

WHY DENTAL CARIES?

by John Courtney, B.S., I.A.P.M.

Dr. Weston A. Price was the first dentist to publish an article asserting that dental caries was primarily a result of a vitamin and mineral deficiency. This was in 1927. Dr. Price met with such opposition to his contentions that he decided to take an extended trip around the world and compile such a complete record of the damage wrought by civilized man in his commercial distribution of devitalized foods that his critics would be forever silenced. His book entitled, Nutrition and Physical Degeneration, shows beyond any possible doubt the real truth of the matter. He found that in all parts of the globe where the native population had changed from their natural foods to the use of commercial products, there began the infiltration of those dreaded diseases, tuberculosis, pneumonia and influenza, together with a statistical rise in dental pathology that exactly paralleled the increase in the use of those commercial foods. Caries, pyorrhea, deformities of the dental arch, cleft palate and hare lip were all now present, where unknown before. It made no difference whether the change took place in a high valley in the Swiss Alps or in an island of the sea in the eastern or western hemisphere. The identically same results followed the introduction of the commercial foods of civilized man.

Modern teachers in dental colleges like to pretend that, "There is no scientific proof that tooth decay can result from improper diet", (A statement made by Dean Noyes of the Dental College of the University of Oregon at the Northwest Dental Conference, Hood River, OR). AT the same conference, an official from the Department of Agriculture stated, "There is no scientific proof that a poor soil can cause poor health." These are samples of the bending of scientific facts.

The truth about dental caries was well expressed by Bicknell and Prescott in The Vitamins in Medicine, Third Edition, P. 569, under the caption of "Refined Foods". They point out the fact that in the Pacific Islands, a number of occasions are matters of history where tooth decay was practically non-existent until refined foods were introduced. In only five years time the incidence of caries in children which had formerly been almost non-existent became common,

and in adults between forty and fifty years of age, had increased fifty percent. These authors state that when human teeth are incubated with white flour or white sugar and saliva, the enamel is destroyed, while with raw sugar or whole grain flour they are "hardly affected."

They quote the findings of Osburne and Noriskin (J. Dental Res., 16:431), who found that unrefined cereals and sugars have a protective action on tooth enamel. Children eating raw sugar cane, having teeth that were covered with sticky sugar most of the time, were relatively immune to decay. These authors also state that raw milk has a similar protective action on the teeth. They quote Sprawson who found a sudden startling fall in dental caries in a children's institution after a schedule of one pint per day of raw milk was instituted. Other instances of caries differences due to the raw versus pasteurized milk were cited.

These are final tests on human subjects. These results show HOW caries CAN be prevented properly without mass poisoning of water supplies through fluorine.

Since vitamins have a catalytic effect in the assimilation and utilization of minerals, we might then analyze refined sugar and refined flour to see what effect they have on mineral metabolism. Raw sugar cane contains an abundance of potassium as well as other minerals and quite a number of vitamins. It seems to be a "rule of thumb" that without potassium and certain vitamins, mainly those of the vitamin B complex, carbohydrate cannot be digested. When refined sugar, then, is put in the system in order for the body to digest it, it would have to supply the potassium and the vitamins that are necessary for this carbohydrate digestion, thereby depleting the system of these very factors. That is why white sugar is referred to as a "depleting factor", since it "steals" the minerals from the body. Without minerals, it becomes very obvious why teeth will erode and disintegrate when minerals are removed from the body.

In the maintenance of bone and tooth structures, calcium, phosphorus and potassium stand out as minerals that are vital. Potassium being one of the alkaline ash minerals, would tend to protect our teeth from acids of fermentation that are formed by the breakdown of sugar products, left as a residue on the teeth.

Calcium and phosphorus also deserve some attention, since a proper balance between calcium and phosphorus is necessary for maintenance of teeth, bones and in fact, the entire body. Both Doctors Hawkins and Page in their work on the calcium metabolism concluded that a ratio of 4 parts phosphorus to 10 parts calcium in the blood was a "normal" ratio. If this ratio deviates one way or another, dental problems would ensue.

Dr. Hawkins, for example, charted the calcium against the phosphorus and found that in certain relationships, the patient was entirely free from dental caries. When the calcium was deficient or on the low side, according to this ratio, dental caries prevailed and erosion of the teeth was commonplace. On the other hand, where there was a phosphorus deficiency, there was a precipitation of calcium on the teeth as a tartar formation. Where the proper balance was experienced, neither extreme was noticed. Therefore, the dentist can be alerted to deficiency of minerals and upon correcting this, might thereby tend to avoid either problem.

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The formation of tartar, of course, could cause irritation to the gums, leading to periodontal disease. In periodontal disease, irritation and inflammation sets in surrounding the tooth, and any inflammation would have a decalcifying effect on the bone process, thereby loosening the teeth.

All of these factors certainly point to the importance of proper mineral balance in our body. This is maintained by proper dietary habits and the avoidance of mineral-depleting, refined, processed foods.

Another aspect of protection from dental caries is the failure of the individual to produce what might be termed, "immune saliva". For example, E. W. Fish and H. Maclean in their treatise of "Immunity to the Organisms of Dental Caries" (Dent. Cosmos, 76, 837.) pointed out that some human saliva prevents decay and some does not. Dog's saliva, it seems, always prevents decay, whereas monkey's saliva varies, as in man. When Fish placed carious human teeth in a dog's mouth, they were sterile within a few days. The saprophytic organisms which cause decay had been destroyed. The same occurred if a carious tooth was incubated with human saliva from a man with no active caries. However, saliva from a human's mouth with progressive caries did not sterilize the tooth, nor did that from a monkey with caries. There is therefore a quality in immune saliva which protects teeth from the organisms of decay. This immune saliva is more frequent after adolescence and is commoner in men than women. If it is the product of a healthy general metabolism, it would explain why a good diet gives protection against caries in children.

To summarize then, dental caries is due to a deficient diet and a vitamin and mineral imbalance which in turn, by starving the endocrines, renders them unable to secrete sufficient amounts of the germicidal ferments to prevent dental caries and other infectious diseases.

One final point that emphasizes this was demonstrated by Dr. Percy Howe, in his "Letters" taken from the Dental Digest.

Dr. Howe demonstrated that as long as experimental animals were kept on a well balanced diet, he had been unable to cause dental decay or pyorrhea by the feeding or injection of the microorganisms most actively associated with such decay. On the other hand, if the diet was unbalanced, by removing a part of the minimum amount of vitamin C necessary to health, acute pyorrhea, decay of the teeth, malformation of the jaws and derangement of the articulation of the teeth result. If all of the vitamin C is removed, the pulps of the incisors in guinea pigs are destroyed and the dentin dissolved. If the necessary roughage is omitted from the diet, the intestines become unhealthy, which condition is reflected in an unhealthy state of the tissues of the mouth. It is shown that these symptoms are merely oral reflections of conditions extending throughout the body, but which are perhaps less readily visible elsewhere.

Reflecting on some of these details, we are forcibly led to the conclusion that we must concentrate daily on eating as many raw natural foods as possible. By this, we mean foods that are well balanced by coming from mineralized, organic soil. We should strictly avoid refined and processed foods, especially white sugar and white flour products including soft drinks, pastries, ice cream and other foods containing a high content of refined sugar.