

MEDICINE

Stomach Balloon Cools

Running ice water into balloon would reduce temperature of heat stroke patient. Hot water would warm those suffering from cold. Heat or cold brought close to aorta.

► **RUNNING COLD** or hot water into a balloon in the stomach can be life-saving for victims of sunstroke or the reverse condition of being nearly frozen.

This new, simple and safe method of quickly lowering or raising body temperature, which could also be used for operations on the heart and large blood vessels, is announced by Drs. H. H. Khalil and R. C. MacKeith of Guy's Hospital in the *British Medical Journal* (Sept. 25).

With the balloon in the stomach, the water is not absorbed into the blood. However, its cold or heat is brought close to the aorta and other big blood vessels which are located close to the stomach. In addition, the many blood vessels of the stomach wall bring much blood to be cooled or heated and thus help spread the cooling or heating effect throughout the body.

Success of the method was shown in the very first patient treated by it. This was a 16-month-old baby boy brought to the hospital suffering from pneumonia. The pneumonia was cured, but the baby had a paralytic fit and his temperature went back up to 105 degrees Fahrenheit. He was in a stupor, very sick and his skin was cold. In spite of repeated cold applications of the usual sort for five hours, his temperature never went below 103.5 Fahrenheit.

At this point, the doctors decided to try the stomach balloon method they had developed for low temperature studies on laboratory animals.

The small balloon was easily passed into the baby's stomach and about three ounces of ice water, at a temperature of about 32 to 39 degrees Fahrenheit, was slowly run in. After two minutes the water was withdrawn, by which time it had been warmed to about 80 degrees Fahrenheit.

Ice water was put in the balloon in the baby's stomach and withdrawn this way in small amounts for 68 minutes. After the first half hour, the baby came out of his stupor. His skin was warm except over his stomach where it was icy cold. At the end of 50 minutes, his temperature was down practically to normal (100.6 Fahrenheit rectally).

At the end of an hour, the baby was very lively, his skin felt normally warm and his condition was much improved. The treatment was then stopped. However, about four hours later he relapsed and his temperature had gone back to 103.6. His skin was cold, pale and gray and he was again in a stupor.

The tube and rubber balloon were again passed into his stomach and 12 changes of about four ounces each of ice water were given over the next hour. His temperature

came down and at the end of an hour and 15 minutes he was "taking milk by mouth with good appetite."

He has kept well and without fever since then.

This simple cooling method, the doctors point out, may be useful not only for patients suffering from heat stroke but also for those with high fevers due to infection or to brain disease. It might be used to cool patients for operations.

For warming men exposed to severe cold, it avoids the serious disadvantages of warming by heating the outside of the body. These disadvantages include increasing the oxygen demands of the surface tissues before the oxygen-carrying blood supply to them is adequate, and the fall in blood pressure that can come from the enlarging of little blood vessels in the skin before the general circulation has improved.

Certain changes for using the new method in grown-ups may be needed, the doctors point out.

The studies for which the method was first developed were done to find what effect the stress of very low temperatures had on the pituitary-adrenal gland mechanism. These showed that the stress response mechanism leading to release of the adrenal-stimulating pituitary hormone, ACTH, better known for its anti-arthritis effects, is checked by very low body temperatures, at least in rats. The adrenal gland cortex, however, still responds to ACTH injected into the veins even when the animal is chilled.

Science News Letter, October 9, 1954

PSYCHOLOGY

Pace Yourself For Long Pull

► **WITH SUMMER** holidays now over, most of us have a back to work (or school) feeling. Another year of work stretches before us and for some the prospect is dull, for others it is inviting.

However you feel about the prospect, this may be a good time to give some thought to the "stress disorders." They are the ailments and sicknesses that come when we are under too much stress and strain.

One authority lists nervousness and neurones, arthritis, overweight, high blood pressure, gastric and duodenal ulcer, gout, coronary heart disease, asthma and bronchitis as some of the stress disorders.

They hit relatively young people, especially business executives. And they are almost always laid to the stress of overwork.

Work, by itself, however, is not necessarily harmful. The stress that is blamed for a heart attack or stroke came as a result of maladjustment, not of work itself. The maladjustment may have been related to the person's job or it may have been related to some other part of his life. In any case, stress disorders result from too much stress and too little tolerance.

In a report to the Industrial Hygiene Foundation, Dr. William P. Shepard of the Metropolitan Life Insurance Company points out that stress disorders are easier to prevent than to cure. His advice to the worker, especially the executive, is to learn to "pace" himself for the long pull, to adjust his speed to his load, to lighten his load by delegating responsibility to well-chosen subordinates.

Finally, he advises developing tolerance to pressure from above, whether it comes from a foreman, a board of directors or the worker's own conscience.

Science News Letter, October 9, 1954

MEDICINE

Awards for Health Aid To Babies and Soldiers

► **IT WAS**, in a way, babies' and servicemen's day at the honor luncheon in New York for the 1954 winners of the Albert Lasker Awards of the American Public Health Association.

Awards went to Dr. Leona Baumgartner, New York City health commissioner, best known for her work to improve health conditions for new babies and their mothers as well as for children generally; to Dr. John F. Enders, Harvard Medical School scientist whose work is helping toward conquest of mumps, measles and polio; jointly to Drs. Alfred Blalock and Helen B. Taussig, Johns Hopkins University, and Dr. Robert E. Gross, Harvard Medical School, famed for "blue baby" and "ductus" operations to correct congenital heart defects; and, in a group award, to the Streptococcal Disease Laboratory, Armed Forces Epidemiological Board, Francis E. Warren Air Force Base, Cheyenne, Wyo., under the directorship of Dr. Charles H. Rammelkamp Jr., of Western Reserve University, Cleveland.

Babies, children and servicemen did not steal the show, however. Patients with overactive thyroid glands, goiters in the layman's terms, who can now be helped by a medicine instead of an operation will cheer the fact that one of the awards went to the discoverer of this medicine, Dr. Edwin B. Astwood of Tufts Medical College, Boston.

All of the researches, from the medical control of overactive thyroids to the new way of growing polio viruses that laid the practical foundation for the vaccine now on trial, to the discovery of streptococci that cause kidney disease and the use of antibiotics for prevention of strep-induced rheumatic fever, have widespread influence toward longer life and better health for people of all ages.

Science News Letter, October 9, 1954