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#39 - Look Mom, No Cavities!

Department of Health Education

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Keys to Total Health

PRODUCED BY THE DEPARTMENT OF HEALTH EDUCATION, SCHOOL OF HEALTH

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Look Mom, No Cavities!

Tooth decay is one of the most widespread and costly diseases in twentieth century America.

Tooth decay is one of the most widespread and costly diseases in twentieth century America. The national dental bill exceeds seven billion dollars yearly. This phenomenon could be controlled by adequate dental care, regular checkups and proper diet. Diet is the most important factor, for there is a relationship between oral health and nutrition. Good nutrition is important for developing and maintaining healthy teeth and gums and good teeth are needed to consume an adequate diet.

A tooth is a living organ. Nutrition plays an important part in tooth development prior to birth. The pregnant mother needs generous supplies of calcium, protein, iron and vitamins A, C and D.

The tooth is composed of four separate tissues. Enamel, the outer layer; dentin, the major portion of the core of the hard part of the tooth; cementum, which holds the tooth to the surrounding tissues; and the pulp, the soft part of the tooth's center. Enamel is composed mainly of calcium, phosphorus, magnesium and carbonate. It is very hard. Dentin is mainly calcium and phosphorus. It is very sensitive.

Cementum is calcified tissue similar in composition to dentin and bone. The pulp is a vital tissue containing nerves, lymph, blood vessels and fibrous tissues. It extends four-fifths the length of the tooth. Peridontal tissues make up the gums and tissues which hold the teeth in place.

Nutrition for Teeth

Teeth need good nourishment. Vitamin D aids in absorption and utilization of calcium, affecting the deposition of calcium and phosphorus in teeth. Vitamins A and C affect the functional activities of the formative cells. Vitamin C helps the calcification of dentin (the inner tooth

structure) and Vitamin A the calcification and development of enamel (the outer coat of the tooth). In animal studies, cleft palate resulted from vitamin E, A, and a number of B vitamins and mineral deficiencies.

Results of Poor Teeth

Poor teeth can result in speech defects, poor appearance and thus personality problems. Healthy teeth are important for both physiological and psychological reasons.

A Mouthful of Tools

You have been supplied with a mouthful of magnificent tools. These tools can properly handle every type of food. You have eight incisors to cut your food with. Four cuspids tear very well. The eight bicuspid have been provided for crushing different kinds of food. And think of it--you have twelve molars to grind your food with. Normal teeth should last a lifetime. Yet more than twenty million Americans have lost all their teeth. Twenty percent have dentures by age forty-five. Half of those who reach age sixty-five have no natural teeth left.

False Teeth

False teeth are only thirty-five percent efficient. With dentures an individual cannot handle as well tough, fibrous foods, but must rely on a softer, more refined diet. This contributes to other problems.

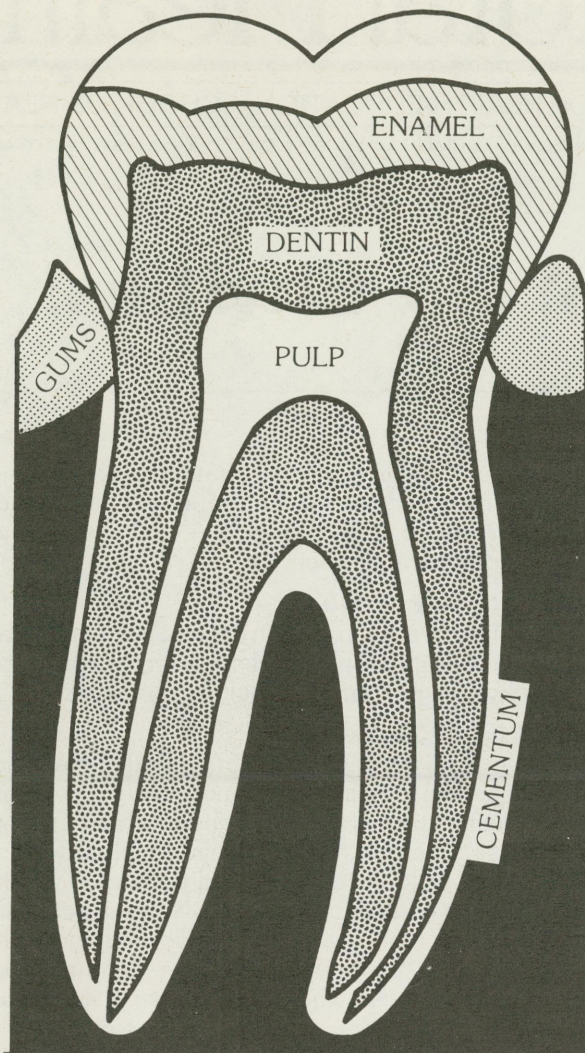
It is possible to avoid cavities altogether. One person in every twenty has no decayed teeth even here in America. And there are areas of the world where tooth decay is almost unknown, even though the people have never seen a tooth brush or a dentist.

Tooth Decay Begins in Childhood

Tooth decay in America begins early in childhood. By age two, half the tots in the United States have decayed teeth.

The national dental bill exceeds seven billion dollars yearly!

CROSS-SECTION OF TOOTH



**A tooth is a
living organ.**

Yet some parents aren't concerned about decayed baby teeth. They know the teeth will come out anyway. But a premature loss of a baby tooth can cause additional losses and soon serious problems can develop. If permanent teeth do not come in correctly, the child may be doomed to a life of unnecessary suffering.

Teen-Age Years

Tooth decay accelerates during teen-age years. The average sixteen-year old displays seven decayed teeth. By age twenty-one the average person has lost five permanent teeth.

Causes of Decay

Tooth decay starts small. If caught in time, the tooth can be saved. But often a faulty diet and neglect go hand in hand to produce a mouthful of tragedies. To prevent this from occurring, see the dentist regularly.

In order for decay to occur, there must be suitable conditions for decay. These include: bacteria in the mouth, the right kind of foods for the bacteria and a susceptibility of the individual. The bacterial products attack the teeth. Cro-Magnon man depicted his dental problems with wall paintings and Aristotle noted that sweet figs adhered to teeth causing decay. A seventeenth century English writer noted: "overuse of most confections and sugar plummess . . . rotteth the teeth and maketh them look black." The basic causes of tooth decay have been known for a long time.

**You have been supplied
with a mouthful of
magnificent tools.**

The Real Culprit

The real culprit is refined sugar. Sugar is found in many things, but especially in sweet, rich desserts. We have associated sweets with the happy moments of life: a birthday cake, a soda for two, a wedding cake or just a candy bar for being good. But innocent looking cookies, donuts and cakes are really villains. Dental health problems multiply when sugar is added to the diet.

Sweets should come from natural sources, such as sweet, ripe fruit. In the beginning of the human race, God said: "Of every tree of the garden thou mayest freely eat." (Genesis 2:16)

How About Honey?

Many people ask about honey as a food and as a source of sugar. Scripture mentions honey as food more than a dozen times. No less than 18 times the Bible describes the ideal land as the "land that flows with milk and honey." One example is Joshua 5:6. However, Scripture tells us: "Use honey sparingly." "Hast thou found honey? eat so much as is sufficient for thee." (Proverbs 25:16) . . . "and carry down the man a present, a little balm, and a little honey . . ." (Genesis 43:11) Concentrated sugars need to be used very sparingly in this sugar-oriented society.

In hamsters, sugar intake and tooth decay are directly associated. When a mother hamster is given a good diet during pregnancy and while she is nursing her offspring, the offspring will have good teeth. If the offspring are continued

More than 20 million Americans have lost all their teeth

on the same good diet, dental cavities will be rare. But if the offspring are placed on a sugar diet after weaning they will have ten times more cavities. If the nursing mother is on a sugar diet, the offspring will have twenty times more cavities. And if the mother is also given sugar during her pregnancy, the offspring will have fifty times more tooth decay.

At Loma Linda University the experiment with hamsters has been carried a step further. Teeth of hamsters on a good diet were examined and fluid movement was observed in little canals in the dentin. When the hamsters were given sugar these little canals were clogged, inhibiting the fluid movement of the teeth, thus leaving the teeth more susceptible to tooth decay.

Hidden Sugars

Most of the sugar we eat is hidden in our foods--three spoons in a serving of canned fruit, ten to fourteen in a piece of cake, ten in a piece of fruit pie, eight in a soft drink, seventeen in a malted milk, five or six in a candy bar, one in a stick of gum, five in a scoop of ice cream, three in a tablespoon of jelly and six in a glazed donut. Soda pop is a double hazard, not only because of the sugar it contains, but also because of the acid which attacks the enamel on the teeth. Fresh fruit would be a much better sweet.

Eating Between Meals

Eating between meals is another major cause of tooth decay. In studies involving preschool children, the total number of cavities each child experienced was directly related to the number of snacks the child ate. Half of the children who had no between meal snacks had no decayed teeth and the average for this group was only 3.3. With just one snack, the rate increased to 4.8; a second snack meant 5.7 decayed teeth; three snacks, 8.5; and children who were allowed four or more snacks daily had a whopping 9.8 decay rate. Eating regularly was encouraged by Solomon when he stated "Blessed art thou, O land, when thy king is the son of nobles, and thy princes eat in due season, for strength, and not for drunkenness!" (Ecclesiastes 10:17)

Periodontal Disease

More teeth, after age thirty-five, are lost to periodontal disease (pyorrhea) than to tooth decay. Plaque (bacterial masses) build up on the tooth surfaces next to the gums. As

the gums recede, the teeth are loosened and finally lost. Periodontal disease is largely the result of improper oral hygiene and is preventable with proper care.

Natural Tooth Brushes

Using a soft bristle, brush your teeth from the gum toward the tooth. Flossing is a preferred method of removing food particles from between the teeth. Most Americans think they are too busy to give their teeth the time required for adequate tooth care.

Some foods serve as natural toothbrushes, such as oranges, apples, raw carrots and celery. From a study done in Norway we are reminded of the importance of diet in regard to tooth decay. Before the war Norwegians were eating refined cereals and lots of sugar. During the war people were forced to eat whole grains. Sugar was difficult to obtain, so sugar consumption dropped dramatically. So did tooth decay, to one-fourth the previous rate! By cutting sugar consumption fifty percent, cavities were reduced seventy-five percent. After the war sugar consumption went back up (and so did tooth decay).

Preventing Decay

In Norway only eighty pounds of sugar is consumed per year per person. But in the United States we eat nearly one-hundred thirty pounds annually or thirty-three teaspoons of sugar each day.

Eating a more natural diet, avoiding those empty calorie foods, and concentrating on the unrefined foods, would certainly be a beneficial factor in preventing tooth decay.

Eating between meals is another major cause of tooth decay.

In the United States we eat nearly 130 pounds of sugar per person annually.

LOOK MOM, NO CAVITIES!

1. What is the most important factor in controlling tooth decay? _____

2. What vitamins and minerals are necessary in the diet for good health? _____

3. What are the four different tissues which compose the teeth? _____

4. How many different kinds of tools (teeth) do you have in your mouth and what are they used for?

1. _____ 2. _____

3. _____ 4. _____

5. How prevalent is tooth decay in America? Why? _____

6. Explain how tooth decay is produced in the mouth. _____

7. What effect does sugar have on tooth decay? _____

8. What effect does eating between meals have on tooth decay? _____

9. How can you promote good teeth and good health? _____

Name _____

Address _____

City _____

Phone _____