

MEDICINE

Christmas Tree May Cause Holiday Asthma Attacks

► CHRISTMAS TREE allergy may be the explanation for post-holiday asthma attacks in children who have never previously had asthma, in the opinion of Dr. Charles C. Coghlan, of Los Angeles.

He describes this apparent newcomer to the growing list of allergies in a newly published book *Are You Allergic?* (Barrows), of which he is co-author with Jessamine Hilliard.

To a child with an allergic predisposition, he explains, inhaling with every breath the fine dust shed by the Christmas tree for the week or more it is in the home may be the extra straw which breaks the camel's back and brings on severe allergic symptoms for the first time.

Added excitement and overeating of rich foods may play a part in bringing on a first attack of asthma right after Christmas, but, says Dr. Coghlan, allergists believe the Christmas tree of equal or greater importance.

For prevention, without depriving the allergic child of his Christmas tree, artificial trees or those sprayed for just this purpose are suggested. As an alternate, the Christmas tree may appear on Christmas day only, being promptly removed the following day.

Science News Letter, December 11, 1943

CHEMISTRY

New Process Makes Dried Milk Keep Longer

► POSSIBILITIES of producing whole milk powder with excellent keeping qualities appear bright as a result of recent discoveries by Prof. C. D. Dahle and D. V. Josephson of the Pennsylvania State College.

In preliminary trials, these dairy research workers have indicated that the oxidation of lecithin, a constituent of the membrane surrounding the fat globules of milk, is the main reason why dried whole milk becomes stale so rapidly in storage. Huge amounts of dried whole milk are being purchased by Lend-Lease and military authorities but it has to be used rather quickly, since it develops off flavors and odors after it has been in storage a few months.

Removal of about half of the lecithin during the process of dried milk manufacture improved its keeping qualities considerably, Professor Dahle and Mr. Josephson found. Laboratory samples of

ordinary dried whole milk stored in airtight containers became stale in a month at 85 degrees Fahrenheit. Others sealed in nitrogen developed a slight off-flavor in two months. Samples which had been especially processed to remove as much of the lecithin as was readily possible and which were sealed in air were only very slightly stale at the end of two months. Samples of this product sealed in nitrogen did not even become slightly stale until the end of three months and were in no worse condition at the end of five months.

The lecithin was removed by first separating the cream from the milk, cooling and churning the cream into butter, and then melting the butter. The curd containing most of the lecithin in the butter was removed by washing and filtering. Part of the lecithin remaining in the skim milk was removed by centrifuging at 25,000 r.p.m. The butter oil and supercentrifuged skim milk were again combined and the resulting product was homogenized and dried in accordance with regular plant practice.

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PHOTOGRAPHY

Sound Film Projectors To Be Standardized

► SIXTEEN-MILLIMETER sound projectors used by troops for training purposes and for entertainment are to be standardized.

Thousands of feet of film are being used in the United States and abroad by the armed forces to teach and to amuse soldiers. These films are now projected by equipment made by many concerns, each with non-interchangeable parts. Large stocks of repair parts must be maintained for each make of machine. A standard machine would eliminate waste of large stock piles and make maintenance easier. The quality of equipment could be determined and maintained and longer production runs could be made.

Lenses which should readily fit into standard mounts on cameras often require special machining before they can be used.

For these reasons the armed forces and industry have asked the American Standards Association, through the War Production Board, to form a War Standards Committee for standardization of photographic and cinematographic equipment. The Association is now at work on the needed specifications.

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IN SCIENCE

PHYSICS

Improved Thermometer Measures Gas Temperature

► AN IMPROVED thermometer for measuring the temperature of exploding or burning gases, as for instance in a gasoline engine, was described by W. T. David of the Engineering Department of the University of Leeds in the British journal, *Nature*. (Sept. 4)

The thermometer generally used for this purpose makes use of five platinum-rhodium wires, the electrical resistance of which increases as the temperature rises. The resistance is measured by an electrical instrument and translated into degrees of temperature.

Mr. David found that some of the gases not yet completely burned settled on the wires—platinum in fact promotes combustion—and there completed combustion, giving the thermometer an extra rise in temperature.

By coating the wires with quartz, he found that this trouble was avoided, and more reliable temperatures were given.

Using two similar thermometers, one with bare wire, the other with quartz-covered wire of the same over-all size, he found that the bare-wire thermometer gave temperatures from 400 to 700 degrees Fahrenheit higher than the thermometer with the quartz-covered wires, the amount of the excess depending on the composition of the burning gases.

In gases that were merely hot, not burning, the two thermometers gave the same temperature.

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GENERAL SCIENCE

Sigma Xi Authorizes Five More Chapters

► FIVE MORE colleges are to have chapters of the Society of Sigma Xi, the national honorary fraternity for the promotion of scientific research, as the result of action taken at the Sigma Xi annual convention in Chicago.

The new chapters will be located at Emory University, Atlanta, Ga.; North Carolina State College, Raleigh, N. C.; St. Louis University, St. Louis, Mo.; Vanderbilt University, Nashville, Tenn.; and Wayne University, Detroit, Mich.

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CE FIELDS

PLANT PATHOLOGY

Microscopic Parasite Carries Walnut Disease

➤ ANOTHER disease, this time of a plant, has been caught hitch-hiking on a many-legged carrier as malaria is borne by mosquitos and Texas fever by ticks. The disease is walnut blight, which destroys great quantities of English walnuts every season. The creature that carries it is known as the erinose walnut mite, a microscopic parasite that feeds only on walnut trees and is practically universal in distribution. Hitherto it has not been considered as of any particular importance.

Dr. B. A. Rudolph of the University of California's deciduous fruit station, reports his discovery of the mite's pestiferous activities in *Science*. (Nov. 12) He proved his case against the minute trouble-maker by isolating from its body the bacteria that cause the disease, culturing them artificially, and reproducing the disease in previously healthy walnut shoots.

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PUBLIC HEALTH

You Can Help Meet The Physician Shortage

➤ RIGHT NOW, in the winter season of increased cases of colds, pneumonia, influenza and other illness, is the time for each of us to plan what to do in case we or our families get sick. Since so many doctors are now in the armed services, it will no longer be possible, when illness comes, to pick up the telephone and have a doctor at your home within 15 minutes or half an hour.

The first thing to do is to select a doctor to call in case of sickness. If your doctor has gone into the Army, his office may be able to tell you who is taking care of his patients. If you have moved into a new community, it would be a good idea, unless your home town physician gave you the name of a doctor in the new town, to call the local medical society for the name of the doctor nearest your home.

Next, be sure to telephone the doctor at once when there is illness. This is always wise, but is especially important now when all doctors are so very busy.

If you telephone the doctor promptly, he can arrange his time to see you more promptly, and he can tell you what to do until he does see you.

If an emergency arises before you have selected a doctor, call the nearest hospital for the name and address of a doctor near you. In some communities the police department and the supervisor of the local telephone company can help you locate a doctor in an emergency, the Illinois State Medical Society points out.

You can help meet the doctor shortage, if one exists in your community, in still another way. That is by taking courses in both first aid and home nursing at your local Red Cross chapter. This will teach you how to keep the patient safe and comfortable until the doctor arrives and you will know better what to tell the doctor over the telephone and how to follow the directions he gives.

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ANIMAL HUSBANDRY

Substitute for Liver In Minks' Diet Suggested

➤ THE TRADITIONAL "apple a day" in the diet of the mink is liver—but what with meat shortages, mink raisers are having trouble keeping the luxury animal supplied with its daily quota.

Feeding the minks "telang" livers is recommended by A. I. Coombes and E. B. Hart, University of Wisconsin research workers. These are livers which have been condemned for human consumption because they contain an excess number of blood vessels, which results in an abnormal appearance. However, despite appearances, they are satisfactory for animal consumption.

Commercial liver by-products were tested by the Wisconsin zoologists and found to be adequate fresh liver substitutes.

Horse liver and liver meal are suggested as wartime diet replacements by the U. S. Fish and Wildlife Service. Liver meal comes from beef animals such as milk cows that are too thin or old when slaughtered to be used for choice cuts.

Although the cause for some internal disorders common among minks has not as yet been determined, the Wisconsin zoologists report that these disturbances may be remedied or prevented by well-balanced diets including the proper proportions of liver or liver substitutes, fresh vegetables and calcium.

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ASTRONOMY

Ninth Magnitude Comet Found by Dutch Astronomer

➤ A NINTH magnitude comet has been discovered by the Dutch astronomer, Dr. H. van Gents, at present on the staff of the Union Observatory at Johannesburg, South Africa. Moving rapidly, it was diffuse in appearance.

The comet was found very close to Nova Puppis, the new star which blazed out so brilliantly in November a year ago. This is purely a coincidence, however, there being no physical significance in this fact.

Observers in the United States will have difficulty in studying the comet, which is moving rapidly to the southwest. Its path may carry it so far south as to bring it completely below our southern horizon so that professionals and amateurs in Mexico, South America, South Africa and Australia will have to carry on the study.

At the time of its discovery on Nov. 27 at 5:15 p.m., EWT, the new comet had a right ascension of eight hours, seven minutes and a declination of minus 34 degrees, 14 minutes. Its daily motion, as reported to Harvard Observatory, clearing house in the United States for such information, was eight minutes, six seconds to the west and one degree, 30 minutes to the south.

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METALLURGY

Stainless Steel Will Be Shinier But Cheaper

➤ SHINING stainless steel of the post-war era can be expected to be more highly polished than ever, yet cheaper, because of a new electrolytic method invented by Dr. Charles L. Faust, young chemist at the Battelle Memorial Institute in Columbus, Ohio, on which U. S. patents Nos. 2,334,698 and 2,334,699 have just been granted.

Heavy factor in the present high cost of polished stainless steel is the tedious job of mechanical polishing. Dr. Faust obviates this by suspending the article to be polished in a strong acid solution, making it the anode of an electrolytic circuit. The electric current causes all roughness, surface stains and other defects left by the manufacturing process to flow away from the metal, leaving a bright, mirror-like surface.

Rights in the patent are assigned to the Battelle Memorial Institute.

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