

MEDICINE

Kidney Stones Dissolved

An improved solvent, formerly used to clean calcium salts from dairy equipment, is proving helpful to sufferers from kidney stones, Faye Marley reports.

► **SUFFERERS** from recurring kidney stones are now being helped by an improved solvent formerly used to clean calcium salts from the pipes of beer and dairy equipment. The insoluble "stones" are similar in humans and commercial products.

Hemiacidrin is the generic name of the solvent produced by Dr. Alfred R. Globus, director of medical research for the Guardian Chemical Corporation, Long Island City, N. Y., under the trade name Renacidin, now used to clean kidney catheters and even to dissolve kidney stones.

"Hemiacidrin is not recommended to replace surgery," Dr. Globus said. "It is particularly valuable, however, as an aid to surgery and in patients unable to undergo kidney operations. It has been especially helpful with paraplegics (patients with paralysis of the legs and lower part of the body), the aging and those with heart trouble for whom surgery would be dangerous."

It was Dr. William P. Mulvaney, assistant professor of surgery at the University of Cincinnati College of Medicine, who first suggested to Dr. Globus that hemiacidrin might be developed in a purified form to clean the "indwelling" catheters of chronically ill patients with non-functioning bladder. Unless cleaned with the solvent, the catheters must be removed every week or so, with discomfort and some danger.

"The solvent is most commonly used for cleaning the catheters," Dr. Globus said, "but a double catheter can now be used under careful medical and nursing care, to administer the solvent in a tube introduced directly into the kidney, which can dissolve some common kinds of kidney stones."

Dr. Mulvaney exhibited a large plastic kidney display at the American Medical Association clinical meeting in Los Angeles, showing how hemiacidrin washes over the kidney stone and dissolves it.

There are numerous tiny nuclei of kidney stones that cannot be seen even during an operation, but the solvent can wash them away and keep them from growing.

Last year some 180,000 persons were admitted to hospitals in the U.S. with kidney stones, which form in the bladder and urinary tract as well as in the kidneys. Hemiacidrin breaks up calcium and increases the solubility of normally insoluble calcium salts through the formation of water-soluble complexes.

Dissolving kidney stones has been a dream of doctors for centuries, Dr. Mulvaney said, but until recently it has been impractical because of irritation by the solvents or the prolonged time required.

Stones continue to recur in some patients and surgery is repeated. However, it may come impossible to reoperate effectively.

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New Treatment Found

► **HOPE** for longer and more active lives will result from a new treatment for the incurable wasting disease called muscular dystrophy. It affects more than 200,000 persons in the U.S., one-third of whom are children who could not have been expected to reach their 18th birthday.

Although disclaiming any cure, Dr. Robert M. Dowben of Northwestern University Medical School, Chicago, told the clinical meeting of the American Medical Association at Los Angeles that eight of the 37 patients he had treated appeared to gain some strength.

Using a digitalis preparation along with a synthetic steroid compound that is not available for general use, Dr. Dowben aimed at building up leaky muscle cells that tend to lose essential proteins. He also prescribed daily exercises.

It took six years of testing various compounds on 1,000 mice to come up with the two-pronged treatment, composed of the steroid known chemically as 1-methyl-delta-1-androstenolone and digitoxin, the digitalis compound.

Referring to his experience with dystrophic mice, the Northwestern professor said the disease probably cannot be halted permanently, but will not progress as fast.

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Supersonic Travel

► **SUPERSONIC TRAVEL**, predicted for the 1970's, will make thunder-like sonic booms a commonplace. It is, however, expected to pose a few medical problems, none insurmountable.

The biggest stumbling block, Dr. Donald H. Stuhling, chief, aviation medicine, The Boeing Company, Seattle, told the clinical meeting of the American Medical Association in Los Angeles, will be the noise of the "sonic boom" phenomenon.

The first supersonic jets may cruise at altitudes approaching 75,000 feet and carry 150 passengers 3,500 miles at three times the speed of sound. Jet transports now cruise often at 40,000 feet at speeds slightly under the speed of sound. With public acceptance of the sonic boom, a noise resembling two claps of thunder to persons on the ground, Dr. Stuhling said the most critical operational milestone of supersonic transport will have been passed. The noise is caused by shock waves radiating from faster-than-sound aircraft.

Time change also will require some adjustment, however. It would take a traveler about a week to adjust to Rome time, leaving Los Angeles, for example, at eight in the morning and finding himself in Rome five hours later at 10 p.m. Both physical and mental efficiency may be undermined.

The high cruising altitude of supersonic jets will require a new system for supplying emergency oxygen in case cabin pressurization is lost, for even a brief period. One solution might be an air scoop that would open automatically under the fuselage to restore partial pressurization while the plane

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Goodyear

AUTOMATIC ANTENNA—This inflatable antenna, stored underground will rise and inflate automatically for operation after a nuclear attack has leveled other buildings. An engineer inspects the aluminized film section of the nine and a half foot structure being developed by Goodyear Aircraft.