

MEDICINE

Cure For Athlete's Foot Discovered By Scientist

ACURE for athlete's foot which stops itching immediately and leaves no stain on skin or clothing is announced by Dr. Edward Francis, medical director (retired) of the U. S. Public Health Service. (*Journal, American Medical Association*, Dec. 6.)

Dr. Francis' remedy consist of a mixture of three parts phenol and one part camphor which can be prepared by any pharmacist. He reports that the mixture is "nonirritating and may be painted between the toes several times a day. The sock may be replaced immediately without danger of corrosion."

Users are warned, however, that the preparation should not be applied to wet skin.

Science News Letter, December 13, 1941

PUBLIC HEALTH

Rats Develop Goiter From New Sulfa Drug

SULFAGUANIDINE, one of the new sulfa drugs which has been used in treating dysentery and similar ailments, causes goiter in rats.

This unexpected discovery is reported by Dr. Julia B. MacKenzie and her husband, Dr. C. G. MacKenzie, and Prof. E. V. McCollum, of the Johns Hopkins School of Hygiene (*Science*, Nov 28).

Whether human patients given sulfaguanidine are in danger of getting goiter from the drug is not yet known. The scientists are now investigating this point.

In rats, the thyroid gland begins to enlarge within a week after being given sulfaguanidine. It grows to from three to 13 times its normal size, depending on the amount of drug given and the length of time it is given.

The discovery is so recent that the scientists have not yet had time to find whether this thyroid enlargement is the kind that occurs in simple goiter due to lack of iodine or in the kind in which the gland is overactive. They expect to find the answer to this soon by feeding the animals extra iodine.

The effect may be due to the sulfa part of the drug or to the guanidine part. This point also is being investigated.

So far, no one seems to have reported any effect of sulfaguanidine on human patients. This may be because rats react differently to the drug or it may be because human patients have not yet been

given enough of it to cause the effect.

The discovery arose from investigation of a possible effect of the drug on the nutrition of the rat. Rats have in their intestinal tract microorganisms believed capable of creating some of the B vitamins and vitamin K. It was thought the drug might cause a deficiency of the vitamin but it did not.

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POPULATION

British Doctor Urges State To Promote Large Families

STATE promotion of large families similar to programs undertaken by Germany and Italy is urged by Dr. A. Spencer Paterson, eminent British physician (*The Lancet*).

"If the family of two children comes to be considered normal," says Dr. Paterson, "the day of England as a world-power is past. Any country whose families average four children, given anything like equal conditions, is likely to oust one like ours, whose birthrate replaces the present population by only 75 per cent."

Dr. Paterson declared that a "heavy responsibility" may be charged against any legislating body "which encourages late marriage such as at present obtains in the medical and nursing professions."

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MEDICINE

Try Sulfa Drug, Calcium For Trichinosis Remedy

SULFAGUANIDINE, one of the newer sulfa drugs, will be tried out as a possible trichinosis remedy in laboratory studies by Dr. O. R. McCoy, of the University of Rochester, it was announced by State Senator Thomas C. Desmond, of Newburgh, N. Y.

Trichinosis is a serious disease for which no specific treatment or cure has yet been discovered. It comes from eating undercooked meat of hogs that are infested with the tiny worm, called trichinella. Thorough cooking of pork makes it safe.

Rats also may be infested with trichinellae. Dr. McCoy's test of sulfaguanidine will be made on such animals. Calcium (lime) compounds will also be tested, on guinea pigs, for possible trichinosis-curing ability. The tests are under the auspices of the New York State Trichinosis Commission, of which Senator Desmond is chairman.

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IN SCIEN

GENERAL SCIENCE

NAS Scientific Exhibits Will Be Shown in Dallas

THE scientific exhibits at the National Academy of Sciences in Washington, which were placed there 18 years ago by the General Electric Research Laboratory, have been removed to provide more space for scientists working on defense problems.

However, some of the exhibits will be shown at the meeting of the American Association for the Advancement of Science at their Christmas week meeting in Dallas, Texas, it has been announced by Dr. W. D. Coolidge, General Electric vice president in charge of research.

After that, the exhibits may be shown in museums and schools through the country and eventually return to the Academy after the emergency.

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CHEMISTRY

New Plastic Fabric For Upholstery Is Tough

ANEW plastic fabric for upholstery that is said to be stainproof, fire-proof, and practically as tough as steel is getting attention at the Modern Plastics Exposition at the U. S. Department of Commerce.

The new material is being tried on New York subways and is being investigated by the U. S. Maritime Commission for upholstering furniture on ships.

That the fabric can be washed with soap and water, does not retain heat like some chair covers, and is tough as steel are among claims made for it by the exhibitors, the Firestone Tire and Rubber Company. Known as Saran, the material is a thermoplastic resin extruded in strands or yarn of various sizes and gauges that can be woven like cloth. It can be produced in practically any weave or color used in producing cotton, silk or other textiles and can be combined with these to make original patterns. Besides upholstery, its uses are expected to extend to table tops, airplane partitions, and room interiors.

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CE FIELDS

ARCHAEOLOGY

Prehistoric Jonah— Indian Buried on Whale Bone

PREHISTORIC America now has a Jonah and Whale. The big difference is that our Jonah and his whale were both dead. The story is revealed by the discovery near Santa Barbara of an Indian's remains, buried on a coffin made of a whale's shoulderblade.

Pronounced unique, the whale coffin burial is described by Phil C. Orr of the Santa Barbara Museum of Natural History (*Science*, Dec. 5). To make the coffin, the big shoulderblade slab of the whale was planed flat with stone tools, and decorated by cutting a groove border around the edge so that Olivella shell disks could be set five-to-the-inch in asphalt.

The coffin is less than 47 inches long, and the Indian for whom it was made was a small adult, about 30 to 35 years old. He was buried face down and with his knees drawn up, as if in sleep.

The entire burial, found at an Indian cemetery on Mescalitan Island, has been removed to the Santa Barbara Museum for public exhibition. The Indian is pronounced one of the early Canalino or Chumash Indians.

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DENTISTRY

Use Germs vs. Germs Dentists Are Urged

SCIENTISTS are using germs to kill germs, Dr. Morris L. Rakiety, Long Island College bacteriologist, told the Greater New York Dental Meeting.

Introduction of attacking bacteria into the area of severe infections of the head and neck—such as sinusitis—results in a microscopic battle, with the bacteria causing the infection the losers, Dr. Rakiety said. He urged laboratory technicians to develop phages (the attacking bacteria) in pus cultures to simulate conditions they will meet on the actual battlefields of human infection.

Dr. Rakiety said sinus trouble could be treated with phage if the pus is removed first to enable the attacking bacteria to come in close contact with the mucous membranes.

"In cases of dysentery and cholera," he continued, "it appears that the phage actually does destroy the infectious (germs) in the gastro-intestinal tract."

Dr. Rakiety said this new phase of fighting disease has attracted laboratory study all over the world. One worker (Raiga), he said, has treated several hundred cases of all types of severe staphylococcus infections including those of the upper lip, and very large carbuncles. "His percentage of cures is so good that unless one knew the man (as I do) he would be inclined to doubt them."

Dr. Rakiety warned, however, that much more work is necessary before this method of fighting serious infections reaches its most effective stage.

Frequent yawners were warned they may dislocate their jaw bone and possibly end up with arthritis of that joint, in a report by Dr. Louis W. Schultz, of the University of Illinois.

Correction of dislocated jaws has been replaced by the injection of sodium psylliate in more than 183 cases treated by Dr. Schultz and Dr. Walter Shriner.

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ENGINEERING

Get Three Dresses For One By Modern Lighting Tricks

GLAMOROUS ladies of tomorrow will buy different-colored light tubes at a dollar or so, instead of new dresses for each evening function.

One girl in a blossom pink gown can change to dusky rose, purplish, or yellowish outfit by clever use of modern lighting, National Electrical Service Executives were informed by O. P. Cleaver, Westinghouse laboratories lighting engineer.

Glamor girls had better watch makeup as the new fluorescent lights gain use in restaurants, offices, and homes. A light makeup is best under these lamps, and a hasty face paint job is likely to look blotchy, Mr. Cleaver warned.

Unpainted skin may look sallow under 3,500-degree white fluorescent lamps, which bring out yellow and green in skin. Other types of white fluorescent light under which a woman may find herself these days are termed Soft White and Daylight, according to Mr. Cleaver's report. He listed colored lights available as blue, green, red, gold, and pink.

Women will have to learn new techniques of makeup, suiting powder and rouge to the new lights if they are to gain charm under fluorescent lighting.

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PHYSICS

New Super-Liquid State Just Before Freezing

A NEW super-liquid state, in which the substance is much more fluid than it was originally, was found to occur in certain liquid films one molecule in thickness just before solidifying.

The discovery was made by Drs. William D. Harkins, Lyle E. Copeland and George E. Boyd of the University of Chicago, and was announced by them in a paper presented at the meeting of the American Physical Society in Chicago.

This is of course the opposite of the usual behavior of liquids in solidifying, which generally become more viscous (less liquid) as the freezing point is approached.

The substances which showed this peculiar behavior were three forms of the higher alcohols which have high freezing points. They were particularly chosen because they have long, chain-like molecules like those of lubricating oils.

The investigation is of importance in studying the behavior of lubricants, paints and cleaners, Dr. Harkins stated, and will be continued.

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CHEMISTRY

Beer Test For Tin! Shows One Part in Ten Million

ONE PART of tin in ten million parts of beer is enough to make the clear amber fluid perceptibly cloudy, Irwin Stone of the Wallerstein Laboratories in New York, has reported (*Industrial and Engineering Chemistry* Nov. 15).

This, of course, was very annoying to the brewers who package their wares in tin cans. And so, the chemists were asked to investigate.

At once it turned out that none of the usual chemical tests for tin were anything like as sensitive to the metal as the beer itself. So, a search had to be made for a more refined test than any hitherto known. Such a test was finally found and may be applied to water, foods and other beverages than beer.

It should be said that even the amount of tin that would produce a decided turbidity in beer is far below anything that would be harmful to the consumer. It is not his health but the good looks of the beer that is involved.

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