

## MEDICINE

# Salt Poisoning Treatment

► THE ACCIDENTAL salt poisonings of infants at the Binghamton (N. Y.) General Hospital last March has led to a simple, proven method of removing excessive amounts of salt from the bloodstream.

The technique, known as peritoneal dialysis, is credited with saving lives of three of the Binghamton babies. It is safe and useful in adults as well as infants. Doctors who have had no previous experience in its application can use it.

The effectiveness of peritoneal dialysis was reported by Dr. John E. Kiley, head of the department of renal (kidney) diseases at Albany (N. Y.) Medical Center, in the first scientific report to come from the Binghamton tragedy.

Dr. Kiley is one of two dialysis experts who were called to Binghamton at the time of the salt poisoning. The other, Dr. Laurence Finberg of Johns Hopkins Hospital, first proposed peritoneal dialysis in the treatment of salt-poisoned infants. Not until the Binghamton outbreak was there an opportunity to employ peritoneal dialysis in a significant number of cases.

Dialysis means the interchange of chemical substances across a membrane. In peritoneal dialysis, the membrane is the peritoneum or abdominal wall. To remove excessive salt from the bloodstream a solution of sugar and water is injected into the abdominal cavity and left there two to three hours.

Through a process not unlike osmosis, the sugar slowly filters into the bloodstream and the salt slowly filters into the fluid in the abdomen. Finally, the solution within the peritoneum now containing considerable salt, is removed, and the entire process is repeated until the salt level in the bloodstream becomes normal.

The Binghamton baby poisonings were traced to the accidental substitution of salt for sugar in the formulas of 14 babies. Normally, salt is a harmless substance. But when it is present in the body in excessive amounts it is highly toxic. Newborn babies are especially vulnerable to its effects.

By the time the cause of the Binghamton accident was discovered, 14 babies had received the salty formula and six had died. Of the eight remaining infants, six were seriously ill with sodium poisoning. Two of these were treated with a simple salt free diet. The four most seriously ill were dialyzed. One, about to die when treatment started, died; the other three owe their lives to peritoneal dialysis.

Since the Binghamton experience, Dr. Kiley and his associates have employed peritoneal dialysis in the treatment of adults who were suffering from hypernatremia (excessive sodium in their bloodstream). They have found it to be a highly effective method of removing sodium from adults.

• Science News Letter, 82:380 December 15, 1962

## GENERAL SCIENCE

# News From Science Clubs

► EFFECTIVE club programs reported to Science Clubs of America by some of its affiliated clubs are:

Members of the SACRED HEART HIGH SCHOOL SCIENCE CLUB, Memphis, Tenn., conduct scientific tours, sponsor the school science fair and present programs for their parents. The club is active in the Tennessee Junior Academy of Science.

The EXPLORER SCIENCE CLUB of Blaine Elementary School, Minneapolis, Minn., reports its most effective program is Parents Night when parents are invited to view experiments and demonstrations. This activity has motivated parents to work with the club and to contribute materials.

Programs of the P.J.H.S. SCIENCE CLUB of Prescott Junior High School, Baton Rouge, La., consist of lectures, field trips and research activities.

The UNSTABLE ISODOPEs of Henry B. Endicott Junior High School, Endicott, N. Y., during the seven years that the club has been organized find that lectures, demonstrations and scientific films have been most effective as programs.

Listening to science records and producing plays relating to science have proved to be the most successful programs of the DUMONT SCIENCE CLUB of the Du-

mont Community School, Dumont, Iowa.

Members of "SAM" (Science, Art, and Mathematics Club) of St. Ambrose School, Anderson, Ind., participate at lectures given by scientists from the local college and industries, present student demonstrations and conduct a science fair.

WOODSIDE SCIENCE CLUB of Woodside School, Brookfield, Wis., is using part of the program time to work for a transistorized geiger counter.

Field trips, guest speakers, films, participation in science fairs and club parties are included in the programs of the K.I.S. SCIENCE CLUB, of Kaimuki Intermediate School, Honolulu, Hawaii.

For clubs looking for program ideas, the Ansco Camera Club Services makes programs available to clubs on a loan basis without charge. These programs were especially prepared to help club members get more pleasure from photography. All requests should be addressed to: ANSCO, Camera Club Services, Binghamton, N. Y.

Affiliate your club with SCA and send reports on your activities and programs to Science Clubs of America, 1719 N Street, N.W., Washington 6, D. C.

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# Questions

FORESTRY—Where do most fires in U.S. forests start? p. 384.

MEDICINE—How is excessive salt removed from the bloodstream? p. 380.

METALLURGY—How many pounds of pressure can Maraging steel withstand? p. 385.

PHYSICS—On what principle does the new liquid laser operate? p. 378.

PSYCHOLOGY—What does experimental evidence suggest as the basis of memory? p. 387.

PUBLIC HEALTH—When did the last yellow fever epidemic occur in the United States? p. 379.

SPACE—When do U. S. space experts hope to establish a station on Mars? p. 381.

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