

Do You Know?

It takes five tons of *coal* to make one ton of steel.

Tantalum is a heavy metal, with a density about twice that of steel.

During 1947, American rubber companies used over 1,100,000 tons of synthetic and natural *rubber*.

A total of 961 *aircraft* are now in commercial service in America; of these, 168 are on routes to foreign countries.

Investigations of ancient civilizations show that vegetable *tanning processes* for making leather have been known since the dawn of history.

Magnesium is the lightest of the present commercial *metals*; aluminum is 50% heavier, steel weighs four times as much, and copper five times as much.

The so-called twinkle of *stars* is due mainly to regions of different density in the earth's atmosphere which are moved around with normal air movements.

"*Wet water*" is a term used by chemists for water containing organic chemicals known as wetting agents that cause a fast penetrating action by the mixture.

Moored balloons six feet or more in diameter must be operated under government permit if used in zones or at altitudes where they are a hazard to aircraft.

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MEDICINE

Cold Germ Is Isolated

V14A, as it is called, has been grown on fertile hen's eggs for almost a year. Fifty-seven of 60 healthy men sprayed in the nose with it got mean colds.

➤ MEET V14A. It has just made its formal bow to the world of science, though you and many a scientist are doubtless already well acquainted with it. V14A will give you a mean cold when you do meet it, or when your nose meets it. It is a common cold-causing germ. Scientists at the National Institute of Health in Washington washed it, with milk, from the nose of a man coming down with a cold. For almost a year they have kept it growing in fertile hen's eggs. And when they sprayed it into the noses of human volunteers, 57 of 60 healthy men got the same kind of mean cold.

This germ going under the name of V14A in the laboratory, may not be the only germ that causes colds. But there is no doubt that it is one of them, and now that the scientists have got it in their eggs and can keep it there, they can go on to the hard job of trying to find a way of curing or preventing the cold it causes.

The letters and numbers of the name, V14A, identify the germ as having come from the fourteenth volunteer in the first nasal washing. Details about the isolation and study of it so far are reported by Drs. Norman H. Topping and Leon T. Atlas in the journal, *Science* (Dec. 26).

Dr. Atlas himself has a V14A cold all the time. That is because he goes every day to nearby Lorton Reformatory to spray the germ into the noses of the Lorton volunteers.

Lorton is the District of Columbia institution corresponding to penitentiaries in the states. Of its 2,000 inmates, 500 have volunteered to help in the fight on the common cold and 200 have so far been used. They get paid \$3 a week instead of the \$1 they would get from prison industry work. And they may draw all of this weekly for purchases at the canteen instead of having to put half of it in their parole fund.

Dr. Atlas located V14A when he was giving a physical examination to another scientist who had applied for a U. S. Public Health Service fellowship. Noticing as he looked down the man's throat and up his nose that there was a faint

reddening suggestive of an oncoming cold, he asked permission to get a nose washing. The man agreed. The first washing, done at three o'clock that afternoon, proved unsuccessful. So Dr. Atlas routed the man out of bed at midnight to get another. By that time his man had a faint "peppery feeling" in his nose, an itching in his palate and was beginning to sneeze. Next day he had a mean cold.

Drs. Topping and Atlas are sure their V14A is not a bacterium, because they treated the nasal washing with penicillin and streptomycin to get rid of any bacteria that might have been washed out with the cold germ. Later tests failed to show any bacteria in the cold-causing material. Other tests showed it is not the influenza virus.

The electron microscope has been turned on it by Dr. R. W. G. Wyckoff. His studies are just starting, but he has already seen some characteristic particles that have not so far been seen in material from normal allantoic fluids from eggs nor in such fluids of eggs inoculated with normal fluids. These particles, which are probably V14A itself, are of the same general size as influenza virus particles but readily distinguishable from them.

Science News Letter, January 24, 1948

CHEMISTRY

Quicker, Better Test for Meat Toughness Revealed

➤ MEAT may become scarcer but it need not become tougher. To guard the consumer through establishment of easier and more objective testing for quality, Drs. Herbert Baker and George D. Palmer of the University of Alabama have devised a new chemical method.

First, the meat to be tested is immersed in a solution of nitric acid, which dissolves out the connective tissue that is the principal factor in toughness. Then a phospho-tungsten compound is added, producing a precipitate. This can be dissolved in boiling water; the tougher the meat, the longer it takes to dissolve the precipitate.

Science News Letter, January 24, 1948