MEDICINE

Butter to Spare Arteries

Treating butter and spreads made from hydrogenated animal fats with special vegetable oils is suggested as method of reducing cholesterol in blood.

➤ FORTIFYING BUTTER and other spreads for bread with special vegetable oils to fight artery trouble and consequent heart disease was discussed at meetings of the Federation of American Societies for Experimental Biology in Atlantic City, N. J. (See p. 259.)

Butter to which a special soy oil was added lowered blood cholesterol of humans fed this three times a day with an otherwise normal diet, Drs. D. W. Peterson, C. W. Nichols Jr., N. F. Peek and I. L. Chaikoff of the University of California at Davis and Berkeley, Calif., reported.

The persons in this diet experiment ate half an ounce of butter with their meals. At the end of one week on ordinary butter, the cholesterol in their blood amounted to 218. Then they ate with each meal half an ounce of butter of which about one-seventh of its weight was soy sterols. After one week of this, the blood cholesterol was down to 194. During the third week, they ate ordinary butter again and the blood cholesterol went to 209.

Experiments with rats also show a difference in blood cholesterol related to the type of fat eaten. These experiments were reported by Drs. Lilla Aftergood, Roslyn B. Alfin-Slater and Harry J. Deuel Jr. of the University of Southern California, Los Angeles.

Animals on a diet containing lard consistently had more cholesterol in their blood and their livers than animals on a diet containing an equivalent amount of cottonseed oil. The differences became more pronounced as the animals continued on the two diets.

A sex difference was also found. Females had more cholesterol in their blood and less in their livers on both diets.

Some of the causes for the accumulation of cholesterol in the liver when lard is the source of fat in the diet, the scientists suggested, are the greater stability of the more saturated fatty acids of cholesterol and the inadequate amount of other fatty chemicals, called phospholipids, which are probably necessary for proper transport of cholesterol.

Cholesterol in the blood increased in monkeys when they were changed from a diet with corn oil as the fat to one with a hardened, or hydrogenated, vegetable oil, Drs. O. W. Portman, F. J. Stare and D. Bruno of Harvard School of Public Health, Boston, reported.

They also found that the monkeys had more or less cholesterol in their blood according to whether they were fed high or low fat diets.

Mild kidney damage may be a possible cause of fatty deposits in the heart's arteries. Evidence for this from studies of animals was reported by Dr. Robert W. Wissler and William L. Bradford, Robert F. Allen and Richard F. Moy of the University of Chicago.

Human patients suffering mild kidney damage, the scientists believe on the basis of their studies, need a different dietary approach in cases of hardening of the arteries and coronary heart disease than the patients who do not suffer from kidney damage.

Science News Letter, April 28, 1956

MEDICINE

Polio Methods Help Save Head Injured

➤ EXPERIENCE in treating polio patients with the serious, bulbar form of the disease has led to a way of saving some patients with very severe head injuries, Dr. Ernest W. Mack of Reno, Nev., reported at a meeting in Honolulu of the Harvey Cushing Society, America's largest neurological society.

The treatment Dr. Mack borrowed from polio treatment is tracheotomy, in which an opening is cut through the neck into the windpipe. A tube is then inserted into the windpipe. Object of the operation, for both bulbar polio patients and for those with head injuries, is to provide an airway so the patient can breathe. In both, damage to a certain part of the brain can interfere with breathing.

For the head-injured patients, Dr. Mack said, the "essence" of the treatment is to perform the tracheotomy operation immediately upon diagnosis without waiting for signs of oxygen lack to develop, as has often been done in the past.

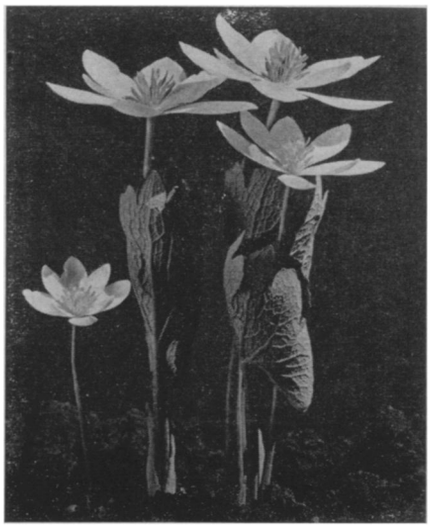
The patients he treated had all had very severe head injuries, although not all had open wounds. All showed signs of severe brain damage, some so severe that they were not expected to recover.

Some of the patients, he reported, "have made rather remarkable recoveries and have returned to gainful occupation."

G-suits such as flyers wear for protection against too great gravity pull are being adapted to help patients undergoing operations on the spinal cord, Drs. W. James Gardner and Donald F. Dohn of Cleveland reported.

The simplified G-suit they use helps prevent too great a drop in blood pressure when such operations are done with the patient sitting up.

Science News Letter, April 28, 1956



BLOODROOT FAMILY—The white flowers of this member of the poppy family can be seen about this time of year from Nova Scotia south to Florida and Alabama, and west to Manitoba, Nebraska and Arkansas. Cy Coleman of Detroit, Mich., took this picture, awarded honorable mention in the plant section of the Chicago International Nature Photo Exhibition.

CHEMISTRY

Year-Around Mushrooms Grown on Waste Sawdust

➤ MUSHROOMS grown on the waste sawdust of pine, oak, gum and magnolia trees may soon be available to American gourmets throughout the year.

Home-grown mushrooms nurtured in sawdust were shown to the American Chemical Society meeting in Dallas, Tex., by Dr. S. S. Block of the University of Florida, who developed them. Growing mushrooms on waste wood products is an adaptation of an ancient Japanese practice, Dr. Block explained.

The Japanese used to inject mushroom fungus into a hole punched into a forest log, plug up the hole and in a year and a half, mushrooms would appear.

The Florida scientist and his co-worker, George Tsao, use a ton of ordinary sawdust, with oatmeal mixed in and, in two weeks, grow 500 pounds of fresh mushrooms.

Dr. Block said his sawdust-grown fungus food is important because the mushrooms produced in his experiments can be raised at ordinary room temperatures. This could mean the elimination of seasonal mushroom growing and the world-wide mushrooming of the mushroom, whose commercial growth now is restricted to cooler regions.

It could also mean a use for the more than 75,000,000 tons of sawdust now annually classed as waste.

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