

DENTISTRY

Water Fluoridation

National Research Council joins dental and health authorities in favoring fluoridation of public water supplies. Proper control necessary.

► ONE OF the top scientific organizations of the country, the National Research Council, now joins forces with dental and health authorities in favoring fluoridation of public water supplies to reduce tooth decay.

"Properly controlled, the addition of fluorides to drinking water which lacks these chemicals appears to be both safe and effective," states a report from the NRC.

Hailed by some as reducing dental decay by two thirds, and opposed by others as of questionable value and possibly dangerous, fluoridation has been the subject of controversies in many cities throughout the country. Last spring the NRC appointed a committee to study the evidence on both sides and give an impartial answer.

While endorsing fluoridation, the committee cautions that its safety depends on proper controls and its effectiveness on proper selection of water supplies for treatment. Among the points emphasized are these:

Fluoridation should be considered by any community which includes a child population of sufficient size, and which obtains its water supply from sources which are free from or extremely low in fluorides.

The actual reduction in dental caries will vary according to local conditions. The widely quoted figure of 65% is a prediction applying only to communities whose water contains no natural fluorides at all. Benefits in many cases would be much less.

Protection is gained chiefly by drinking fluoride-containing water while the permanent teeth are being formed, or up to about 12 years of age. However, this protection lasts to some extent into adult life.

There is no evidence that fluorides are harmful in the very small amounts (about one part in a million) needed to reduce caries. Probably 5,000,000 Americans drink water with this much or more every day. However, it should be undertaken only under expert dental and engineering supervision by the state board of health, with constant chemical control. Less fluoride should be added in warm climates where more water is consumed.

Fluoridation is only a partial caries control procedure and does not eliminate the need for other dental health measures.

About one half of the population of this country is rural and does not use public water supplies. Other provisions for preventing dental caries in this fraction of the population should be continued and developed.

Chairman of the committee is Dr. Kenneth F. Maxcy, The Johns Hopkins University School of Hygiene and Public Health, Baltimore, Md. The membership includes Dr. J. L. T. Appleton, School of Dentistry, University of Pennsylvania, Philadelphia; Dr. Basil G. Bibby, director, Eastman Dental Dispensary, Rochester, N. Y.; Dr. H. Trendley Dean, director, National Institute of Dental Research, U. S. Public Health Service, Bethesda, Md.; Dr. A. McGehee Harvey, The Johns Hopkins University; Dr. Francis F. Heyroth, Kettering Laboratory, University of Cincinnati College of Medicine, Ohio; Dr. A. LeRoy Johnson, Great Barrington, Mass.; former head of the Harvard School of Dental Medicine, and dental consultant, National Research Council. Prof. Harold A. Whittaker, University of Minnesota School of Public Health, Minneapolis; and Dr. Abel Wolman, The Johns Hopkins University.

Science News Letter, December 8, 1951

ENGINEERING

Gas Turbine Engines Ideal For Gas Pipeline Pumping

► GAS TURBINE engines give promise of providing ideal power for use in long, large cross-country pipelines carrying natural gas from gas fields to consumers, the American Society of Mechanical Engineers meeting in Atlantic City was told.

One pumping station so powered is already in use and has completed a two-year test, T. J. Putz, Westinghouse Electric Corporation, Lester, Pa., reported. It is at Wilmar, Ark. It is the first such installation in the world, he said, and the first industrial gas turbine in the United States to operate on natural gas.

Its use will effect a saving in the cost of boosting the flow of gas through pipelines, particularly in the big pipelines which are 20 inches or over in diameter.

Gas turbine engines will use natural gas from the line being pumped, as do gas-fired reciprocating engines now employed, but are more efficient, he indicated, and require a lower capital investment.

The experience gained from the Arkansas installation "has proven this type of gas turbine is ideal for booster power," he declared. "The simplicity and small size allows for a simple low cost station, and it can readily be moved to various locations. It can be shut down for extended periods without the expense of providing special

protection and can be later restarted in an exceedingly short period of time without difficulty."

Based on experience gained with this Arkansas 1800-horsepower, single-shaft unit, Westinghouse has designed and is building a 5000-horsepower dual-shaft gas turbine with regenerator.

Science News Letter, December 8, 1951

NUTRITION

Add Kale to Your Winter Vegetables

► IF YOU are looking for a different vegetable but one which carries a good share of nourishing value, try kale. It is a good bet for winter menus, since it comes on the market at the season when other green leafy vegetables are scarce.

Studies of the nourishing value of this green, and of appetizing ways of cooking it, have recently been made at the Connecticut Experiment Station at Storrs, Conn. Kale rates high as a source of vitamin A and of two essential minerals, calcium, or lime, and iron. But the Connecticut scientists give it a special boost as an inexpensive source of vitamin C.

This anti-scurvy vitamin is the one found abundantly in oranges and other citrus fruits and in tomatoes and raw cabbage as well as in other fruits and vegetables. In winter, diets of northern families are especially likely to run low on this vitamin, so they are advised to take advantage of the good supply furnished by kale.

Small leaves of kale are even richer in vitamin C than the large leaves, the Connecticut scientists found. They suggest stripping the leaves from their tough midribs and then tearing or cutting them in inch-size pieces for cooking.

Further cooking directions to make kale appetizing and conserve its vitamin C are as follows: Boil nine minutes in enough water to come half-way to the top of the kale. If the kale has been tenderized in the field by heavy frost, it is better when boiled only six minutes. These best cooking times were learned by taste tests made by 50 college students and teachers.

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