

DENTISTRY

Gum Reduces Decay

Chewing special nitrofuran gum for 10 minutes after each meal reduces caries. It is sugarless, but flavored with peppermint. Not yet on market.

► CHEWING GUM for 10 minutes immediately after each meal will substantially reduce tooth decay if the chewing gum contains a chemical called nitrofuran.

This special nitrofuran chewing gum is credited with preventing new decay in 60% of those using it in preliminary experiments. These are reported in the *JOURNAL OF THE AMERICAN DENTAL ASSOCIATION* (Aug.) by Drs. Samuel Dreizen and Tom D. Spies of Northwestern University and Hillman Hospital, Birmingham, Ala.

The number of patients in the experiment is so small that the findings must be considered preliminary, Drs. Dreizen and Spies state.

The 30 patients who chewed the special gum for the year of the experiment had an average of 0.8 new cavities each. Another 25 patients chewed gum composed of the same chemicals but lacking the nitrofuran. The average of new cavities in this group for the year was three. A third group of 25 did not chew any gum routinely and did not get the special gum. In this group new cavities averaged 3.8 per person.

The 80 persons who volunteered for the experiment were all between the ages of six and 38 and all had signs of active tooth decay at the start of the experiment. No attempt was made to change the diet

or mouth hygiene and toothbrushing habits of any of them during the period of the experiment.

The experimental chewing gums were flavored with peppermint but contained no sugar. They are not yet on the market.

Nitrofuran, the potential anti-tooth decay ingredient, has been used chiefly as an anti-germ chemical to prevent infections in wounds. It acts by interfering with the ability of susceptible germs to utilize some of the B group of vitamins, notably thiamin and nicotinic acid. These two vitamins are essential for the maximum growth of *Lactobacillus acidophilus*, the microorganism most commonly associated with the start of tooth decay in humans. The two vitamins are also involved in the bacterial degradation of sugar to acids capable of dissolving tooth structure.

Laboratory tests showed that the yellow crystalline nitrofuran known by the trade name of Furadroxyl was most effective in checking decay and that it was non-irritating and not toxic so it could safely be used. It was put into chewing gum for use after meals because recent evidence shows that tooth decay is not a continuous process but goes on most actively during the half hour after eating sugars and fermentable starches.

Science News Letter, August 11, 1951

PUBLIC HEALTH

Summer Sneeze Season

► THE SUMMER sneeze season is on for the millions of persons in the United States who suffer from hay fever due to ragweed pollens. In the old days, hay-feverites who could fled to ragweed-free regions in the north and stayed there till the season was over. The others suffered at home. Now they have three modern scientific aids to help them comfortably through the hay fever season. These are sprays, "shots" and drugs.

The sprays are for killing the ragweed. Many communities conduct ragweed control campaigns every spring and summer.

Sprays of a different kind may also be used by the hay fever sufferer to clear his stuffy nose, but most hay fever specialists in the medical profession agree that best treatment consists of immunizing "shots" plus antihistamine drugs.

Experienced hay-feverites know that the "shots" are best given in the spring, so that enough tolerance can be built up to

withstand the pollen blowing about at this time of the year. But the "shots" help even when started during the hay fever season.

Hay fever sufferers should see a doctor both to get this treatment and to find out which antihistamine will give the most relief and how much to take. While some of these drugs can be bought at the drug store without a prescription, it is wiser and safer to find out from your doctor which one to get and how much to take. Overdosing with them, which may tempt a desperate hay-feverite, is dangerous for anyone.

The hay-feverite must guard against a special danger from them. The drugs do not keep the pollen from entering the nose, though they relieve the nasal symptoms. If the patient is not getting immunizing treatment, the "shock" organ affected by the pollens may change from the nose to lower in the breathing tract and cause asthma.

Hay-feverites are usually advised to keep away from drafts and breezes that stir up dust and pollen and to avoid chilling. Air conditioning which filters out pollen and dust is helpful, but if it cools the air too much, it may make the hay-feverite more miserable. His ability to react to the chilling process is altered and a sudden drop in temperature may cause abnormal swelling of tissues in the nose with consequent stuffiness and sneezing.

Science News Letter, August 11, 1951

MEDICINE

Spinal Curvature Worst Polio Aftermath

► WORST AFTER-MATH of polio is spinal curvature, medically termed scoliosis, Dr. John R. Cobb of the Hospital for Special Surgery in New York declares.

A shrivelled, useless arm or leg usually seems to the layman to be the worst, most crippling after-effect of the disease. These can be extremely disabling and difficult to treat. But, says Dr. Cobb, they do not endanger the life of the patient.

"Extensive trunk involvement with resulting scoliosis may, however, he says, 'not only be extremely disabling with very severe deformity, but may seriously impair the patient's health.'"

Dr. Cobb will report on 165 cases with scoliosis following infantile paralysis at the Second International Conference on Poliomyelitis in Copenhagen, Denmark, in September.

Science News Letter, August 11, 1951

ENTOMOLOGY

Mosquito Fighting Needed In Midwest Flood Areas

► RESIDENTS of the Midwest's flooded areas can expect to battle mosquito hordes whose ranks are swelled at regularly spaced intervals for some time to come. The peaks, or waves, of mosquitoes will be about one week apart.

There may be 200 times as many of the pests as in the pre-flood period. Regular swellings of the mosquito's ranks by new generations apparently are reflections of the main peak occurring soon after the flood waters recede, concludes Dr. Burton B. Hodgden, entomologist with the Kansas State Board of Health. His findings are based on a study of the number of mosquitoes trapped after a relatively small flood at Great Bend, Kans., last year.

Two weeks after the flood, the trap catches increased sharply, he reports. City-wide spraying with DDT was effective in controlling the pests, but it had to be repeated regularly to keep the mosquito numbers down. Different species of mosquitoes trapped jumped from a pre-flood four to 12 at the height of the post-flood outbreak.

Science News Letter, August 11, 1951