

## PUBLIC HEALTH

## Fallout Effect Feared

► NINETY-FIVE CHILDREN between the ages of 10 and 18 living within a few hundred miles of the Nevada Nuclear Test Site have developed nodules that could mean thyroid cancer in some instances.

U.S. Public Health officials in Washington, D.C., were quick to emphasize that an immediate follow-up study was being done by thyroid specialists to determine whether or not further diagnosis is necessary.

Nodules do indicate a disease of some kind because a normal thyroid is smooth, but a number of causes besides cancer are being considered. The nodules could have resulted from an old case of thyroiditis, or could prove to be benign, associated with nontoxic goiter.

Physical examinations of school children in Washington County, Utah, where fallout was heaviest in the 1950s, and in Graham County, Ariz., which was outside the fallout area, were done by a team of physicians organized by the Public Health Service. Dr. G. D. C. Thompson, Utah State Health Director, U.S. Department of Health, Education and Welfare, made a preliminary report.

The preliminary examinations of approximately 2,000 children in Utah, and 1,400 students in Arizona, began Sept. 17, 1965, and were completed Oct. 11. Each student was examined independently by three physicians. At least one physician in each instance was of the opinion that thyroid nodules, or small lumps, might be present in 70 of the Utah students, and in 25 of the Arizona group.

Surgeon General William H. Stewart of PHS said that in this preliminary phase it is not possible to assess the medical significance of these findings.

PHS has called together three members of a panel of nationally known authorities on thyroid for further study of the two groups. Family physicians, parents and health authorities will be advised concerning each individual situation.

Members of the panel are: Dr. Raymond F. Keating Jr., Mayo Clinic, Rochester, Minn., Dr. Brown M. Dobyns, Cleveland General Hospital, and Dr. Joseph E. Rall, Institute of Arthritis and Metabolic Diseases, Bethesda, Md.

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## INVENTION

## Current U.S. Patents

► THE METHOD being used to make 14,400 gallons a day of pure water from salty water in Puerto Rico was granted four patents by the U.S. Patent Office.

The drinkable water made by this distillation process is often called a "Caribbean cocktail." However, it will never compete in taste with fresh tap or well water, as anyone who has ever sipped distilled water will testify.

All four of the patents, numbered from 3,214,348 through 3,214,351, were assigned to the Saline Water Conversion Corporation of New York. Three were granted to Joseph Lichtenstein of Bayside, N.Y.; the fourth was earned by Edward C. Kehoe and Elwood C. Walker of North Caldwell, N.J.

The four patents cover a method of changing saline water, either ocean or brackish, to fresh potable water by heating it, then bringing a thin layer of the humidified air above the water into contact with fresh cool water. The resulting lower temperature condenses pure water from the saturated air.

The Puerto Rico Water Resources Authority is converting salty water at its Palo Seco station.

### Method for Permanent Waves

A new method of giving women so-called "permanent waves," using suction to make hair curl, was the subject of five patents assigned to the Gillette Company of Boston, Mass., owners of a Chicago subsidiary known as Toni Company.

In use, hair is rolled up on round forms but the rollers stand up from the head rather than lying flat upon it. The hair within the curler is whipped into place by suction, eliminating the need for holding the ends in with special papers.

Patents for the suction method are numbered from 3,213,859 through 3,213,863. Four of the five were awarded to John P. Vitello of Silver Spring, Md., among others who included Charles G. Tewksbury, Louis R. Mizell and Donald L. Underwood.

### Other Patents of Interest

A method for detecting objects moving silently in the water by measuring how their wakes affect the electrical conductivity of the water earned patent 3,214,728 for L. L. Higgins of Woodland Hills, Calif., who assigned rights to TRW, Inc., an Ohio corporation.

A process for increasing the light from electroluminescent lamps by heat treatment during production was awarded patent 3,213,515. Frederic Koury of Lexington, Mass., and Paul Fortucci of Lynn, Mass., assigned rights to Sylvania Electric Products, Inc.

Superconductors capable of withstanding high current and high magnetic fields for long periods of time, and a new method of producing them have been developed by Charles P. Bean and John C. Fisher of Schenectady, N.Y. They assigned rights to patent 3,214,249 to General Electric Company.

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## Poor Light for Reading Does Not Damage Eyes

► THERE IS NO EVIDENCE that reading with inadequate light can damage the eyes, says Dr. Jerry H. Jacobson, clinical assistant professor of surgery in ophthalmology at Cornell University Medical College in New York City.

Adequate, nonglaring illumination undoubtedly makes reading more comfortable, the physician says, but the eye is "quite resistant" to damage by anything short of direct injury.

Good news to those who make a habit of reading in bed is Dr. Jacobson's statement that this is not bad for the eyes. Also "mistakenly believed harmful" activities include: wearing sunglasses, not wearing sunglasses, reading in the sun, looking at television and holding a book too close. A person may get a temporary headache if he does these things to excess, but that is about all in Dr. Jacobson's opinion.

Dr. Jacobson reported the study in *Parents' Magazine*, 42:62, 1965.

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## PHYSIOLOGY

## Nicotine Stimulates Cats While They Sleep

► EVIDENCE that nicotine stimulates the brains of sleeping cats has been reported.

A Michigan experiment has shown that the drug will speed up brain waves, possibly producing cat dreams.

In humans, rapid brain waves are associated with dreaming, but tests of this effect of nicotine on humans have not yet been completed, said Dr. Edward F. Domino, a pharmacologist with the University of Michigan, who conducted the cat experiment.

Dr. Domino reported that he is currently attempting to relate his experiments with animals to humans by injecting subjects with very small amounts of nicotine before they sleep.

The problem is that the drug wears off before the subject can fall completely asleep.

The importance of the study lies in evidence that nicotine directly affects the central nervous system, Dr. Domino said. Usually considered a depressant, nicotine had the opposite effect in cats, at least part of the time, of exciting the nervous system.

For his study, reported in *Science*, 150:637, 1965, Dr. Domino and a colleague, Ken-ichi Yamamoto, placed electrodes in 15 cats. While the cats slept, nicotine was injected into their systems. Initially the cats began to wake up, but then lapsed back into normal slow-wave sleep. Approximately 15 to 25 minutes later rapid brain waves were registered and continued for about 25 minutes.

Nicotine's reputation as a depressant is nevertheless accurate, Dr. Domino explained. Wakefulness produced by the drug is followed by a slow down as the nerve endings become clogged with nicotine.

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