

MEDICINE

Ice Pack Relieves "Bends"

► A NEW TREATMENT for the "bends" is packing in ice up to the hips.

The first patient was a 32-year-old workman in Toronto, Ontario, Canada, who had excruciating pain in his lower limbs, accompanied by swelling in the knee joints and leg muscles. Even strong opiates could not relieve his suffering.

Then Dr. Edward H. Simmons, a Toronto orthopedic surgeon, used the ice treatment. In 45 minutes the worst of the pain was gone, and after 12 hours in the cold pack, the young man asked to go home.

Describing the case to the American Academy of Orthopedic Surgeons meeting at Miami Beach, Fla., Dr. Simmons said the patient had some joint pain for two weeks following the ice treatment but no severe disability as often happens with the bends or caisson disease.

The usual treatment for this decompression disease, which strikes construction workers and others exposed to sudden reduction of pressure from the atmosphere, is gradual lowering and then increasing of air pressure. But Dr. Simmons said he had

treated several other acute cases where repressurization failed.

"One of these was a diver who had to be flown from the Georgian Bay area at tree-top altitudes," the surgeon said.

His temperature theory of treatment came from talking to many patients with caisson disease, named for the watertight boxes or chambers used for work under water. These construction workers said they were exposed to more cold atmosphere on certain days than on others. He also noticed that more cases of bends occurred in the hot summer weather when the men would be coming out into a warmer atmosphere outside.

What causes the illness is the formation of bubbles of nitrogen in the tissues and blood stream. Dr. Simmons proceeded on the theory that the bubbles will vary according to the temperature and that the metabolism of the patient can be lowered through the ice treatment.

Airplane pilots who fly above 25,000 feet in open planes, and deep-sea divers as well as sewer construction workers may get the bends.

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MEDICINE

No Malformation From Flu

► NO RELATIONSHIP between influenza infection and malformed babies, prematurity or stillborn infants was found in a study released in Public Health Reports, 78:1, 1963. The study was done by the New York City Department of Health.

Deaths of pregnant women who had Asian flu in the first of six outbreaks of the disease in New York City (1957-1961) were nine times higher than deaths of nonpregnant women, however.

This would justify placing expectant mothers in the high-risk group, which the U. S. Public Health Service indicated should be among the first to get vaccine. But more study will have to be done if findings of the New York group of researchers is to be explained.

For example, in later exposures during the succeeding outbreaks of influenza, pregnant women showed greater resistance to death than nonpregnant women. The researchers suggest that this may be due to development of a protective factor that is not decreased in pregnancy.

In view of these observations, they said, it may be "appropriate to review our thinking with regard to the use of influenza vaccine for this so-called high-risk group." Immunization might be of value in protecting pregnant women if administered before the first appearance of a new influenza strain in a given geographic area. But a newly introduced virus would require different immunization.

The researchers also said that consideration should be given to the lack of knowl-

edge concerning the harmful effect of sensitization of human mothers or fetus to egg products contained in the vaccine.

Drs. Daniel Widelock and Lajos Csizmas, with Miss Sarah Klein, all of the New York City Department of Health, reported the study, which was aided by a grant from the Public Health Service.

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BIOCHEMISTRY

Kidney Stone Victims Foretold by New Test

► AN IMPROVED test to predict future sufferers of kidney stones was announced in Cincinnati.

The test detects the condition called cystinuria, an inherited kidney disease. It makes possible heading off the formation of kidney stones, which cause intense pain and damage, Miss Yuk-Hang Cheuk, Ames Research Laboratory, Elkhart, Ind., told the American Chemical Society.

A commercially available tablet is placed on a porcelain plate, then one drop of alkaline cyanide and one drop of test urine are added. Within one minute, the solution around the tablet will develop a cherry-red color if the disease condition is present, Miss Cheuk reported.

"A positive test on a child who has inherited the defect would indicate that this child, untreated, is likely to develop kidney stones," Miss Cheuk said. Thus early preventative treatment can be started.

Treatment consists of keeping cystine (the stone forming culprit) dissolved in urine and, also, drinking large quantities of liquids to "wash" the cystine through the kidneys before it can form crystals.

Cystine is an amino acid, one of the building blocks of protein. In the hereditary disease, cystinuria, the body cannot use four of the more than twenty amino acids properly, and they appear in increased amounts in the urine. The other three are soluble and are easily excreted, but cystine in large amounts becomes insoluble, and forms tiny crystals. If the condition is not treated, these crystals are likely to form kidney stones, Miss Cheuk reported. This simple test is easy to do on a large scale.

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PUBLIC HEALTH

War on Illness, Disease Included in New Budget

► RELENTLESS warfare on illness and disease was pledged by President John F. Kennedy in his budget message.

Expenditures of the Department of Health, Education and Welfare for research alone will total an estimated \$778.4 million, the largest part of which, \$721.8 million, is under the Public Health Service.

"Under existing health programs," President Kennedy explained, "the budget provides for strengthening the National Institutes of Health and the Food and Drug Administration, for improving community and environmental health protection, and for combating mental illness and mental retardation."

In addition, he said, new legislation is proposed that would expand further the fight against mental illness and mental retardation, authorize a new program to assist in the construction of medical schools, and broaden the scope of the Hill-Burton Act providing the construction of medical facilities. These would include nursing homes for the aged and chronically ill.

The President said he was "again proposing health insurance for aged persons, to be financed mainly through the social security system, but with benefits for those not covered by social security to be paid from regular appropriations."

The Federal Government now supports nearly two-thirds of the \$1.5 billion national expenditure for medical and health-related research, with the National Institutes of Health accounting for three-fifths of the Federal support for about 40% of the national health research.

Related health and medical research is carried on by the Atomic Energy Commission, the Department of Defense, the National Aeronautics and Space Administration, the Veterans Administration, the Department of Agriculture and the National Science Foundation.

Despite the expressed need to strengthen all aspects of the Drug Amendments of 1962, only \$49,823,000 was budgeted for the Food and Drug Administration, an increase of \$17,758,000 over the 1963 estimate.

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