the earliest days of husbandry that the newborn calf thrives on raw milk. Calves fed pasteurised milk since birth die by the third month.

Relief of muscle cramps in pregnancy was reported by **John Fowler, M.D.**, Worcester, Massachusetts. He stated that raw-milk therapy was "**very effective**, and in no instance where used faithfully, were the **muscle cramps in pregnant women** a cause of discomfort."

#### **d. The Effect of Milk on Growth**

Case study

**Destin Callahan** was one of my patients who started badly in life. He was not breast fed.

**Asthma developed by six months of age.** His mother couldn't recall any time during his nine years that he hadn't wheezed. He was in and out of hospitals with asthma attacks, sometimes nearly fatal, at least six times yearly. He took antibiotics and cortisone almost continuously after the age of six months. Although Destin was nine years old, he was physically the size of a six year old. He was intelligent, but thin and delicate. Destin's mother and father came to the Douglass Centre in Atlanta, Georgia desperate to try something different and non-toxic. They felt Destin's poor growth was at least partially due to constant medication. He had seen many allergists and undergone frequent skin tests. His parents were told that their son was allergic to milk. We informed them that 99% of affected individuals are allergic only to *pasteurised* milk. We custom ordered the manufacture of a serum which contained the various factors to which Destin was allergic by skin test. This serum was then injected into a pregnant cow. After the calf was born; the raw colostrum was taken from the mother and given daily to Destin. **After six weeks** of this raw milk treatment, Destin began to improve. For the **first time in his life he stopped wheezing**. His parents were astounded and hesitant to believe the difference they witnessed. On Christmas Eve, Destin became overly excited and suffered a severe asthmatic attack. Marcy and Les Callahan had the courage to eschew customary medications and gave Destin raw milk colostrum every hour. By Christmas morning, Destin was completely free of symptoms. Destin **grew rapidly after the raw milk and colostrum treatment began**.

Raw milk contains bioactive vitamins. Through the process of chromatography, we now recognize that **synthetic vitamins are not the same as natural vitamins**, yet marketers of pasteurised milk continue to advertise the supplemental vitamin content of their pasteurised milk as an equivalent replacement of the nutrient value of raw milk. However, **natural Vitamin C**, for instance, is **33% higher in fresh raw milk** than in pasteurised milk. Some professionals conclude that both milks are inadequate in Vitamin C, and neither raw nor pasteurised milks should be relied upon as a Vitamin C source. However the fact that **many babies fed pasteurised milk develop a scurvy-like syndrome which raw milk-fed babies do not suffer proved those professionals' conclusion wrong**. The research of Friederger also testified that **pasteurised milk with vitamins added produced the same deficiencies as those caused by plan pasteurised milk**.<sup>55</sup>

**Francis Pottenger, M.D.** proved there is deficiency disease similar to Vitamin C deficiency (scurvy) that can be cured with an endocrine product which contains no Vitamin C. He proved that raw milk contains this endocrine nutrient and pasteurised milk does not. He proved that **raw milk reversed and prevented scurvy**.

**Stefansson, an Anthropologist working for the U.S. government**, demonstrated that a supposedly adequate intake of Vitamin C in the form of tomato juice did not prevent scurvy in an arctic sea captain. When the captain ate raw meat for a few days he was completely cured.<sup>56</sup> It was observed in 1942 that "... the **cows** of the country **produce as much Vitamin C as does the entire citrus crop**, but most of it is **lost as the result of pasteurisation**."<sup>57</sup>

French physiologist, Rene Dubos said, "From the point of view of scientific philosophy, the largest achievement of modern biochemistry has been the demonstration of the fundamental unity of the chemical processes associated with life." In other words, if it happens in guinea pigs, rats and cats, it probably happens in humans.

<sup>52</sup> Certified Milk Magazine, January 1929.

<sup>53</sup> Ibid.

<sup>54</sup> Annual Convention, Certified Milk Producers Association, Hotel Roosevelt, New York City, February 8, 1938.

A Dutch chemist, Willem J. Van Wagtendork at Oregon State College, confirmed the Wulzen findings that **pasteurised dairy creates calcification and stiffness**. He found that guinea pigs with calcification of the tissues could be **relieved with raw cream** but not so with pasteurised cream. The active factor is transmuted and **rendered ineffective by pasteurisation**.

#### e. RAW MILK SAFETY AND HEALTH BENEFITS IN GENERAL

**Dr. Crewe's use of raw milk therapy in advanced cases of pulmonary tuberculosis often resulted in rapid improvement for the patient.** This was ironic since raw milk was blamed, incorrectly, for a great deal of the tuberculosis seen in that decade. (Hippocrates told doctors hundreds of years ago that raw milk greatly alleviates tuberculosis.) Crewe reported on his raw-milk treatment of edema (swelling), "In cases in which there is **marked edema, the results obtained are also 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.**" **Cardiac and kidney cases showed remarkable improvement.** One patient with **advanced heart and kidney disease lost thirty pounds of fluid in six days on raw milk.**

On the treatment of **high blood pressure**, Crewe reported that he had "never seen such **rapid and lasting results** by any other method."

**Patients with heart failure were taken off medications, including digitalis (Lanoxin), and "responded splendidly."**

Perhaps the most startling raw-milk treatment and one that goes counter to present-day thinking was **obesity**. Dr. Crewe: "One patient **reduced from 325 pounds to 284 pounds in two weeks** on four quarts of milk a day, **while her blood pressure was reduced** from 220 to 170."

The same results might be obtained, as Crewe implies, by eating fresh raw meat. He relates the story of the explorer Stefansson, who travelled the frozen Arctic with his colleagues living on fish, seal, polar bear, and caribou, nothing else for nine months. Most of this was eaten raw, and although undergoing the severest of hardships, they were never sick. On the return journey, they discovered a cache of civilized food, including flour, preserved fruits and vegetables, and salted, cooked meat. Against Stefansson's advice, the men ate this preserved food for several days. They quickly developed diarrhoea, loose teeth, and sore mouths. Stefansson immediately placed them on raw caribou tongue, and in a few days they were well.

**Raw milk is by far the most convenient and acceptable form of raw animal protein supplying the enzymes, antibodies, and nutrients needed for recovery from disease.**

Dr. Crewe reported on his work again in 1930. He quoted a colleague, who also treated with raw milk, "This was the worst case of **psoriasis** I have ever seen. This boy was literally covered from head to foot with scales. We put the boy on a milk diet and **in less than a month he had skin like a baby's.**" Crewe postulated, because of the remarkable effects seen in such a great variety of diseases, that raw milk may supply some hormonal elements to the patient. He repeatedly saw **marked improvement in patients with toxic thyroid disease**, a hormonal malady.

**Rapid and marked improvement in the infection and in the reduction of the size of the prostate gland was seen routinely.** With **shrinkage of the gland, the blockage clears and surgery is avoided**, Crewe reported. **Urinary tract infections, even with prostate swelling are greatly improved.**

The raw milk treatment of **diabetes** caused most patients' sugar levels to **normalize in 4-10 weeks** and had no diabetic symptoms.

<sup>55</sup> Certified Milk Magazine, October 1927 as reported by Victor E. Levine, Prof. of Biological Chemistry & Nutrition, Creighton University School of Medicine.

<sup>56</sup> Harper's Magazine, November/December, 1925 & January 1936, from the Stefansson Collection, Dartmouth College.

<sup>57</sup> Proc. Nat. Nut. Conf. for Defence, May 14, Federal Sea Agency, pp. 176; U.S. Government Pat. Off., 1942.

This was astounding because the milk sugar in five quarts of milk, the amount he used daily for diabetes, was 1/2 *pound*.

And finally Crewe commented on the large group of **patients for which no specific disease could be found**, "These patients are often underweight. They may consume a fairly large amount of food, but they do not gain in weight or strength. They are often nervous and frequently classed as neurasthenics. Usually, the skin condition is poor, they are sallow, and disappointed because no one can tell them what the trouble is. They do not respond well to medical treatment... Every physician knows this class of patients because they are unhappy and unsatisfactory to treat." He reported that they "**respond admirably**" to **raw-milk therapy**, but he added, "The chief fault of the treatment is that it is too simple . . . it does not appeal to the modern medical men."

Dr. Crewe: "**...the treatment of various diseases over a period of eighteen years with a practically exclusive [raw] milk diet has convinced me personally that the most important single factor in the cause of disease and in the resistance to disease is food...**"

Dr. L. J. Harris wrote, "Dr. Evelyn Sprawson of the London Hospital has recently stated that in certain institutions **children brought up on raw milk (as opposed to pasteurised milk) had perfect teeth and no decay.**"<sup>58</sup>

The Lancet published that in **children, teeth are less likely to decay on a diet** supplemented with raw milk than with pasteurised milk.<sup>59</sup>

"The dividing line between a food and a medicine sometimes becomes almost invisible. In many diseases **nothing heals the body and restores strength like [raw] milk...**" Dr. J.F.

**Lyman, Prof. of Agricultural Chemistry, Ohio State University.**

Milk has been used for gastric disorders, especially ulcers, for centuries. In the 19th century, **Cruvelheir** advocated **raw milk** as the most **important part** of the **treatment of gastric ulcer**.<sup>60</sup>

**Benjamin M. Bernstein, M.D., a gastroenterologist**, described a much more difficult gastrointestinal disease, "...very sick with active diarrhoea, abdominal pain, loss of blood and consequent anaemia, frequently with fever, markedly dehydrated and in severe cases, 'nigh unto death'."<sup>61</sup> Referring to his successes with **raw milk**, he said, "...milk not only may, but **should be used in the management of any type or variety of gastrointestinal disorder.**"<sup>62</sup>

**Samuel Zuerling, M.D., ear, nose, and throat specialist, Assistant Surgeon, Brooklyn Eye and Ear Hospital**, reported an unusual case treated with **raw milk**.<sup>63</sup> "Not long ago a gentleman came to me for relief of a severe burning sensation in the nose... he was panicky. He had sought relief and obtained no results...the patient readily acceded to a milk...diet and in **a few days had complete relief.**"

The Bahimas of Africa drink six pints a day. In fact, they eat little else. This is also true of the Nuers of the Upper Nile, the Todas, the Kazaks, and the Hottentots. They all live healthfully.

**Pelvic Inflammatory Disease in women** is an abscess involving the fallopian tube and ovary. **Seaman** reported a case that conventional antibiotic therapy had not helped. The woman went to an Indian country doctor who **treated her with raw milk straight from his cow. In six weeks she was free of disease.**<sup>64</sup>

**Fermented raw milk** has been shown to **retard tumour growth** and decrease the activity of alkylating agents associated with stomach cancer.<sup>65</sup>

<sup>59</sup> EFFECTS OF PASTEURIZATION OF MILK ON TOOTH HEALTH, The Lancet, p. 1142, May 8, 1937

<sup>60</sup> B.M. Bernstein, Paper presented to the AAMMC Conference, Atlantic City, NJ, June 8, 1942.

<sup>61</sup> Loc. cit.

<sup>62</sup> Loc. cit.

<sup>63</sup> Certified Milk Magazine, September 1936.

<sup>64</sup> Seaman, Women and *the Crisis in Sex Hormones*, Bantam Books, 1979, pp. 203.

<sup>65</sup> Raw Certified Milk and Food borne Illness, 1997.



## f. IMMUNE RAW MILK THERAPY BENEFITS

**Eighty years** of research with **successful Immune Raw Milk Therapy**, from Ehrlich to Peterson has been ignored by members of the *American Medical Association*:

**Dr. Alan Howard, Cambridge University, England**, discovered that whole raw milk actually **protects against abnormally high cholesterol**. Feeding two quarts of whole milk a day to volunteers caused a drop in cholesterol.

**Dr. George Mann, Vanderbilt University School of Medicine**, concurs with Dr. Howard. He found that four quarts of whole milk per day **lowered blood cholesterol level by 25%**. **Cambridge's Howard** concluded, "... all this business that saturated fats in milk are bad for you is a lot of nonsense." Raw milk therapy is preferable to taking clofibrate, a chemical prescribed by doctors for lowering the cholesterol level of the blood. Clofibrate can cause heart attacks, gall bladder attacks and cancer.

**The Lancet** reported on immune milk therapy by showing conclusively through a scholarly review of the literature and research that:

- 1) Antibody against disease is absorbed from the gastrointestinal tract into blood.
- 2) Rheumatoid arthritis and hay fever respond to immune raw milk therapy.
- 3) The udder acts as an antibody-forming organ independent of the cow's blood-immune system. The appropriate bacteria, fungus, or virus need only be infused directly into the teat canal for antibody production in the colostrum milk.

**Doctors Peterson and Campbell of the University of Minnesota** began rekindling the fires of controversy in 1955. Peterson had had **success treating rheumatoid arthritis** patients with immune raw milk from cows immunised with streptococcus antigen.<sup>66</sup> There was great blind resistance to this arthritis therapy. Emotions ran so high in Virginia that this perfectly harmless food was impounded by the state from two dairies.<sup>67</sup> They claimed it was a "biological product" (no kidding) and needed a Federal license. **The FDA declared that immune raw milk was a drug and confiscated 80 cases [of that raw milk]."**

Peterson's work with **allergies**: The cow's udder was stimulated with pollen antigen such as rag weed. The resulting **immune raw milk was fed to asthma and hay fever sufferers**. In a controlled experiment, **thirty-six patients were improved to a significant degree**. The **symptoms disappeared** in a definite order: First, the asthma, then nasal congestion, and lastly, itching of the eyes.

**Dr. Donald H. Hastings, a Bismarck, North Dakota veterinarian, from University of Minnesota**, aware of Peterson and Campbell's work, read that the Japanese had isolated measles virus from the intestines of multiple sclerosis patients. He postulated that multiple sclerosis is a viral-induced disease caused by measles and other viruses. He produced immune raw milk from measles-inoculated cows and fed the raw milk to multiple sclerosis victims. Hastings reported that **forty percent of the multiple sclerosis patients got relief** including alleviation of numbness, decrease in muscle twitching, and less fatigue. "We put people on plain colostrum and it doesn't work."<sup>68</sup>

<sup>59</sup> EFFECTS OF PASTEURIZATION OF MILK ON TOOTH HEALTH, *The Lancet*, p. 1142, May 8, 1937

<sup>60</sup> B.M. Bernstein, Paper presented to the AAMMC Conference, Atlantic City, NJ, June 8, 1942.

<sup>61</sup> Loc. cit.

<sup>62</sup> Loc. cit.

<sup>63</sup> *Certified Milk Magazine*, September 1936.

<sup>64</sup> Seaman, Women and *the Crisis in Sex Hormones*, Bantam Books, 1979, pp. 203.

<sup>65</sup> *Raw Certified Milk and Food borne Illness*, 1997.

## **g. RAW MILK AS A PRESERVATIVE**

A remarkable quality of raw milk that housewives of pioneer days used was its ability to preserve meat. Housewives immersed chops, steaks and roasts in large crocks of raw buttermilk, and assured fresh meat for the family year round.<sup>66</sup> The Arabs have preserved meat with raw camel milk for thousands of years. The Icelanders of 200 years ago preserved their sheep's heads in sour raw milk. In 1908, an American doctor decided to try it himself. He immersed a beefsteak in raw buttermilk. *Thirteen years* later it remained in a state of perfect preservation, "showing not the slightest taint or decay." The doctor emphasized, "It should be mentioned right here, however, that these remarks are true only of clean cow's milk as it flows from the original fount, and do not hold for milk which has been boiled or pasteurised. . . processes which. . . deprive the milk of one of its most unique and valuable properties."<sup>70</sup>

<sup>66</sup> The Milk Dealer, June 1960.

<sup>67</sup> Ibid.

<sup>68</sup> DVM, February 1981

<sup>69</sup> American Association of Medical Milk Commissions, Proceedings 15th Annual Conference, 1921.

## **h. NUTRITIVE VALUE OF RAW MILK Vs. PASTEURIZED MILK (Chart)**

### **COMPARISON CHART BETWEEN RAW AND PASTEURISED MILKS**

<b>Elements</b>	<b>Raw Milk</b>	<b>Pasteurised Milk</b>
1) Enzymes:	All available.	Less than 10% remaining
2) Proteins:	100% available, all 22 amino acids, including the 8 essential ones.	Protein-lysine and tyrosine are altered by heat with serious loss of metabolic availability. This results in making the whole protein complex less available for tissue repair and rebuilding
3) Fats: (research studies indicate that fats are necessary to metabolise protein and calcium. All natural protein-bearing foods contain fats.)	All 18 fatty acids metabolically available both saturated and unsaturated fats,	Altered by heat, especially the 10 essential unsaturated fats.
4) Vitamins:	100% available.	Among the fat soluble vitamins, some are classed as unstable and therefore a loss is caused by heating above blood temperature. This loss of vitamins A,D,E & F can run as high as 66%. Vitamin C loss usually exceeds 50%. Losses on water soluble vitamins are affected by heat and can run from 18 to 80%.
5) Carbohydrates:	Easily used in metabolism. Still associated naturally with elements.	Test indicate that heat has made some changes, making some elements less available metabolically.
6) Minerals:	100% metabolically available.	Calcium is affected by heat and



Major mineral components are calcium, chlorine, magnesium, phosphorus, potassium, sodium and sulphur. Vital trace minerals, all 24 or more 100% available.

loss in metabolism may run 50% or more depending on pasteurisation temperature. Losses in other essential minerals, is caused because one mineral usually acts synergistically with another element. There is a loss of enzymes that serve as leaders in assimilation of minerals.

**NOTE:**

Bacterial growth in raw milk increases very slowly, because of the friendly acid forming bacteria (nature's antiseptic) retards the growth of invading organisms (bacteria)

Usually keeps for several weeks under refrigeration and will eventually sour not rot.

Pasteurisation refers to the process of heating every particle of milk to at least 145 deg F and holding such temperature for at least 15 sec. Pasteurisation does not remove dirt or bacterially-produced toxins from milk. Bacterial growth will be geometrically rapid after pasteurisation or homogenisation. Gradually turns rancid in a few days and then decomposes.

<sup>70</sup> American Association of Medical Milk Commissions, Proceedings 15th Annual Conference, 1921.

#### **i. HISTORY OF MOVEMENT AGAINST RAW MILK - The Creation of the Assumption That Pasteurized Milk Is Safer Than Raw Milk**

**Dr. Fosgate** lamented, "The dairy cow has been sadly maligned by the dairy and food industry in general. She has been pictured as a veritable 'Typhoid Mary' for all of the ills of man, including the common cold, when actually, the reverse is true."

#### **a. NATIONAL (American) CLAIMS AGAINST RAW MILK**

In order to understand how pasteurised milk became so prominent and over-powered raw milk in the market, we must look to three historical factors:

- 1) **Political and industrial forces,**
- 11) **Catastrophic circumstance, and**
- 111) **Propaganda.**

**1) Milton J. Rosenau, M.D.**, a prominent physician in the early 1900's, campaigned to reduce milk borne diseases. He stated in his textbook, "Next to water purification, pasteurisation is the most important single preventive measure in the field of sanitation." In 1913, Rosenau became a Harvard University Medical School professor and a co-founder of the Harvard and Massachusetts Institute of Technology School for Health Officers. When Harvard established a school of public health in 1922, Rosenau directed its epidemiology program until 1935. He did not conduct any empirical tests to prove that any animal was healthier by drinking raw or pasteurised milk; he simply was convinced of his speculation that pasteurised milk was healthier and safer. In 1936, he moved to the University of North Carolina, Chapel Hill, to help establish its public health school (1940), where he served as dean until his death in 1946. He continually campaigned with an intense fervour against raw milk even in the face of Dr. Pottenger's tests that proved Rosenau wrong. By 1936, he had, without scientific proof, elevated pasteurised milk to the standard in most large cities, although over half of all milk in the United States was still consumed raw.<sup>71</sup>

**2) The Medical Milk Commission, responsible for certifying the purity and cleanliness of raw milk, had taken a strong stance against pasteurisation since their inception at the turn of the 20th century.** In their official journal, the *Certified Milk Magazine* they defended clean unpasteurised milk, properly inspected, as the milk of choice because of its superior nutrition, better digestibility, and freedom from disease-causing properties in heated milk.

**3) In September 1929, the first pasteurised certified milk was sold. There was vigorous objection to this from members of the milk commission and producers of raw milk,** but the consumer was led to believe that pasteurisation was an added benefit to certification of the

raw product. But there was no need for pasteurisation with certified raw milk's cleanliness and purity.

4) A fatal blow was dealt to the raw milk producers by **Charles Speakes, Secretary Treasurer of the American Association of Medical Milk Commissions**, the national organization responsible for maintaining standards, educating the public and encouraging milk producers to produce clean pure raw milk. **Unbeknown to the Milk Commission, he was also the Executive Secretary of the Milk Foundation which was closely aligned with Dr. Milton J. Rosenau and dedicated to the eradication of raw milk.** By the time the raw milk producers and commissioners realised that they were subverted, too much damage had been done. **At the time Speakes was fired in Washington DC, two telephones sat on his desk, one for the Milk Commission and one for the Milk Foundation.** While in office, Speakes took over editorship of the official  $\pi$  MMWR, 1999, Vol. 48 / No. 40. Journal "Certified Milk Magazine". The word "raw" was rarely mentioned.

5) **A catastrophic circumstance which led to the demise of the raw milk industry was World War II.** Milk could not be shipped halfway around the world in its natural state. This gave rise to massive pasteurisation and powdered pasteurised milk production.

6) **We must look at the way in which people acquired certain information** in order to understand why and how the general public, including doctors, came to believe that raw milk is dangerous.

**Dr. Milton J. Rosenau** created a momentum and this was continued with deceptive reports. "Raw Milk Can Kill You," headlined an article that appeared in the May 1945 issue of Coronet Magazine. It proclaimed, "Crossroads, U.S.A., is in one of those states in the Midwest area called the breadbasket and milk bowl of America. Crossroads lies about twenty-five miles from the big city on a good paved highway ... What happened to Crossroads might happen to your town ... might happen almost anywhere in America." Coronet's expert Dr. Harold Harris then went on to describe in vivid detail an epidemic of undulant fever in Crossroads that infected 25% of the population and killed one in four. Case histories were recounted to illustrate the subtle, debilitating nature of the disease. Investigation revealed the town of "Crossroads" does not even exist. The entire article, because of the harm it did to the raw milk industry, and indirectly to the health of the American people, was as irresponsible as yelling "fire" in a crowded theatre. "A curious incident in New York City," Harris tells his wide-eyed readers, "concerned a physician who fell ill of brucellosis." Within a few days he was dead. The source of his lethal infection of undulant fever, or brucellosis, was cheese "dripping with germs," Harris reported. The incident was false: Undulant fever does not cause death in a few days. Cheese does not transmit undulant fever. Investigation through the New York City Health Department revealed that there was no such case ever reported. Harris put forth many outlandish claims and preposterous misstatements. These claims frightened people who drank raw milk. Harris admitted to J. Howard Brown of Johns Hopkins University that he made the whole story up and from his own writings revealed that he knew it could not have possibly happened.

**Summary of Harris' misstatements:**

- 1) Undulant fever is a common disease in the United States. Untrue.
- 2) Raw milk transmits undulant fever. Untrue.
- 3) Cows that prove positive for undulant fever can pass the germ in their milk. Untrue.
- 4) Cows can transmit the pig strain of undulant fever in their milk. Untrue.
- 5) Undulant fever can be transmitted from cheese. Untrue.
- 6) Four thousand cases of typhoid fever in Montreal were caused by drinking raw milk. Untrue (it was pasteurised milk).
- 7) Drinking unpasteurised milk unnecessarily exposes one to illness. Untrue.
- 8) Ten percent of Americans are infected with undulant fever. Untrue and preposterous.
- 9) Raw milk can be "as lethal as strychnine." Untrue and asinine.

The Ladies Home Journal, December 1944, reported, "A Kansas City survey proved that nine percent of 7,122 school children entertained (undulant fever) infection." "Entertained," a peculiar word in this context, could be interpreted by most people as meaning that almost 700 children of those surveyed were running around with undulant fever - an epidemic. J.B. Darlington (*Rural New Yorker*) investigated this claim. The report merely showed that 9% of the children had a positive skin test to brucellosis, such as TB skin test, that indicated **immunity**.

**Pasteurization-proponents continued their drive to stamp out raw milk. The Progressive, on July 15, 1946, reported:**

"Startling improvements in public health invariably ensue when a community moves from raw to pasteurised milk. The Province of Ontario, Canada had been overrun with undulant fever, typhoid, and other infectious diseases when, in 1938, the provincial legislature made pasteurisation compulsory in all communities ... deaths from typhoid were cut in half."

As I pointed out in my analysis of the Coronet article, whether milk is pasteurised is unrelated to catching typhoid. The official records from the Canadian Public Health Journal and the Ontario Department of Health revealed that between 1912 and 1941 inclusive, a period of 29 years, there was a grand total of 2 deaths attributed, without scientific proof and by survey only, to milk-borne typhoid. Cut in half from 2 to 1 in 29 years? The report does not indicate whether the accused milk was raw or pasteurised. The other typhoid deaths during this period, 245 of them, were attributed to water and contaminated foods other than milk.

The Reader's Digest, enlarging on the Progressive's hysterical, unscientifically based and deceptive article a month later, reported: "... an estimated 45,000 persons will be stricken this year with one or another of the lethal diseases carried by infected raw milk - diseases such as diphtheria, streptococcus infections of the throat and tonsils, dysentery, scarlet fever, typhoid, paratyphoid, and undulant fever. Still more thousands will suffer debilitating gastric and intestinal disturbances which are likely to be put down to 'food-poisoning'. Thousands of infants will contract diarrhoea, more or less serious."

**In the dairy industry, nearly 100% of the advertising is done by the National Dairy Council and those closely affiliated with it and pasteurised dairy products.** Raw milk is a threat to their financial interests. Hence, the American people have been subjected to a one-sided propaganda campaign, aided and abetted by the AMA-based health departments that depict fresh, unpasteurised milk as a veritable bacterial soup and a sure path to an early grave. Pasteurisation has been sold as a cure-all, and people, after years of misinformation, have accepted it as true. This misinformation in the lay press has been initiated and/or supported by the majority of professional organizations:

*American Veterinary Medical Association, AMA, American Dental Association, American Academy of Paediatrics, FDA, CDC, National Dairy Council, State and county health departments, U.S. Animal Health Association, National Association of State Public Health, Veterinarians, and Conference of State and Territorial Epidemiologists*