

MEDICINE

TB Vaccine Succeeds

CONTRADICTING the opinions recently expressed by United States experts that the B.C.G. tuberculosis vaccine was of little, if any, value, the British Medical Research Council has made a progress report on a controlled clinical trial it has been conducting since 1950. The Council says, in a 20,000-word report, that it has proved vaccination against tuberculosis does prevent the disease in young people.

Nearly 57,000 children, aged 14 to 15½ years, living in different parts of England, were used in the tests. The tests were started nine years ago and many of the subjects are now young men and women. They have all been closely studied since they were first vaccinated. The reduction in tuberculosis attributed to vaccination which is given by injection is 83%.

The trial has been conducted by a team under the direction of Dr. P. D'Arcy Hart, with the cooperation of local health authorities. "These tests establish beyond question the value of vaccination for young people," Dr. Hart said. He added that protection had been shown to extend beyond adolescence into early adult life. It lasted for at least five years and perhaps six or more years. The potentialities of vaccine were even greater than had at first been thought.

The object of vaccination is to give a person a harmless infection which will confer immunity against a later virulent infection. Protection is still well worthwhile.

Although the number of deaths from tuberculosis has fallen remarkably in recent years, many cases of the disease are

discovered yearly. Last year about 30,000 were notified in England and Wales.

Two vaccines have been used in these tests: the *Bacillus Calmette Guerin*, named after its discoverers in Paris more than 30 years ago, and usually called B.C.G.; and a vole bacillus vaccine discovered by Dr. A. Q. Wells, of Oxford, England, who was a member of the investigating committee until his death in 1956.

The Wells vaccine proved superior even to B.C.G. During the five-year follow-up period, the annual incidence of tuberculosis in the B.C.G.-vaccinated group was 0.38 per 1,000. This compared with 2.29 per 1,000 in the unvaccinated group. This represented a reduction attributable to vaccination of 83%. The annual incidence in the Wells bacillus-vaccinated group was 0.33 per 1,000 against 2.62 in an unvaccinated group. This represented protection of 87%.

The Medical Research Council says: "The present results show that a general vaccination scheme among children 14 to 15 years of age should reduce the number of cases developing between the ages of 14 and 21 by about one-half."

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ENGINEERING

Russian Mining Method Sinks 10-Foot Hole Fast

RUSSIA reports development of a mining method that can sink a ten-foot shaft at the rate of about three feet every four minutes.

In the new method, liquid explosives

are piped through an opening in a big drill bit. A detonator is added to produce a rock-shattering explosion.

As reported in the Central Intelligence Agency's *Scientific Information Report* circulated by the U. S. Department of Commerce, the explosive mining method has been under development since 1957 by Russia's Central Scientific Research and Planning-Design Institute for Underground and Mine Building.

Experiments showed the equipment can sink a ten-foot hole about three feet every four minutes, or a 24-foot hole about three feet every 25 minutes. This is ten times faster than by conventional methods, reports A. Osipov in a technical journal published in Moscow.

Jim Hill, assistant chief mining engineer at the U. S. Bureau of Mines, Washington, D. C., said he knows of no similar explosive technique under development in the United States.

In the United States, conventional drills are used to punch holes in rock. These holes are packed with dynamite and shot. Loose rock is then loaded into buckets mechanically and hauled out of the hole, he said.

Unless the Russian method proved to be inexpensive, it is unlikely that it would find wide acceptance in American mining circles.

In the U. S. individual companies sink their own shafts and must bear the cost of the shaft-sinking equipment. In South Africa, and presumably Russia, where one agency may sink shafts for many projects, expensive equipment could be economically justified, he said.

Mr. Hill said he doubted that Russia is actually now applying the explosive mining method. He based his opinion on recent information concerning a dispute between South Africa and Russia over who had sunk a shaft the faster. South Africa claimed 863 feet a month, and Russia claimed 1,000 feet a month. Neither figure would indicate that radically new techniques were being used.

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PALEONTOLOGY

Dinosaur Remains Main Guest at Museum Dinner

THE LARGEST plant-eating dinosaur ever prepared for public exhibition has made its preliminary debut at the Cleveland Museum of Natural History dinner.

Haplocanthosaurus (half-spined lizard) lived in the Jurassic at least 120,000,000 years ago and was dynamited out of Colorado rock by a youthful team of Clevelanders, beginning in 1954. When the restoration is complete the bones of the giant beast will measure about 70 feet long and 13 feet at the shoulder, possibly the world's largest.

Head and neck are on display now and the whole specimen will be completely mounted next year.

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PLANT-EATING DINOSAUR—The skeleton of the 70-foot *Haplocanthosaurus* is a feature of the Cleveland Museum of Natural History's new Hall of Nature.