Why Milk Pasteurization?

Sowing the Seeds of Fear

By Jean Bullitt Darlington

Reprinted by Permission
from

The Rural New-Yorker
THE BUSINESS FARMER'S PAPER
Established 1850

March 15, 1947

Reprint No. 28
Lee Foundation for Nutritional Research
Milwaukee 3, Wisconsin

Why Milk Pasteurization?

By
Jean Bullitt Darlington

CONTRARY to current popular belief, pasteurization of milk is not a step forward in nutrition and health. It is a step backward. Certain important nutritional elements, i. e., vitamins, enzymes and minerals, are lost; low standards of milk production are encouraged; incentive for high grade milk production is discouraged; competition in distribution is narrowed; monopoly control of producers is made possible; and the dietary value of milk is lowered, while the cost to the consumer is increased.

These are not statements based on hearsay or guesswork, but upon more than ten years of patient inquiry and diligent study of the evidence, including unbiased scientific research, for the purpose of determining the importance of milk, in relation both to health and economics.

[Ed. — Mrs. Darlington has been active for several years in the cause of raw milk and has gained a well deserved reputation for her energy and industry in this work. She was one of the organizers of the Pennsylvania Raw Milk Producer-Distributors Association and was its president from 1941 to 1946; presently she is assistant secretary.

She lives on a Chester County, Penna., farm which has been owned and operated by the Darlington family for two hundred years as a dairy farm. Mrs. Darlington is the mother of six children, the grandmother of three.

This is the first of a series of three articles.]

That results from pasteurization of milk are not in the public interest can hardly be denied after a study of the subject. Nevertheless, the propagandists would have us believe that disease from unpasteurized milk is so widespread and inevitable that pasteurization should be compulsory. The fallacy of this contention can best be demonstrated by assaying the facts upon which it has been based. Examination of a few samples of the propaganda campaign to which our press and popular monthly magazines have recently lent themselves, will serve to show, to some extent, how the American public has been duped into an acceptance of pasteurization as a cure-all.

Selected for examination are: "How Safe Is Your Town's Milk?", by Holman Harvey, *The Reader's Digest,* August, 1946; which in turn was condensed from Mr. Harvey's article in *The Progressive* (Madison, Wis.), July 15, 1946; "Raw Milk Can Kill You," by Harold J. Harris, M. D., in *Coronet,* May, 1945; and "Undulant Fever," by Milton Mackaye, in *Ladies' Home Journal,* December, 1944.

If the credibility of a lie is enhanced by its size, it is immeasurably more enhanced when, under our tradition of freedom of the press, it is repeated again and again and remains unchallenged. (1) [See Reference List, page 233]. The public is therefore usually justified in relying on the fantastic "facts"

presented in articles of milk pasteurization promotion, because of the popular belief that where the press is free, opportunity for the other side of a controversy to present its case, in the same publication reaching the same circulation, is a foregone conclusion. Lack of any such presentation is a tacit admission by the other side that there is no evidence with which to refute the propaganda charges made against it. In the controversy of raw versus pasteurized milk, however, this belief on the part of the public is not justified because the press never gives an equal opportunity to the proponents of raw milk; it seldom gives any opportunity at all.

For example, *Ladies' Home Journal* and *Coronet* have refused, in spite of request, to present this other side in their columns. *The Progressive* offered to print a "Letter to the Editor," but insisted that the letter be limited to not more than 600 words. This offer was refused because it was not considered adequate to offset the mischief done, particularly in view of *The Progressive's* responsibility for the much wider circulation of Mr. Harvey's article in *The Reader's Digest.*

The Reader's Digest, which publishes few original articles, admitted the controversial nature of the whole subject, and stated that it would be willing to consider any information written on behalf of the other side(presumably in the nature of condensation and republication).

Let us therefore have a full and complete look at the case for pasteurization, and the evidence that has been offered in its support.

The Montreal Typhoid Fever Epidemic

The False Propaganda

"Ten years ago Montreal, a favorite American vacation spot, had an epidemic of 4,000 cases (typhoid) — 400 persons died — all from a single Montreal dairy which sold raw milk." *Coronet,* May, 1945.

"In Montreal a few years ago, virulent typhoid fever from unclean raw milk attacked 5,100 persons killing 500." *The Progressive,* July 15, 1946. *

The Truth

The great typhoid epidemic in Montreal was in 1927, not ten years prior to 1945. It was traced to pasteurized milk from the Montreal Dairy Company, which company sold pasteurized milk exclusively. (2) According to an official investigation authorized by the Ministry of Health of the Province of Quebec:

> "The Montreal epidemic of typhoid fever showed a total of 5,353 cases during a period from the first of March to July 1, 1927.
>
> "Observations of the early cases indicated clearly that the spread of the disease could be attributed to the consumption of milk and other dairy products from the Montreal Dairy and its associated National Dairy Company. The latter company distributed milk pasteurized at the plant of the Montreal Dairy.

---

* *The Reader's Digest,* August, 1946, saw fit to omit this claim in its condensed version of Mr. Harvey's article.

"Later findings, based on a study of data covering the entire epidemic, confirmed the earlier indications and definitely showed the connection between pasteurized milk from the Montreal Dairy and the epidemic. . . .

"An extensive study of the possibility of infected raw milk causing the epidemic, failed to reveal any such opportunity. . . .

"The survey clearly shows that the epidemic was largely caused by the consumption of pasteurized milk from the Montreal Dairy Company. There is a probability that a minor portion of the cases were caused by the consumption of cream and ice cream from the same company.

"The pasteurized milk undoubtedly became infected with typhoid bacilli largely through the medium of a typhoid carrier who was the foreman of the pasteurizing room and his successor, who was at the time an incipent case of typhoid, continued the infection. . . .

"In conclusion it may be said that an unfortunate chain of circumstances caused an infection of pasteurized milk in a plant containing, for the most part, excellent and modern equipment."

From this report it is quite clear that the milk was contaminated during and after pasteurization. The statements made by Dr. Harris and by Mr. Harvey are therefore absolutely not true.

Kansas City Survey

The False Propaganda

"Surveys indicate that about 10 per cent of the population may be infected by undulant fever. Of more than 7,000 school children tested in one group nine per cent were found to have the disease. Among children who came from families owning their own cows, the rate jumped to 18 per cent." *The Progressive,* July 15, 1946.

The Reader's Digest repeated that version.

"A Kansas City survey proved that nine per cent of 7,122 school children entertained the (undulant fever) infection." *Ladies' Home Journal*, December, 1944.

Mr. Mackaye was more cautious than Mr. Harvey. He gave the impression that nine per cent had the disease, but refrained from categorically saying so.

There being two cities called "Kansas City," the Director of Health of each was queried as to when, where, and by whom this now nationally advertised survey was made. The replies give an idea of the difficulties that continually beset any inquiry for truth concerning milk.

The Commissioner of Health of Kansas City, Missouri, by letter dated August 20, 1946 replied:

"Replying to your inquiry of August 17, I may say that the study on undulant fever among school children was made a number of years ago in Kansas City, Kansas. I note that you have addressed a similar request to both cities and I trust you will have a reply from Kansas."

The reply received from the Chief Milk Sanitarian, Kansas City, Kansas, dated August 19, 1946, read as follows:

"So far as I know, no extensive tests have been made on Kansas City, Kansas, children for undulant fever, and I am sure that the articles you have read regarding 'Kansas City School Children' must have originated in our sister city, Kansas City, Missouri."

Consultation of the *Index Medicus* at the College of Physicians Library in Philadelphia, revealed a report on this elusive survey and several unexpected facts concerning it. The survey was actually made in Kansas City, Kansas, in April and May 1937, by four physicians, one of whom was "W. F. Lunsford, M. D., Director of Health of Kansas City, Kansas." (3) Yet, only nine years after it was made, the Kansas City, Kansas, Department of Health was unaware of this otherwise now nationally famous survey which has been so widely exploited (except apparently in Kansas City, Kansas) and so grossly misinterpreted in recent magazine articles.

The Truth

A careful reading of the reports of this Kansas City survey reveals that, while skin sensitivity to brucellergin was found in nine per cent of the children tested, not a single child was diagnosed as "having the disease." In his article in *Ladies' Home Journal,* Mr. Mackaye reported that "nine per cent entertained the infection," which to the layman would imply that nine per cent had the disease. Such an implication is completely unwarranted. The authors of the survey state: "We wish to make it clear that evidence of infection does not mean disease." (4)

As to the "nine per cent" of those tested who showed skin sensitivity to brucellergin, and which percentage "increased to 18 per cent" among children who came from families owning their own cows, it should be noted what I. F. Huddleson, an authority on bacteriology, has to say:

> "When human beings are exposed to brucella, a large percentage of those exposed fail to show any clinical evidence of the disease, but do develop specific serum antibodies and skin sensitivity, and in some instances to the same degree as those clinically infected. . . When antibodies or skin sensitivity are found present in healthy persons a state of active immunity is indicated." (5)

In other words, not only was there no disease (Mr. Harvey reported there was), but, according to Dr. Huddleson, even the implication sought to be left by Mr. Mackaye about nine per cent entertaining the infection, was wrong, since skin sensitivity in well persons indicates active immunity.

Another observation. Pasteurization proponents go much too far (their usual failing) in interpreting this kind of survey, when they attempt to generate a fear complex among parents. According to one well recognized authority —

> "It has become more or less tacit opinion of writers on undulant fever that *the disease is relatively uncommon in children.* In fact, some authors have gone so far as to argue that *brucella infection is not caused by drinking milk,* because children seem to contract the disease so infrequently in spite of drinking large quantities of raw milk." (6) (Italics mine).

And still one further observation:

"It must be remembered that a major source of the disease is contact with infected animals. To a degree undulant fever may be considered an occupational disease. . .farmers and workers in food processing plants suffer from undulant fever far more than any other group." (7)

CROSSROADS, U. S. A. EPIDEMIC

The False Propaganda

A lurid account is given of a frightful epidemic of undulant fever which —

". . .spread rapidly. . .it struck one out of every four persons in Crossroads. Despite the efforts of the two doctors and the State health department, one out of every four patients died." *Coronet,* May 1945.

The Truth

From an article by J. Howard Brown of Johns Hopkins University, it has been ascertained that Dr. Harris has acknowledged to him that this epidemic, so realistically described with names and places, was fictitious. Dr. Brown says:

"The public has been bombarded with sensational articles in popular magazines* creating the impression that anyone who drinks a glass of raw milk is in imminent danger of contracting undulant fever and that if all milk were pasteurized there would be no human brucellosis. Neither proposition is true."

" * Addendum: See Raw Milk Can Kill You, *Coronet,* May 1945. Correspondence with the author of this article reveals that the outbreak at 'Crossroads, U. S. A., in one of those States in the Midwest,' was fictitious, representing no actual occurrence, and, presumably was described merely to illustrate what the author thought might happen." (8)

Not only does Dr. Harris now admit to be a complete fiction what he stated in his *Coronet* article to be an actual fact, but, according to his own public statements made both before and after the article was written, he knew that such a thing could not possibly happen. His belated explanation, as reported to Dr. Brown, that he *thought* it might happen, is for the same reason not entitled to the slightest credibility.

In an article written by Dr. Harris in March, 1941, he stated:

> "Mortality in acute cases (of undulant fever) was formerly about two per cent, but this has been greatly lowered by modern methods." (9)

Again Dr. Harris, in a paper read before the Maine Veterinary Medical Association, Portland, Maine, on April 17, 1946, had this to say:

> "The small proportion of deaths from acute illness (varying from two to three per cent—rarely higher in epidemic form) can be made almost, if not quite zero." (10)

In spite of Dr. Harris' knowledge, as above recorded in 1941 and 1946, he pictures for *Coronet* readers in 1945 his imaginary epidemic of "Crossroads," with a death rate of 25 per cent of those stricken. He claims also that 25 per cent, "one out of every four persons in Crossroads," had the disease.

Concerning milk-borne undulant fever "epidemics," the official statistics of the U. S. Public Health Service, which compiles such information on a nationwide basis, show that from 1923 through 1944 (1945 figures not yet available) there have been recorded in the entire United States, Alaska and Hawaii, 32 outbreaks of milk-borne undulant fever, with 256 cases and three

deaths. (11) (12) There are "outbreaks" reported consisting of as few as one, two or three cases. The average number of cases per "outbreak" of undulant fever was eight. There was one death to every ten outbreaks, or one death in 85 cases.

It is clear, then, that Dr. Harris' synthetic epidemic has no counterpart in reality, and that his claim in *Coronet* that "What happened to Crossroads might happen to your town—to your city—might happen almost anywhere in America," can be dismissed as completely false, and to some extent even malicious.

Death of a New York Physician

The False Propaganda

"About five years ago there was a curious incident in New York City. A physician fell ill with brucellosis. His colleagues did what they could, but within a few days he died. Tests showed he had a rather rare variety of the disease transmitted by goats. One of his doctors proved to be an amateur Sherlock Holmes. Acting on a hunch, he inspected the doctor's kitchen. He checked the refrigerator's contents. Pasteurized milk. No goat's milk. Finally he spotted a freshly cut head of imported Italian cheese, which he took to the laboratory. The cheese was made from goat's milk; a culture showed it was dripping with the germs of the goat brand of undulant fever." *Coronet,* May, 1945.

The Truth

The circumstances of this "death" of a doctor was investigated through the New York City Department of Health. The Department's letter, confirming an interview, follows:

"This is to acknowledge the receipt of your letter of July 8, 1945, in which you ask whether any further data have been found on a case of brucellosis which presumably occurred in New York City as a result of eating cheese, about which you spoke to Dr. Greenberg of this Department several weeks ago. No further data have been found. As Dr. Greenberg told you, there is no record in the files of this Department of any such case." (13)

Fortunately, New York, unlike Crossroads, is not a fictitious place, and records are available. It was therefore relatively easy to ferret out this additional piece of "scare" fiction and dismiss it as another typical example of the false pasteurization propaganda.

A False Deduction

"Startling improvements in public health invariably ensue when a community moves from raw to pasteurized milk. The Province of Ontario, Canada, had been overrun with undulant fever, typhoid and other infectious diseases when, in 1938, the provincial legislature made pasteurization compulsory in all communities.*** Deaths from typhoid were cut in half." *The Progressive*, July 15, 1946.

The Reader's Digest, August 1946, condensation reported the same.

The Truth

A special milk issue of the *Canadian Public Health Journal*, which contained a "Survey of Milk-Borne Disesase in Canada, compiled by the Milk Committee of the Canadian Public Health Association, covering the years from 1912-1940 inclusive," shows that the

last recorded deaths in Ontario from milk-borne typhoid were in 1930, when there were 18 cases and three deaths. So the claim that passage of the pasteurization law in 1938 cut deaths from typhoid in half was not true. (14)

Thinking that more authentic information might be obtained, the Ontario Department of Health was asked for the official records of typhoid fever in the Province of Ontario for the years preceding and following the date of the compulsory pasteurization law of 1938. Here is that authentic information compiled from three letters received from the Health Department:

Year	Total Cases All Sources Typhoid Fever	Mortality Rate	*Deaths	Milk-Borne Typhoid Cases	**Deaths
1934	547	1.4	52	11	1
1935	310	1.2	45	0	0
1936	251	1.1	41	0	0
1937	241	1.	37	5	1
1938x	235	.7	26	0	0
1939	119	.4	15	0	0
1940	159	.6	22	0	0
1941	133	.2	7	0	0
Total	1,995	.	245	16	2

x Year compulsory pasteurization law was passed.

* Total deaths figured from mortality rate applied to the population figure furnished by the Ontario Department of Health, 3,756,632. (15)

** Figures for milk-borne deaths furnished by Ontario Department of Health. (15) Note inconsistency between survey of Canadian Public Health Assn. that there were no deaths since 1930, and statement from Ontario Dept. of Health that there was one death in 1934, another in 1937. No reason or explanation given for obvious inconsistency.

Let us suppose for the moment that we are studying highway safety. The first three columns represent injuries, mortality rate and deaths from automobile accidents. The last two columns represent injuries and deaths from a

grade crossing. The x indicates the year that the grade crossing was abolished. Would this record justify the claim that the elimination of grade crossings was responsible for cutting the death rate in half? It would take a somewhat flighty, perverted imagination to draw any such conclusion. Yet, in the case of the 1938 Ontario pasteurization law, Mr. Harvey pictured the results as "startling improvements."

Randall's Island Incident

Far Fetched Claim

For another illustration to support his contention that "startling improvements in public health invariably ensue," Mr. Harvey states:

> "At a children's institution on Randall's Island, N. Y., a mortality of 44 per 100,000 from all causes, was immediately reduced to 20 by pasteurizing all milk served the children." *The Reader's Digest*, August, 1946. *The Progressive*, July 15, 1946.

If Mr. Harvey had consulted an original source, he would not have given the absurd figures, "44" and "20" per 100,000. He would have said that in a certain year 41.81 per cent of the sick children died in an institution that cared for the waifs of New York City, and that this death rate was reduced to 21.75 per cent in the next year, by pasteurization of the institution's milk supply. (16)

Such figures would be impressive if they could be shown to have any application to the present day. But Mr. Harvey, in reporting the Randall's Island incident, neglects to tell his readers that it happened fifty years ago, in 1897, when conditions affecting the production and distribution of New

York City's milk were so vastly different that no valid comparison could possibly be made.

False Prophecies

Deploring the fact that "only one American community in three of 1,000 population has any kind of ordinance to insure safe milk," Mr. Harvey goes on to say:

> "As a result, an estimated 45,000 persons will be stricken this year with one or another of an assortment of lethal diseases brought to them by infected raw milk, most of which will be deposited on their doorsteps by their regular milk man. Many more thousands will suffer debilitating gastric and intestinal disturbances which are likely to be put down to "food poisoning." Thousands of infants will contract diarrhea, more or less serious. *The Progressive*, July 15, 1946.

The condensed version:

> "As a result, 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, typhoid, paratyphoid and undulant fevers. 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 diarrhea, more or less serious." *The Reader's Digest*, August, 1946.

A Look at the Record

As the writer gave no clue to the source of these extraordinary predictions, their validity can be tested

only by comparing them with the records available of milk-borne disease, compiled on a nationwide basis. The official U. S. Public Health Service reports that in 22 years, 1923-44 inclusive, there have been a total of 37,965 cases of all kinds of diseases traced to all varieties of milk and milk products. These reported outbreaks include all cases from pasteurized milk as well as raw, and all of the products thereof. The 22 years show a yearly average of 1,726 cases traced to all kinds of milk and milk products. (11) (12)

For comparison with the quoted magazines' predictions, this is what is found from the latest available figures (1944): (12)

Kind of Milk	Number Cases all kinds of Diseases	Deaths
Raw Milk	430	1 typhoid
Pasteurized Milk	224	
Pasteurized and Raw	3	
Ice Cream made from Raw Milk	24	
Ice Cream made from Past. Milk	145	
Ice Cream Unknown if Raw or Past.	65	
Hospital Formulas	43	2 diarrhea
Evaporated Milk	10	
Cheeses	505	17 typhoid
Total from all kinds milk and milk products in 1944	1,449	20

In studying these figures for 1944, it is clear that a number of cases of disease outbreaks were traced to pasteurized milk; also, that only one death was attributable to raw milk. In 1944, raw milk "on the doorstep" accounted for less than 30 per cent of the total cases from milk and milk products, and only five per cent of the deaths reported. (12)

To understand how relatively unimportant is the problem of raw milk-borne disease, against which such

fantastic claims have been made, the following figures on milk-borne disease, water-borne diseases and diseases traced to foods other than milk, are presented for comparison: (17)

Year	Milk and Milk Products	Water	Foods Other Than Milk	Total All Sources
1944	1,449	2,686	14,558	18,693

In 1944, therefore, raw milk accounted for only a little over two per cent of this total, and all milk and milk products for less than eight per cent.

It is clear that the case for pasteurization presented by some magazines has been built upon false and fictitious facts, and that there is in reality little danger of contracting disease from the consumption of raw milk; that instead of the 45,000 cases of raw milk-borne lethal diseases (lethal means "deadly") as prophesied, it can be estimated, not by guess but by the latest available statistics, that the number of such cases will be exactly 0.95 per cent (less than one per cent) of Mr. Harvey's guess; and 0.0022 per cent of the number of deaths he suggests will occur.

If evidence to support the promotion of pasteurization is so difficult to find that it must needs be distorted and in some cases even invented, which is clear from the most recent publicity on the subject, an honest mind cannot fail to grasp that the case for pasteurization is a very weak case indeed.

(To be continued)

REFERENCES

1. Hitler, A.: The Art of Propaganda, The New York Times Mag. Sun. June 22, 1941. Excerpts from "Mein Kampf."
2. Pease, H. D.: An Investigation of Epidemic Typhoid Fever in Montreal, 1927. Authorized by Dr. Alphonse Lessard, Director, The Provincial Bureau of Health of the Province of Quebec, Canada. 1931.
3. Angle, F. E., Algie, W. H., Baumgartner, Leona, and Lunsford, W. F.: Skin Testing for Brucellosis (Undulant Fever) in School Children, Ann. Int. Med. 12: 495 (Oct.) 1928.
4. Ibid. p. 1192 (Feb.) 1939.
5. Huddleson, I. F.: Immunity in Brucellosis, Bact. Rev. 6; 111, 1942.
6. Dooley, Parker: The Incidence of Undulant Fever in Children, Arch. Diseases of Child. 6: 235-238. 1931.
7. Huddleson, I. F.: Hygeia, vol 23, Dec. 1945, p. 908-9.
8. Brown, J. Howard: Why Certified Milk? Amer. Jour. Med. Sciences, 211, 144-148 (Feb.) 1946.
9. Harris, Harold J.: The Raw Milk Menace, Hygeia, Mar. 1941; p. 250.
10. Harris, Harold J.: Brucellosis, J. A. M. A. Vol. 131, No. 18, p. 1485-1493. 1946.
11. U. S. Public Health Service: Summary of Milk-Borne Disease Outbreaks, 1923-1941.
12. U. S. Public Health Service: Disease Outbreaks Conveyed Through Milk and Milk Products in the U. S., 1942, 1943, 1944.
13. Calderone, Frank A.: Personal Communication to the author from the New York City Deputy and Acting Commissioner of Health.
14. Milk Committee of the Canadian Public Health Association: Survey of Milk-Borne Diseases in Canada, 1912-1940 Incl. Can. Pub. Health Journ. 32; 4, p. 83-84. (Apr.) 1941.
15. Hardman, R. P.: Personal Communications to the author from Division of Epidemiology, Dept. of Health, Toronto, Canada. May 27, June 12, June 23, 1942.
16. Straus, Lina Gutherz, "Disease in Milk—The Remedy Pasteurization—The Life Work of Nathan Straus." 2nd Edition 1917, E. P. Dutton & Co., New York.
17. U. S. Public Health Service: Summary of Disease Outbreaks from Water, Milk, Other Foods, and Undetermined Vehicles 1938 through 1944.