The Miracle of Milk:
How to Use the Milk Diet Scientifically at Home

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Chapter 1: Why the Milk Diet Cures

From the earliest dawn of human history milk has been recognized as one of the most valuable of food products. In fact, the cow, next to the dog, was probably the earliest domesticated of the animals. For, away back in pre-glacial days – before the great ice-flow changed the surface aspects and the climate of Europe – the Swiss Lake-Dwellers kept cattle, the milk of which, reinforced by the fish they hauled out of the lake, furnished their chief source of food.

Wells tells us that it was in the Neolithic Age, ten or twelve thousand years ago, that the nomadic hunter evolved into the herdsman, and mankind first became cow-keepers. The practice of cow-keeping gradually spread all over the earth, until now there are very few races, civilized or savage, city dwellers or nomads, in Europe, Asia or Africa, who have not depended, or do not depend, more or less, upon cow, goat, reindeer, or buffalo. And, as we all know, among many African tribes the wealth of an individual is measured by the number of cows he owns. Indeed, a man may even buy his wife from her loving father for a certain number of cows, depending upon the youth and comeliness of the maiden and upon how badly he might be smitten by her charms.

Millions of people, as the Tartar tribes in Asia and many of the Central European races, even now find in milk and in milk products their principal source of nutriment.

And so free from disease are they that certain of these peoples, such as the Bulgarians, have been given credit for being among the longest-lived of all the peoples of the earth. In fact, Metchnikoff's famous discovery that age-decay is largely the result of the absorption into the system of poisons generated by decomposition in the intestinal canal was stimulated by the study of the diet of these same Bulgarian peasants, who lived largely

upon clabbered milk – milk fermented by adding a little of the clabber of the preceding lot. This "cultures" the milk, causing the development of large quantities of health-giving lactic acid germs.

These germs are supposed to destroy the colon bacilli and other more highly toxic bacteria that breed in the intestinal canal, and thereby prevent their destructive action upon the delicate nerve cells and upon the general organism.

In our own country an average of between half a pint and a third of a quart of milk is consumed every day in the year by every man, woman and child in the land. This amounts to from twenty-five to thirty million quarts of milk each day for the country as a whole. Probably as much again goes to the manufacture of butter, cheese, and other milk products.

On the Continent, two or three times as much milk and products derived from milk are consumed as are consumed in the United States, but regardless of the considerable amount of milk that is used daily, comparatively few people here or elsewhere are using milk as an exclusive article of diet for the treatment of abnormal conditions, either functional or organic. The milk industry is of vast importance to the country and community because of the exceptionally valuable nutritive qualities of milk and our absolute dependence upon it as an indispensable food for infants, young children and invalids, and because of the actual therapeutic or curative properties of milk when properly used.

The Food Value of Milk

Indeed, the food value of milk can hardly be overestimated. This may be better visualized by remembering that a quart of milk equals in food value three-quarters of a pound of beefsteak, two pints of oysters, eight eggs, two pounds or chicken, three-fifths of a pound of pork chops, or three pounds of fresh codfish.

When one is securing, then, from four to six quarts of milk daily (the usual amount taken on the full milk diet) one can see that the body is securing a large amount of most valuable and wholesome nourishment. Owing to the selective action of the cells of the body and because every necessary element is furnished to normalize functional processes and make it unnecessary and practically

impossible for the cells to take up an excess of a certain element, all of any particular element that is supplied above the absolute demands of the human economy for wear and tear, maintaining and increasing weight, and repair work is expelled from the body through normal eliminative channels.

This is decidedly opposite to the action of the system when given the usual conventional diet. In such a diet the system is not supplied with every requisite element, but receives some far in excess, with few corrective, normalizing elements. The final result is an exhaustion of certain functions and a deposition of toxic elements in certain tissues.

When we grasp the significance of these facts we can readily understand that it is more milk, rather than more meat, that the people need, and insofar as the production of meat interferes with the production of meat interferes with the production of meat interferes with the production of milk a great evil arises. Milk is an invaluable food, and every means, not excluding the total elimination of meat as food, should be adopted to increase its use. I have doubt that our devotion to the fleshpots is the greatest single factor in the present restricted use of milk, which is the most unfortunate phase of our dietetic habits. In fact we could well dispense with the packers altogether, if such consummation would result in an increased supply and a proper consumption of this most valuable food substance.

How Milk Cures

To answer the question, "How does milk cure?" we need to know only that it furnishes elements necessary to make new blood. Milk is one of the most easily digested and assimilated foods, containing ample amounts of substances required for the growth of tissues and organs and the repair of worn-out cells.

When one is taking the milk diet he does not have to worry about combinations or whether this element or that element is being supplied. Every element is there in the milk in living organic form, and the sick body uses them to the best of its ability – and it is well to say that that ability is constantly increasing as the milk diet is followed day after day and week after week.

Milk is the best food in that most precarious period of life – babyhood; and it is also the best food in that other critical period, whether of the babe or adult – chronic illness. Some have said, "Milk is food for babies, not for adults." This is true, and that is just why we prescribe it for sick people. No sick person is an adult. Let him first restore his enervated, functionless, depleted, emaciated, worn-out old body to normal functioning and normal proportions before he claims maturity, and this is done in the large majority of cases more surely, safely and satisfactorily by taking the milk diet than by any other known method.

What Milk Is

Milk is a watery solution of albumin, milk sugar, and certain salts, holding fat globules in suspension. The protein and the mineral matter are in semi-solution. When taken from the cow milk has a slight alkaline reaction, but this changes rapidly to a very slight acid, due to the rapid development of lactic acid bacilli.

Whole milk should have a specific gravity of from 1.029 to 1.035, pure water being reckoned at 1.000. It should contain not less than 8.5 per cent of solids, apart from fat – and not less than 3.25 per cent of butter-fat.

According to Dr. Henry C. Sherman, professor of Food Chemistry at Columbia University, milk consists of proteins 3.3 per cent, fats 4 per cent, milk sugar 4.8 per cent, citric acid, 0.1 per cent, ash constituents 0.7 per cent, and water 87.1 per cent. The albumin and casein of milk rank at the head of the list among proteins.

No sugar, with the single exception of dextrose (the finished product of carbohydrate digestion), is so easily assimilated as lactose, or milk sugar.

Among the mineral salts of milk we find sulphur, phosphorus, chlorine, sodium, potassium, calcium, magnesium, iron and iodine – all indispensable elements in supplying nutritive material for the brain and nerve cells and essential for building strong bones and perfect teeth.

The iron of milk is very small in amount (only 0.00024 per cent). Yet it is rapidly absorbed and completely utilized. So that,

notwithstanding the small amount of iron taken into the system with milk, the improvement in the iron content of the blood is often more marked and much more rapid than while taking meat and other iron-forming foods.

Time and again an increase of from fifty to seventy per cent in the hemoglobin of the blood in anemic individuals has been observed.

In fact, on the basis of from twelve to fifteen milligrams of iron per day being required to replace the "iron loss" of the system, and on the basis that there are .24 milligrams of iron in each 100 grams of milk, five or six quarts of milk per day will supply the amount of iron needed each day by the human system.

Butter Fat

When a drop of milk is put under the microscope, the fat globules are readily seen floating in the serum, or fluid portion of the milk. These fat globules are among the most finely subdivided or emulsified of all the fat globules to be found in Nature. A drop of milk the size of a pin head may contain 1,500,000 of these tiny droplets – which explains why the fat globule of milk is perhaps the most easily digested and assimilated of all fats.

There is no finer, richer fat in all the world than the butter fat suspended in infinitesimally small globules in the milk. But never, or at least rarely, will the full fat content of milk be digested and absorbed. The unnatural products resulting from the changes in the fat may produce disturbance throughout the digestive tract, and may result in sufficient irritation to produce a diarrhea or nausea and vomiting. For these reasons it is quite frequently necessary to reduce the amount of cream considerably.

Of course, the great bulk of milk is water – to be exact, about eighty-seven per cent. Yet, when considered from the standpoint of its health value, this wealth of water is a distinct asset, especially among a people who rarely drink as much water as they should, and who, as a consequence, suffer from constipation and imperfect elimination of effete body material.

Indeed, were plenty of water to be taken at all times, it would normally be excreted through the kidneys and through the bowels.

The feces would be softened and rendered much more voidable by the solvent and stimulating action of the water. The considerable amount of water secured on the full milk diet is of distinct value in helping absorb and eliminate toxins and acids from the system.

The Calory Value of Milk

The calory, or heat and energy producing effect of milk, varies according to the amount of fat contained in the milk.

Average milk, with four per cent of butter fat, yields about 675 calories per quart, at 314 calories to the pound. Skim milk, while equally good as a tissue builder, quite as rich as is whole milk in vital mineral salts, and equally satisfactory as a healing diet, contains much less of calory value, as only from eighteen to twenty per cent of the calories are furnished by the protein of the skim milk, the remainder by the milk sugar.

However, it must be remembered that the calory is, after all, only a unit of measurement – nothing that contributes to the nutritive value of the food it measures.

The Vitamine Content of Milk

Within the past few years marvelous discoveries connected with the health-giving aspects of milk have been made by Hess, McCollum, and other scientists, as well as by the Children's Bureau of the United States Public Health Service.

Briefly, these authorities have found that many diseases, some of them so grave as to cause even death, as well as serious physical and mental deficiencies, may arise as a result of the lack of protective foods – foods rich in mineral salts and in the vitamines.

"It is recognized," says U.S. Public Health Service Bulletin No. 325, "that although vitamines undoubtedly are widely distributed in food products, they occur for the most part in very minute amounts, and the various foods differ in the proportions which they contain. If the diet is made up principally of foods poor in vitamines, or rendered so by their preparation, an insufficient

amount of these substances would be provided, and abnormal metabolic processes would result."

In this connection it is interesting to note that milk has been found to be among the richest in vitamines of all foods. While there is, as yet, no exact means of measuring actual amount of vitamine substance, it is definitely decided by repeated experiment that milk contains large amounts of the Vitamine A, as it is called. This is the vitamine upon which growth largely depends, and which has so frequently been found missing or deficient in the case of rickety, marasmic babies, stunted children, and backward adults.

The "nerve-feeding" Vitamine B, the lack of which causes paralysis, beri-beri, and various other grave nervous disorders, is also found to be abundant in milk.

The anti-scorbutic factor, the principle that prevents scurvy, is also abundantly present in milk.

It is evident from this that if one were taking the milk diet these grave disorders would never develop. Since the elements are present in milk which would prevent the development of such disorders, they are present in such form and in such amounts as to cure conditions when they develop, it the strict milk diet is taken.

Milk contains also several important ferments which aid in digestion, such as diastase, galactose, etc. These ferments or digestants undoubtedly act as stimulators and regulators of nutrition, and are identical in their function with certain of the digestive enzymes secreted by various organs in the body.

Because of its mineral salt content, milk, especially and exclusive milk diet, markedly increases the alkalinity of the blood. Remember the normal alkaline state is the state of highest health and physiological functioning, while the acid state is the pathological condition.

The contributing cause of many of the most serious of all disorders – such as diabetes, Bright's disease, rheumatism, high blood tension, etc. – is an over-acid state of the system. This condition is rapidly overcome by the alkaline salts of milk, which explains why the exclusive milk diet, or the milk and fruit diet, is so generally effective in these conditions.

Because of the large amount of fluid absorbed when on the absolute milk diet, toxic elements in the tissues are highly diluted. And because of the natural tendency of the blood to maintain a certain degree of concentration, it has a very much more pronounced tendency to absorb deposits in various tissues and structures when on the milk diet.

The Effect Upon Blood and Circulation

One of the most outstanding effects of the full milk diet is the marvelous effect the ingestion of this large amount of fluid has upon the circulation. This is most important, from the standpoint of normal functioning. For many people suffering from chronic diseases are troubled with defective circulation of the blood. Their blood pressure is thirty or forty degrees below or above what it should be. This condition may manifest itself by cold feet, cold hands, constant chilliness, susceptibility to colds, and numerous other symptoms.

These are the cases that respond very rapidly to the effects of the full milk diet. This is due to the improved circulation and to the increased amount of life-giving fluid in the veins and capillaries. Often within a few hours after commencing the diet their pulse rate will be increased when very low. Inside of forty-eight hours the heart beat has frequently gained four or five beats to the minute. The pulse will be full and vigorous and the blood will flow to every cell and tissue in the body with increased force.

The dry, scaly character of the skin will disappear and instead there will be a healthy moistness and glow in its surfaces. The colorless, leathery skin covered with pimples and eruptions becomes rosy and clear, and free from unsightly blemishes.

The prolonged baths taken as part of the treatment, as will be described later, assist in softening up the harsh outer layers of dead skin and facilitating their removal. Perspiration is increased and the pores of the skin are stimulated to throw off dead material that might otherwise accumulate in the deeper tissues of the skin and in the deeper, more vital organs of the body.

Not infrequently when the patients first begin the milk diet they will awaken from sleep completely bathed in perspiration –

sometimes of a most offensive character. This is not due to any weakness or to a thinning of the blood, as some patients fear, and as occurs in the night sweats of the consumptive, but is due to increased activity of the circulation and increased power of the sweat glands to rid the system of poisonous materials. Often the sweat will be found to have a very unpleasant odor, and that of rheumatic patients will not infrequently have a strong odor of urea.

The large accumulations of water materials when the skin is fractioned, as in massage, prove conclusively the health-giving benefit of this treatment. Even the nails share with the skin in the obvious benefits of the milk diet – their rigid roughness giving way to a smooth, normal condition, showing the improvement in the purity of the blood and the increased alkalinity of the body fluids. All this, remember, while the patient may be perfectly quiet in his room or even while lying in bed, such is the deep effect of a full milk diet.

The benefits of this improvement in the circulation must be conceded by every medical man, for there is nothing in their entire armamentarium of drugs, exercise, massage, baths, oxygen inhalation, electric treatment, or blood transfusion can equal the natural physiological increase in blood circulation that is brought about as a result of increasing the amount of circulatory fluid in the veins and arteries of these debilitated patients.

Tooth and Bone Nutrition

The lime, phosphates, fluorin, and other mineral salts also have a very definite constructive value in building tooth and bone cells, as these salts are found in rich profusion in milk and in the most easily assimilable form.

Milk contains practically twenty different chemical elements, which makes it of enormous value as a general building food.

And this applies not along to bone and tooth structure, but also to brain and nerve cells – which can not function without lime and phosphorus – and to various of the ductless glands, which depend upon lime, phosphates, and sodium salts to stimulate their normal functioning.

Also, milk contains leucocyte cells, not unlike the white blood corpuscles of our own blood. There can be little doubt but that these are absorbed into the circulation, to reinforce the white cells already in the blood stream in overcoming disease germs that may have gained entrance through the respiratory passages, or been absorbed from the stomach or bowels into the blood stream.

After the first feeding of milk these cells have been known to increase from five to six times their usual number in a given amount of blood.

Since the various mineral elements, tissue-building elements, and leucocytes are absorbed in considerable numbers, it is easy to account for the rapid repairing of wounds and injuries, when the full milk diet is supplied.

There is no doubt but that the nutrient material in the milk can be absorbed directly into the lacteal vessels of the intestines, from which it can be taken up at once by the blood.

It is a fact that milk is secreted directly from the blood, and that its serum, or fluid portion, is practically identical with blood serum.

The fat droplets of the milk, it is certain, can be absorbed and utilized at once to become a part of the fatty portion of the blood.

The milk sugar (the carbohydrate portion of the milk) can be absorbed and assimilated without undergoing any further process of digestion (after coagulation) – some maintaining that milk can be completely absorbed from the colon, when given as a nutrient enema. Also, there is a small proportion of fibrin, or coagulating element in milk, identical with that found in the blood. This partially explains why one is less liable to sever hemorrhages after a regular, systematic milk diet.

Therefore, it is obvious that no other dietary article so adequately fills the growth and health requirements of the body as does milk, and that no other dietetic régime can compare in simplicity and yet in effectiveness with the full milk diet.

It is highly probably that if the five million American boys and girls whom the Federal Department of Labor reports as suffering

from malnutrition in its various forms could only have the proper amount of milk, *given the proper way*, their malnutritive condition would be a thing of the past, and abounding health and vitality would replace their present lamentable health deficiency.

In fact, so convinced am I of the value of milk, both as a food and as a medicine, that I am willing to go on record as stating my belief that, without a doubt, ninety per cent of all the malnutrition among children everywhere could be cured if two quarts of milk a day were supplied to each child. I heartily agree with Dr. Graham Lusk when he states that no family of five can afford to purchase a pound of meat until it has first bought at least three quarts of milk.

This is a lesson every man, woman and child in this country should take to heart. It would mean an increase of millions of work-hours, and a longer, healthier and happier life for everybody, if they did.

But when these physical abnormalities have developed or begun to develop, in adult or child, feel assured that the diet that would have been effective in preventing illness and in maintaining health will be effective as a curative agent when taken correctly, after proper preparation, and with the proper adjuncts, as will be described in a later chapter.

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