

## PUBLIC HEALTH

# May Not Be T. B.

► MANY MEN rejected for the armed forces because of healed tuberculosis may be eligible for such service. They probably did not have tuberculosis, even though X-ray pictures of their lungs showed areas of calcification.

This is one of two medical surprises turned up in a U. S. Public Health Service Study of some 3,000 student nurses. The study is reported by Dr. Carroll E. Palmer in *Public Health Reports* (May 11).

Calcification of the lungs is generally taken as evidence of healed tuberculosis. It may also be due to another disease, histoplasmosis, Dr. Palmer's report shows.

This disease comes from a fungus called *Histoplasma capsulatum*. It has been known as a rare and always fatal ailment. It may, however, be a very common infection, occurring in a form so mild as not even to be recognized as a sickness. This is the second surprise turned up in the study reported by Dr. Palmer.

Starting point for the study was a growing doubt that lung calcification showing in X-ray pictures always was due to healed tuberculosis. Part of the doubt came from the geographical distribution of the X-ray findings. A lot more people with lung calcification were found in one part of the country than in

another. Selective Service examinations, for example, showed a variation from 6% in Oregon to 28% in Kentucky.

The geographic distribution of people with lung calcification, moreover, did not correspond with the distribution of tuberculosis throughout the country.

The idea that lung calcification always meant healed tuberculosis became even more doubtful when it was found that large numbers of those with calcified spots on their lungs had negative tuberculin reactions. A negative tuberculin reaction means that the person has not been infected with tuberculosis. Consequently the calcified spots on his lungs must have had some other cause.

So when the Public Health Service with the National Tuberculosis Association started making chest X-rays and tuberculin tests on some 10,000 student nurses throughout the country, Dr. Palmer took the opportunity to investigate this question of a nontuberculous origin of the lung calcification.

Clues from other scientific studies pointed to histoplasmosis and to San Joaquin Valley Fever, another fungus infection with the scientific name of coccidioidomycosis. Skin tests something like the tuberculin test were made for these two infections.

San Joaquin Valley Fever was soon ruled out. Only a very few student nurses gave a positive test for this and they had lived or traveled in the Southwest where it is prevalent.

With the histoplasmosis test, the story was different. Among student nurses with a positive reaction to this test, but not to tuberculin, 31.1% had lung calcification. Among those reacting positively to tuberculin but not to histoplasmin, 10.4% had lung calcification. In the large group of more than 2,000 who had negative reactions to both tests, only 1.2% showed lung calcification.

Wide geographic differences were also found. Among nurses who had lived almost all their lives in Minnesota, less than 5% showed any reaction to histoplasmosis, while more than 60% of those in Missouri were sensitive to this substance.

If, as seems likely, a positive skin test with histoplasmin means the person has been infected with the fungus or a related organism, the studies show that the infection in mild form is very com-

mon in certain states. They also show that histoplasmosis is probably the cause of a very high proportion of lung calcifications seen in chest X-rays of persons with negative tuberculin reactions.

The states where lung calcification is a frequent finding and where histoplasmosis is probably common in mild form are: Kentucky, Arkansas, Illinois, Indiana, Iowa, Maryland, Mississippi, Missouri, North Carolina, Ohio, Tennessee, Virginia and West Virginia.

*Science News Letter, May 26, 1945*

## GENERAL SCIENCE

## Baku on Caspian Sea Now Has Science Academy

► THE AZERBAIJAN Academy of Sciences at Baku, the oil center, has been added to the roster of the world's scientific bodies. Geologists, physicists, biologists and other scientists and technologists are now at work exploring the raw materials and working out new methods and processes for the industries and agriculture of this republic of the U.S.S.R. which lies on the eastern side of the Caucasian Mountains.

Chromite, the ore of chromium needed for steel alloying, as well as ores of cobalt, barium and aluminum have been discovered. Cotton yields have been increased.

The autonomous academy replaces a branch of the U.S.S.R. Academy and the new organization starts with 15 academicians under the presidency of Dr. M. Markazimov.

*Science News Letter, May 26, 1945*

*Anaxagoras*, who lived from 500 to 428 B.C., was banished from Athens for teaching that the sun was a red-hot stone, and the moon simply another earth that does not shine by its own light.



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