

THE TRUTH

ABOUT

PASTEURIZED MILK

Third Edition

BY

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IN THIS ARTICLE THERE WILL BE A DISCUSSION OF THE CAUSE AND PREVENTION OF UNDULANT FEVER

Report of U. S. Public Health Service

A most startling statement is from H. E. Hasseltine, senior surgeon of the U. S. Public Health Service:

"Allowing for the sterilizing effect of pasteurization, a considerable proportion of the market milk of many states is contaminated with living *brucella abortus* (undulant fever) of the bovine type . . . In Denmark Madsen states: 'No case has ever been observed in the hospitals and asylums for children in Copenhagen or elsewhere where raw milk is used in large quantities'."

Opinions of Eminent Authorities Against Pasteurization

In Montreal there were 5353 cases of typhoid fever, traced to pasteurized milk from one dairy.

Dr. Jesse Mercer Graham, in an article entitled "An Experiment in Milk Pasteurization," in the March, 1941, issue of Nature's Path, said in part the following:

"Perhaps one of the most conspicuous experiments in years recently to prove the case of pasteurized milk was that conducted under strictest supervision at the West of Scotland Agricultural College at Auchincruive, near Air. Two groups, each of eight calves, were fed, one group on raw milk, the other on pasteurized milk, prepared by holding the milk at 145 degrees Fahrenheit for 30 minutes, the most usual pasteurization procedure. The experiment covered a period of 90 days. All the animals in the raw milk group finished the trial without mortality. In the pasteurized milk-fed group, two died before they were 30 days old, and a third died on the 92nd day; that is, two days after the experiment.

The 50 per cent mortality record among the pasteurized group was appalling to the pasteurization interests (which had prompted the experiment to prove their product). This experiment proves conclusively that there are protective qualities in raw milk that are rendered ineffective by pasteurization. Precisely what all of these protective properties are no one can say positively. Those that are known to be lessened are calcium, the antiscorbutic vitamin, Vitamin C; and the protein of milk as

well as the butter fat are rendered less assimilable by pasteurization.

By Dr. Royal Lee, of the Lee Foundation For Nutritional Research, Milwaukee 3, Wisconsin.

1. With quotations from Pottenger, Francis M., M.D., F.A.C.P. The Effect of Heating Processed Foods and Metabolized Vitamin D. Milk on the Dentofacial Structures of Experimental Animals. "American Journal of Orthodontics, and Oral Surgery." Vol. 32, No. 8, Oral Surgery, Pages 467-485, August, 1946.

2. Jean Bullitt Darlington, "Why Milk Pasteurization?" The Rural New Yorker of March 15, 1947, May 3, 1947, July 8, 1947.

A test was recently made on cats fed pasteurized milk and cooked meat, as compared with raw milk and raw meat, and raw milk and cooked meat.

The evidence from feeding 900 cats, demonstrated that:

1. Feeding pasteurized milk, even with raw milk, definitely impaired the health of the animals.
2. Feeding an entire cooked diet caused unhealthy conditions to develop within three to six months. These were:
 - a. Gingivitis, commonly called "pink tooth brush."
 - b. Abscesses of teeth, and progressive loss of teeth.
 - c. Lessened reproductive efficiency in the females; abortion common (25% in first generation, 70% in second), deliveries difficult, many cats dying in labor. "Mortality of the kittens was high, frequently due to the failure of the mother to lactate. At times the mother would steadily decline in health following the birth of the kittens, dying from some obscure tissue exhaustion about three months after delivery. Others experienced increasing difficulty with subsequent pregnancies."
 - d. Irritability. "The females were dangerous to handle, occasionally viciously biting the keeper."
 - e. "Vermin and intestinal parasites abounded."
 - f. "Skin lesions and allergies were fre-

quent, being progressively worse from one generation to the next."

- g. Great increase in susceptibility to infections and degenerative diseases. Pneumonia and empyema were among the principal causes of natural death among the adult cats. Diarrhea, followed by pneumonia, took a heavy toll of the kittens. Osteomyelitis was also both common and often fatal. Cardiac lesions, some ascertained clinically during life, were frequent. Hyperopia and myopia, thyroid disease, nephritis, orchitis, hepatitis, oophoritis, paralysis, meningitis, cystitis, arthritis and many other degenerative lesions familiar in human medicine were observed.
- h. Impairment of hereditary endowment to offspring — "the kittens of the third generation were so degenerated that none of them survived the sixth month of life, thereby terminating the strain."
- i. Progressive impairment of bone calcification. "The trabeculation of the bones became coarser and showed evidence of less calcium. In the third generation some of the bones became as soft as rubber and a true condition of osteogenesis imperfecta was present. The degenerative changes in the skull and mouth grew more pronounced in the third generation. The bones were very fine, with scarcely enough structure to hold the skull together. The teeth were smaller and much more irregular. When the permanent teeth erupted, the third generation cats were frequently prostrated."

Since milk is one of the few animal foods that is heat processed only for the convenience of the middlemen, as Mrs. Darlington has so ably demonstrated in her articles, why do not people use more certified raw milk and goat's milk? Simply because they do not know what the terrific consequences are of using pasteurized milk. They do not know that pasteurized milk would be dear at any price, that its devastating effects upon succeeding generations can never be properly compensated for, and represent Nature's penalty for our ignorance and carelessness in selecting sound and wholesome food. A penalty that cannot be dodged or evaded, for we know no way to counteract or restore the

damage due to its use. Dr. Pottenger showed that succeeding generations could be gradually restored to normal by careful feeding, but the damaged individuals were just the types that flood our hospitals, incurable and often public charges. The death of third generation cats at half their life span, usually from arthritis if not from some infectious disease, is terribly suggestive of why we have twenty million arthritic victims in this country, in various stages of disability. Would these people or their parents have used one drop of pasteurized milk if they had even suspected there might be such consequences? — "Pasteurized milk in its destruction of the Vitamin C content alone of milk takes as much of this vital vitamin out of the National dietary as is put back by all the citrus fruits in this country. Would they have used pasteurized milk if they knew how they were 'unfitting the unborn' by robbing their children and grandchildren of the opportunity to keep their teeth, and robbing them of the very vitality, resistance and health that makes life worth living? This is no idle theory. Dr. Pottenger's cats lost their teeth faster with each generation, in the third there was scarcely enough bone structure 'to hold the skull together'. Pasteurized milk was shown to be more potent than cooked meat in promoting the root abscesses that caused the loss of teeth. The gingivitis, spongy gums, pyorrhea and abscesses were exactly the same as every dentist sees every day.

The first reaction of a test animal or human subject to pasteurized milk is constipation. This no doubt, mainly due to enzyme destruction (phosphatase) and consequent impairment of calcium assimilation, with lowered muscular tone and reduced peristalsis as the immediate effect. There seem to be remarkably few constipated patients who fail to respond to the use of raw milk.

"The only reasonable and wise course to follow in nutrition is to get our foods in as natural and unprocessed a state as possible. To avoid as far as possible all pasteurized, processed, refined, bleached, 'enriched,' artificially colored, synthetic substitutes for wholesome food."

Eugene Underhill, M.D., graduate of the University of Pennsylvania, made the following inquiry in June, 1940, of a veterinarian, head of the laboratory of one of the large milk companies in Philadelphia:

"Doctor, I would like to get the low-down on the question of pasteurized milk versus raw milk. What is your opinion on the subject?"

The veterinarian replied: "I will tell you professionally that I am 100 per cent for pasteurization. Personally, I won't have a drop of pasteurized milk in my home."

A. Fitz Roy Anderson, of New York City, says this: "Let it be remembered that pasteurization of milk started in Germany, where later it became unlawful, yet over here, under pressure, our Public Health Service remains indifferent to its devastating effect upon the health of our people."

Many of the most virulent forms of bacteria (staphylococci, streptococci, etc.) are not affected by 185 degrees Fahrenheit of heat, though the limit of practically all pasteurization is 165 degrees Fahrenheit, and many laboratories do not employ heat above 145 degrees Fahrenheit.

Pasteurization Is Injurious

A very interesting observation for a period over six months was carried out by M. Ludd, H. W. Ewerts and L. W. Franks, in New York on infant feeding. The infants were divided into four groups. The first was fed on pasteurized milk alone; the second on pasteurized milk plus orange juice and the third on pasteurized milk plus orange juice and cod liver oil; and the fourth certified milk, which was the only raw milk obtainable in New York. The percentage in weights of these different groups showed that those fed on pasteurized milk alone gained 1.7 per cent weight; with pasteurized milk plus orange juice the gain was 7.9 per cent; with pasteurized milk plus orange juice and cod liver oil the gain was 9.5 per cent. While **THOSE FED ON RAW MILK GAINED 14 PER CENT** in weight.

The effect of pasteurization on the calcium salt (lime) in milk has been studied by H. E. Mague and D. Harvey, working in the Rewett Research Institute, Aberdeen, Scotland. They demonstrated that the calcium in milk is in two forms—a soluble one, and an insoluble one bound up in caseinogen. After pasteurization the total of soluble calcium is very much diminished. The loss of soluble calcium as regards infants and growing children must be a very important factor in growth and development, not only in the formation of bone and teeth, but also in the calcium content of

the blood, the importance of which is now being raised.

Some time ago a letter was printed, signed by eight members of parliament (England), from which we quote:

"May we here adduce certain facts relating to a single county as recorded in the last report of the Medical Officer of Health for Hartfordshire? This county has a population of 420,000 souls, and all the milk drunk by them is produced in the county. During 1932 there were 45 deaths in all from surgical tuberculosis, of which 33 were children under 15. In 13 rural districts, where the whole supply is in the hands of small retailers of raw milk, there were no deaths at all during the year from surgical tuberculosis. The highest death rate was in an urban area where the population lives under model conditions and practically all the milk supply is pasteurized."

Harold F. Hawkins, D.D.S., of the University of Southern California, has this to add:

"Raw milk from healthy cows that have been suitably tested is of the highest biological value. Pasteurized milk is not so desirable as raw and greatly increases the difficulty of calcium assimilation as well as injuring vitamins and probably hormones. Pasteurization should not be used for food. Homogenized milk is usually pasteurized from 160 to 186 degrees F. by the flash method. This type of milk is not suitable for a growing child or invalid as only about half the theoretical calcium is assimilated by the average child, according to our tests.

Dr. Florence MacLeod, Columbia University, New York, N. Y., in her paper "The Place of Milk in the Diet," read before the Metropolitan Certified Milk Producers in New York in February, 1928, made this statement:

"Some years ago Hess pointed out that at least one pint of fresh raw milk was necessary to protect a baby from scurvy."

The late Dr. Emmett Hold said:

"Very many agree with me that cases of scurvy among infants are on the increase in New York since the general use of pasteurized milk. Formerly this condition was most frequently seen in infants fed on patent foods; now, chiefly in those taking heated milk."

We find that Dr. Wm. H. Donnelly in "Raw Milk and What It Means" tells us:

"From its perishable nature, raw milk is always marketed, delivered and consumed many hours earlier than pasteurized milk, consequently the important factor or loss of vitamins from aging is much lower in the raw product."

In "Feeding the Family," Mary Swartz Rose, professor of nutrition, Columbia University, gives us this: "Shortage of vitamins and especially the C vitamin is detrimental in the development of teeth."

Pasteurization robs us every year of as much ascorbic acid as is contained in the entire citrus crop of the United States.

Your milk as now bottled can lose one-third of its riboflavin and one-half of its ascorbic acid by exposure to sunlight.

Dr. Henry Dwight Chapin, consulting physician, Willard Parker Hospital, New York City, member of American Pediatric Society, in his article "The Necessity of a Pure Raw Milk," gives us this to think about:

"Milk is a physiologic fluid, not merely a mixture of fats, proteins, carbohydrates, mineral matter and water, or a combination of protein matters and calories. As more is learned of its properties, the greater will be the demand for raw milk in the treatment of various nutritional defects. We must always remember that physical changes may interfere with some physiologic functions."

Raw Milk Not Responsible

When Edsel Ford died of undulant fever the Detroit News in its issue of May 26, 1943, had this to say:

"Undulant fever was present"—developing among various other symptoms the finally fatal "metastatic carcinoma," a type of cancer to which the death certificate attributes his death (Macomb County records). It will not be argued that the power and wealth of the Ford family was not exerted to the utmost to obtain the best that was to be had in the field of health treatment. But it was impossible to save him from the curse which monopoly had placed upon him evident in the following quotation from page 97 of Dr. Josephson's book "Rackets, Social Service and Medical":

"Undulant fever is spreading rapidly in this country. At times and in some communi-

ties it has attained epidemic proportions. For a long time the matter was hushed even in the medical press, so that even many doctors were not aware of the existence of the disease or its nature. But its spread is forcing it on public attention. A recent survey among the school children of Detroit showed that one third of those examined were affected with unsuspected chronic undulant fever."

Few of the people in Detroit have any suspicion that a third of the children in the city have become affected with this disease as a result of the national milk interests to establish monopolistic control over the milk field in Michigan.

The growing undulant fever epidemic accompanying the rise of the national milk monopoly has more lately been reported in a popular magazine, *News Week*, issue of February 5, 1945:

"Recently Dr. Frederick D. Stricker, Oregon State health officer, reported that at least 15 persons out of every 100 in the state have the disease."

Farnsworth Laboratories, Chicago, report undulant fever present in 25 per cent of all persons affected with chronic ailments; and it is only proper to point out that a shift from pasteurized milk to canned milk in the effort to escape undulant fever infection merely involved other discouraging facts. The Detroit Free Press republished on April 18, 1944, from the Chicago Tribune service the following:

Truth About Milks

"London. Dr. T. H. Sanderson Wells, chairman of the Food Education Society, recently disclosed to London how a perfectly balanced chemical meal, containing all of a number of necessary vitamins, killed all of a number of rats to which it was fed. Later, he said, a tablespoon full of fresh milk was added to the 'perfect meal.' Rats which ate it thrived. A professor continuing the experiment boiled the milk before adding it to the meal. The rats which formerly thrived died."

"Raw Milk versus Pasteurized Milk," an editorial in the *Illinois Medical Journal* of July, 1925, brought out some interesting facts and comments:

"Vitamins necessary for perfect results from

this complicated fluid are found only in the raw, clean product.

"Unclean milk cannot be made clean by pasteurization. In fact pasteurization increases the danger of infection of the intestine with Welch's bacillus and other putrefactive organisms by destroying the lactic acid forming organisms which when present hinder the growth and development of the putrefactive flora. Destruction of these germs gives the putrefactive bacteria opportunity for unlimited growth and development under favorable conditions whether within or without the body. In pasteurized milk there may be present the highly active poison produced by tubercle bacilli, and in quantity sufficient to give rise to marked symptoms of malnutrition. This has been shown definitely in animal experimentation.

"Unless used very quickly after pasteurization, spore of the deadly Welch's bacillus and other dangerous organisms may multiply rapidly so that when used, pasteurized milk may actually introduce into the body of a sensitive infant more dangerous germs than were originally found in the raw milk before it was pasteurized. It is high time that the public should be informed of the fact that pasteurization does not make dirty milk either clean or safe and that pasteurized milk is even in some respects less safe and wholesome than dirty raw milk, provided germs of infectious diseases are absent. This statement cannot be repeated too often."

Indisputable Proof

In Dr. E. M. Josephson's book "Your Life Is Their Toy" on pages 95 and 96 he makes the following statements:—

"Among the diseases of the cow conveyed to the human by milk are the following: Colds, septic sore throat, rheumatic fever and heart disease."

The works of Rogers and Frazier, and of Prucha, reveal that certain types of the dangerous streptococci and other groups of bacteria may actually flourish at the temperatures of pasteurization. Ayers and Johnson of the U. S. Department of Agriculture stated in their official publication, "A Study of Bacteria Which Survive Pasteurization," as follows:

"Four distinct groups of bacteria, the acid forming, the inert, the alkali forming and

the peptonizing, survive pasteurization—"Streptococci from milk and cream were much more resistant than those from other sources."

The disease which these streptococci cause in the human is generally virulent, and dangerous to health and life. It may cause rheumatism, heart disease, St. Vitus dance, kidney disease, and even death through the blood stream infection, so called "blood poisoning." Periodic epidemics of septic sore throat recur as often as three or four times a year among milk drinkers.

There is little room for doubt that the streptococci of milk are the most frequent cause of rheumatic fever, the most deadly disease of childhood. It ranks first as the cause of death in girls and third in boys.

Let's take a trip to a little group of islands in the outer Hebrides in the north Atlantic northwest of Scotland. Here the inhabitants were found to be strong, healthy and long of life. Their food consisted of whole grains, raw milk, milk products and meat. There was no need for either doctor or dentist. In time a brisk trade developed with the mainland from the leeward side of the Isle of Lewis. Marmalade, candy, cookies, along with white flour and refined sugar were introduced into the diet of the natives. Coincident with this change in diet, the school children showed a large incident of tooth decay, adenoids, diseased tonsils, arthritis, T.B. and other nutritional diseases. The people in the back of the island and other adjoining islands who were not exposed to this refined food diet suffered no deficiency disease. They continued to live to near the century mark without T.B., arthritis, heart disease, digestive disorders or dental decay.

In the Loetschental Valley in Switzerland, high in the Alps, there lives an isolated colony of 2,200 persons. The people of this section live on milk, cheese, butter, whole grains, eggs and meat. They have never had a dentist or a doctor. The expected age is around 100 years. They do manual labor in their 80s and 90s. The Swiss Guard formerly furnished to the Pope was selected from this region because of superb physical development of men.

Conclusions

Following are a few notes on items published in The Rural New Yorker, New York City, or the Pennsylvania Raw Milk Producer-

Distributors Association, Westchester, Pa., in the process of pasteurization of milk:

1. Scientific tests have shown that organic calcium and phosphorus are lost.
2. Iodine is lost.
3. Vitamins B and C are destroyed.
4. There is loss of Vitamin B₂.
5. Practically all the enzymes (organic ferments) are lost.
6. The anti-stiffness and anemia factors are destroyed.
7. The germicidal property of milk is destroyed.

Furthermore, scientific investigations have shown that an anti-cancer protective element is contained in natural milk. Has anyone known of any of our public health officials or commercial champions of pasteurized milk and the pasteurization there to mention that fact?

Final Conclusions

First: A hard curd results from the heat of pasteurization.

Second: Pasteurization destroys the lactic acid ferment. Lactic acid is one of the most healthful and essential products of milk. Many countries prefer the lactic acid milk to the sweet. Pasteurized milk will *DECAY* but never *sour*.

Third: Vitamin C is most completely destroyed. This essential vitamin is necessary to prevent scurvy.

Fourth: There is a lessening of the lime salts and phosphorus. Also pasteurization makes protein and butter fat less assimilable.

Fifth: Under the influence of heat, the protein of milk undergoes modification. The production of hydrogen sulphide and of ammonia points to decomposition (decay) of these proteins. The proteins, albumin and globulin suffer coagulation.

Sixth: Pasteurization of milk is no guaranty that the bacteria in the milk, though apparently latent or dead, will not revive after a period of time without losing an iota of their harmfulness.

Seventh: Live bacteria in milk produce toxins known as exotoxins, which are far less fatal than the endotoxins resulting from the bodies of the dead bacteria.

Eighth: That pasteurization has no effect upon the spores of the germs of undulant. Thus, the users of pasteurized milk are susceptible to undulant fever. This has been acknowledged by the former health commissioner, Dr. Frank Carroll, of Seattle, Washington.

Ninth: That raw milk is the only perfect food providing all the elements necessary to the healthy growth of the human body.

Tenth: The assumption in the question of the pasteurization of milk is that the milk from sick cows can be rendered fit for consumption. I do not believe there is a doctor living who would sanction the use of any milk from a tubercular mother or one suffering from undulant fever. No mother suffering from T.B. or undulant fever is fit to nurse a baby. No tubercular or undulant cow, infected, can produce milk for consumption. What we must have for our children is pure milk, which can come only from healthy cows.

In the best interest of every child, infant and adult the first requisite is pure raw milk, carefully supervised as to bacterial count.

The constantly broadening knowledge of nutrition that is resulting from chemical studies and from animal feeding experiments should be a warning against passing laws that will prevent progress, and no regulation should be tolerated that will put normal, physiologic milk beyond the reach of physicians and the public at large.

If you are using, or contemplating using, pasteurized milk, remember that you are depriving your child of proper proteins, the lactic acid ferment, Vitamin C (which may cause scurvy and the lack of which is detrimental to teeth), phosphorus and calcium. You are endangering your child's life through the presence of toxins of the dead bacteria, which are now known to be more fatal than the toxins of the live bacteria. You are endangering your child to diarrhea and forcing into its blood the spores of dead bacteria, which may remain in the blood stream to eventually burst into life, causing serious infection.

WHAT WE NEED IS NOT THE ELIMINATION OF RAW MILK, BUT THE ELIMINATION OF SICK COWS!