

- 1. THIS MOLASSES WAR —
WHO IS PREVARICATING?**
- 2. BONE MEAL —
NUTRITIONAL SOURCE OF
CALCIUM**

These abridged articles appeared in



Magazine

1133 N. Vermont Ave., Los Angeles 29, Calif.

December 1952, January and March 1953

THIS MOLASSES WAR — Who Is Prevaricating?

by Royal Lee, D.D.S.

President, Lee Foundation for Nutritional Research, Milwaukee, Wisconsin

Since molasses has been brought to the attention of the public by a few nutritionists who recognize its merits, many articles have appeared decrying its food values, trying to insinuate that it is an "impure waste product."

To understand why such opinions could be so well distributed we must look to the psychology of the gentlemen who set the stage for our untimely death by promoting foods that are *not* capable of supporting life, the men who promote the sale of all the death foods that have the essential fractions carefully refined out.

Carbohydrate not essential

What is refined sugar? It is *pure* carbohydrate. Is carbohydrate an essential food, a food component without which we could not live? It certainly is *not*. Steffanson has shown that the Eskimo lives in perfect health without a trace of carbohydrate in his diet. Then how about the minerals and vitamins that are removed from the sugar in refining, but are available in the molasses? Ha, that is something else again. These minerals and vitamins are *absolutely necessary* to life.

So we see, that in ridiculing molasses, somebody has been trying to make us believe that black is white. Somebody has been trying to lull us into thinking that we can live without essential foods. Let us list these essential foods, as far as we can with the limited amount of knowledge we possess at this crude stage of human civilization, and note what a deficiency of each can do to our health and happiness.

Many vitamins

There are vitamins in sugar cane, not found in refined sugar: A fair source of thiamin and riboflavin, a good source of niacin, and a rich source of pantothenic acid. (Merck Research Laboratory); a rich source of the anti-arthritis factor (Wulzen Factor); a good source of vitamin E, since all green plants carry this vitamin; and a rich source of the plant sterols that are a part of the vitamin E complex, which act as precursors of the sex hormones.

Here are the minerals in molasses: Potassium, Sodium, Magnesium, Iron, Phosphorus, Silica, Copper, Manganese, Zinc. (Winton, v. LV. *Structure and Composition of Foods.*)

Protects

The phosphorus in cane juice is in part as phospholipids, those fatty compounds in foods that protect our nerve insulations, whose deficiency is devastating in the degenerative changes that can follow.

The manganese is essential as an enzyme activator; flat feet and weak ligaments may result from a deficiency. We all suffer from some degree of lack, no doubt, of this essential trace mineral.

Lung function

Zinc is necessary as a probable organic precursor of insulin. It, too, is a part of some enzyme (carbonic anhydrase in particular, without which we could not transport carbonic acid in the blood, meaning we cannot maintain lung function without it.) It is quite probable that organic zinc protects us from diabetes.

Silica appears to be essential to youthful tissue elasticity. The older we get the less we keep in our tissues. Certainly, a deficiency will accelerate the changes of age.

Potassium aids

Potassium is the highest in quantity in the mineral list of molasses. Without potassium, our adrenals cannot function. Without potassium, we cannot store sugar in the liver. Without potassium, our autonomic nervous system gets out of gear, we have a reduced and subnormal activity of the vagus system, and a consequent unbalance of our automatic controls that can bring on a host of troubles that are mysterious and unrecognized as being a result of nutritional incompetence. Among these are listed eye weakness, loss of accommodation, nervous instability, rise in blood pressure, rapid heart, slow healing rate, low sugar tolerance, neurasthenia, atonic constipation, reduced activity of liver and pancreas.

Phosphorus in molasses is in organic combination as phospholipids, which are members of the vitamin E complex. These important factors protect our nervous systems, are components of the insulating layers in nerve and brain structures.

They are the parts of the vitamin E complex found of vital importance in treating angina pectoris and the muscular dystrophies that follow nerve degeneration. One such fraction has exactly the effect of nitroglycerin in relieving angina pectoris and spastic heart seizures without the toxic reactions of the drug. A good demonstration of how we are using poisons to treat starvation. It is these phosphorus compounds that are destroyed by metallic poisons (lead and aluminum salts) that can thereby cause paralysis and nerve degeneration. Yes, there are many so-called experts who deny the toxic action of aluminum, but if these same experts admit that alumi-

num is always excreted as phosphate regardless of the form in which it enters the body, how can we reconcile the facts?

Copper in organic form is essential in foods as tyrosinase. There is good evidence to indicate that tyrosinase contributes to the maintenance of hair color. Tyrosinase being an enzyme is destroyed by the cooking of molasses, but the copper still may be in a useful food form, and protect us from anemia. (There are forms of cane molasses made by low temperature process, distributed as a deep freeze product, that may contain enzymes intact).

As to the vitamins in molasses, let us elucidate only on those that are otherwise ignored, the Wulzen Factor and the vitamin E complex. The Wulzen Factor is probably the same thing as described by Dr. Weston A. Price as his Factor "X" which he found only in butter made from cream from cows fed spring grass, and with which he so effectively treated arthritis and dental caries. (See Price's monumental book, *Nutrition and Physical Degeneration*, page 270-273).

To vanishing point

Cooking foods fed to animals seems to be a sure way to give them arthritis and various other diseases common to us ignorant human creatures, who know no better than not only to destroy valuable vitamins by cooking and pasteurizing, but also to permit our basic foods to be refined and devitaminized to the vanishing point.

Dr. Rosalind Wulzen, of Oregon State College, has shown us how guinea pigs fed pasteurized cream, as a fat source, invariably develop arthritis but are quickly cured by raw cream. She found that sugar cane juice was 500 times as high in the special anti-arthritis factor as raw cream. This was a result of testing the

cow feed in detail for the source of the anti-arthritis factor, which was only found in high amounts in the molasses that was supplied as a preservative in silage for the cow.

Palatable source

Dr. Price found that there was no anti-arthritis value in common butter, only in butter from cows getting rich grass in the spring of the year. Since the green plant juices that we might get in ordinary diets are very limited, molasses seems to offer a palatable source of concentrated minerals and vitamins that otherwise we never may have the opportunity to enjoy.

A practical review of the value of animal fats with their content of vitamin A, E and F complexes in the treatment of arthritis, is found in Alexander's book, *Arthritis and Common Sense* (Witkower Press, Hartford 1950).

Vitamin E Complex

Now as to the vitamin E complex. If you wish to study this vitamin in some detail, I suggest you get the 1949 Symposium on Vitamin E in the *Annals of the New York Academy of Science*, Vol. 52, Art. 3, pp. 63-428. It tells how vitamin E is necessary to prevent heart disease, prevent a host of chronic degenerative diseases from creeping paralysis to Dupuytren's Contracture. This latter tends, like many other deficiency diseases, to become a dominant hereditary characteristic, and be fixed into the family traits. A very pleasant thought, but do not laugh it off until you have read about it in Gates' treatise on *Human Genetics*, vol. 2, p. 962-4. The exact mechanism by which these things are brought about is described in detail in *Protomorphology* (1947, Lee & Hanson) available through LET'S LIVE Books

Division, for those who wish to make a hobby of the study of such things as cell physiology.

But no more study, I think you will agree, is necessary to make out a case for molasses as essential food. Essential because if you fail to get your share there most certainly will be a penalty demanded by your body for *your* neglect of its vital needs.

Vital difference

One last reference must be made to the vital difference between refined foods and natural products. In that most valuable book for the physician, *The Vitamins in Medicine* (1947, Bicknell & Prescott, Grune & Stratton; New York), reference is made to tests on human teeth put into refined sugar solutions or white flour and water, where the enamel was corroded in a short time, while little or NO damage was caused by similar preparations of whole grain flour or unrefined sugar. The natural product was not robbed of its minerals; was not capable of absorbing minerals from the ambient media.

The authors quote various occasions where the change from natural foods to "civilized" refined foods had caused devastating changes in a few years in the teeth and health of the victims. (page 688). The value of unpasteurized raw milk is also stressed as a protective factor for teeth and health.

Such books as this are hard to find; there seems to be a malignant influence that profits by our ignorance, and our opportunities to get reliable information are strictly limited. The misstatements of advertising copywriters on "foodless foods", really "death foods", are so well publicized that the truth is strange to us. So your only defense is to use your own native common sense.



BONE MEAL — Nutritional Source of Calcium

by *Royal Lee, D.D.S.*

President, Lee Foundation for Nutritional Research, Milwaukee, Wisconsin

One of the foremost problems in nutrition is calcium and its assimilation. Most of our dental diseases arise as a result of disorders in calcium assimilation, and allergic reactions, nervous conditions, susceptibility to virus infection, and susceptibility to bacterial infection seems to be in more or less degree a consequence of low calcium content of food, and low calcium availability.

Other mineral elements are contributory, in some degree, to poor assimilation of calcium. In animal feeding, the use of alfalfa is indispensable to get normal bone growth. Hogs fed on skim milk and grain feeds will grow only half as fast as others fed the same schedule plus a little alfalfa.

Their development will be hindered by a slow rate of bone growth. Alfalfa contains a good complement of manganese, iron, copper and other trace minerals needed to activate the enzymes that take part in bone development and calcium assimilation.

Discovery

A farmer in Ohio discovered in feeding two lots of cattle — one lot on each side of a highway, the same feeding schedules being used for each lot—that he was losing money on one lot, and making a good profit on the other. On investigation, he found that he was losing money on the lot that were getting soft water from a stream, and making money on the ones that were getting hard water containing a lot of calcium from a deep well.

In general, nobody can operate a cat-

tle business or dairy business very successfully unless they are getting calcium consistently, either by hard water from limestone fed wells or springs, or feeding supplements of oyster shell flour or limestone dust. Texas, Florida, New York and Wisconsin are underlaid almost entirely by limestone deposits, thousands of feet in depth. Dairy farmers have told me that the application of limestone on their pastures was followed by a disappearance of undulant fever and tuberculosis in their herds. Scientific tests at Columbia, Missouri, have shown that not only calcium, but trace minerals such as manganese, cobalt, copper, and iodine were necessary to eliminate undulant fever. It seems that cattle must first be subjected to soil and feed deficiencies before they can become susceptible to this disease.

Normal levels

The reason seems to be that blood levels of calcium bicarbonate must be normal, and these trace minerals must be present to promote phagocytic activity — the activity of the white blood cells that act as “policemen” to pick up invading infectious organisms. Viruses must be “flocculated” by the physiologic effect of cortisone to make the virus susceptible to this operation, it seems. Vitamin P, the flavone group of the vitamin C complex, appears to be the control factor in preparing calcium for phagocyte activation. That may be the reason rheumatic fever is helped by the use of the vitamin P group. (The latest high source of vitamin P has been green buckwheat juice).

Now, the human body cannot make calcium bicarbonate very well from the calcium phosphate of bone. That is why hard water containing calcium bicarbonate is so necessary. That is why calcium gluconate and lactate are so good to combat colds, virus infection, etc., as they form the bicarbonate readily after entering the body. Cold sores and fever blisters are mild virus infections that indicate the lack of blood calcium bicarbonate. Often the use of the right form of calcium is of no avail until its metabolizer, vitamin F, is also taken. This vitamin promotes the conversion of non-diffusible blood calcium to the diffusible form, thereby making it available to cell absorption. Chalky teeth can be converted into hard, translucent, normal teeth — as a rule — by the use of calcium lactate and vitamin F.

Bone meal

But to build the bone that supports the teeth, bone meal is unexcelled. It preferably should be made of veal bone, as young animals have less toxic fluorine in their bones. If prepared without pasteurization heat, the bone cell determinants will still be present, as well as some of the enzymes that are peculiar to raw food. (Recall the way cats lost their teeth from pyorrhea when fed pasteurized milk and raw meat. Free report on request to Lee Foundation for Nutritional Research, 2023 West Wisconsin Avenue, Milwaukee 3, Wisconsin. *Lecture No. 14*). These enzymes and determinants are more important than the calcium, and are no doubt the missing link in this calcium problem. Such a bone meal will often tighten up loose teeth, and will restore health in most cases where the bone has been severely damaged by pyorrhea, and for the patient who has lost his teeth and cannot wear dentures successfully because of receding tissues. Even the mucous mem-

brane becomes tough and resistant to pressure after the use of the raw bone meal. The amino acids of bone protein seem to build up the connective tissue. In fact, they supply the very formula for such tissue, as bone itself is one-third fibrous connective tissue. We never get this kind of tissue in meat, it is too tough to eat — tendons and ligaments.

Furthermore, after cooking the vast majority of its food values are destroyed. Dried and reduced to powder it is easy to ingest, its flavor is neutral, no taste at all if properly made, and supplied from materials kept in deep-freeze temperatures until dehydrated.

Age is no factor

Most of us are inclined to think that tooth loss and denture troubles are inevitable concomitants of the effects of Father Time. Far from it! Look up *Reader's Digest* for September 1952, page 23, and read about the 66-year-old Swedish citizen who won a 1000-mile bicycle race by a 24-hour lead OVER 50 YOUNG ATHLETES, the best in Sweden!

The effects of proper food are so quickly evident that no one need to make mistakes. The effects of bad food may require many years to bring on evident repercussions, often so violent as to be irreparable. Recall the cattle fed a normal diet but lacking vitamin E, at the University of Minnesota? Out of 28, 13 dropped dead from heart failure within three years. (Reported in the *Annals of the New York Academy of Sciences*, 1949, Vol. 52, pp. 256-259.) What was the main item of diet for the old Bicycle Champion of Sweden? Rye bread, but WHOLE RYE, stone ground, vitamin E and all. There is a lot of latitude between winning a 1000-mile bicycle race and dropping dead. Most of us between the limits of this scale do not know which end we may be near. Some of us

are closer to danger than we may think,
according to the statistics of heart failure.

For the vegetarian, the best source of

calcium is raw almonds, and alfalfa tea
is a good source of the bone building
minerals.



NOTE: Lee Foundation for Nutritional Research is a non-profit, public service institution, chartered to investigate and disseminate nutritional information. The attached publication is not literature or labeling for any product, nor shall it be employed as such by anyone. In accordance with the right of freedom of the press guaranteed to the Foundation by the First Amendment of the U. S. Constitution, the attached publication is issued and distributed for informational purposes.

SPECIAL BULLETIN 3-53

LEE FOUNDATION FOR NUTRITIONAL RESEARCH
Milwaukee, Wisconsin 53201