

DENTISTRY

More Cavities for Well-Fed

UNDERNOURISHED PERSONS usually have better teeth than well-fed happy Americans.

A relationship has been found between a low intake of calories, or undernourishment, and few, if any, cavities in teeth. This does not mean that starving will improve your teeth, Dr. A. L. Russell, chief, laboratory of epidemiology and biometry at the National Institute of Dental Research, Bethesda, Md., reported.

However, the undernourishment and healthy teeth relationship has been found among many groups of peoples. It exists among primitive groups in Alaska and has been found recently among the people of Ethiopia. A group of U. S. researchers from the Interdepartmental Committee on Nutrition for National Defense found this relationship there when they visited that African country to study the nutritional status of its citizens.

Ethiopians lack adequate supplies of protein, and vitamins C and A. Although their teeth are healthy, they are subject to gum diseases. The most prevalent is gingivitis,

inflammation of the gums and tongue, due to vitamin deficiency, Dr. Russell reported at the conclusion of a colored film made during the team's tour of the country.

There is an abundance of fluorine in the water supplies of Ethiopia, but this alone would not account for the healthy teeth, he said. The extremely low intake of sugar in the average diet of the Ethiopian might account for the lack of cavities, but there has been no definite proof of any specific cause.

The film depicted Ethiopians obtaining salt from sea water. Health experts in that country are now considering methods by which this salt can be iodized, as goiter is a common African problem.

The investigating team found very little anemia, lack of iron in the blood. In addition, Ethiopians have low cholesterol levels, now linked with a heart disease, and few exhibited high blood pressure. The team emphasized that the average adult Ethiopian was somewhat underweight. They also pointed out the average male is a hard working manual laborer.

Science News Letter, June 20, 1959

AGRICULTURE

Aids Against Fire Ants

BETTER AND CHEAPER weapons against the imported fire ant are coming to the farmer's aid

U.S. Department of Agriculture researchers already have reduced the amount of heptachlor insecticide used per acre from two pounds to one and one-quarter pounds. Tests in Arkansas, where the reduced rate is being used, show it is effective in controlling the fire ant, Leo Iverson of the USDA's plant pest control division told SCIENCE SERVICE.

Concerning the controversial question of just how harmful the insecticide is to wildlife, Mr. Iverson pointed out that wherever the USDA's recommended procedure was followed, no harm resulted. Under difficult conditions or where natural forces interfered—as in the case of unexpected rains falling on dried rice paddies that had been treated—some wildlife has been killed.

Considering the large acreage treated so far, slightly more than 1,000,000 acres in a nine-state area, very little land has been adversely affected, Mr. Iverson said.

The main advantage to using the reduced rate, he explained, will be an economic one. It will be possible to treat land invaded by the fire ant at reduced costs. The current cost is between three and four dollars an acre.

Other developments in the war on the fire ant include attempts to water-proofing heptachlor granules. If scientists are successful in doing this, it will be possible to apply the insecticide early in the day. Now workers must wait until the dew is gone, thus limiting themselves to a two- to three-hour work day since later in the day winds are too strong. To be effective, insecticides must reach the ground. Moisture keeps them on the plants.

Vegetable oils—corn and peanut—are also being tested as baits that would permit still lower dosages of insecticide.

Recent reports on the invading army of fire ants indicate they have spread to several new counties in Mississippi, Louisiana and Florida.

Science News Letter, June 20, 1959

BIOCHEMISTRY

Obese Retain Steroids

FAT ANIMALS store a lot more of their steroid hormones than normal animals.

Since testosterone and progesterone, two of many steroid hormones, are used to treat various diseases and abnormalities, this should be considered in administering steroids.

Scientists gave obese mice testosterone or progesterone tagged with carbon-14 and later observed how much steroid was stored. A large amount of excess fat favors the retention of injected steroids, three scientists report in *Science* (June 5).

It apparently does not matter whether

the animal has "regulatory" or "metabolic" obesity. Although the two types of fat mice differ in enzyme reactivity, and in the way they manufacture liquids and cholesterol as well as in their feeding patterns, both retained steroids to the same degree.

Nervous centers regulating food intake are responsible for regulatory obesity, while the increased food intake in metabolic obesity is a result of metabolic disorders in carbohydrate and fat metabolism.

Thirty-two mice, including males and females, were examined in this study of obesity reported by Claire Zomzely, Robert Asti and Jean Mayer at the department of nutrition, Harvard School of Public Health, Boston, Mass.

Science News Letter, June 20, 1959

SCIENCE NEWS LETTER

VOL. 75 JUNE 20, 1959 NO. 25

Edited by WATSON DAVIS

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., North 7-2255. Cable Address: SCIENSERV.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; ten or more copies in one package to one address, 7½ cents per copy per week; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

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Printed in U.S.A. Second class postage paid at Washington, D. C. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index. Member Audit Bureau of Circulation.



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