

PUBLIC HEALTH

Protection From Lockjaw

Booster shot is all that 20,000,000 persons in U. S. need when lockjaw threatens, due to long-lasting power of tetanus toxoid given to them as children or by armed services.

► SOME 20,000,000 persons in the United States now have long-lasting protection against tetanus, or lockjaw, thanks to toxoid shots given them as children or when serving in the Armed Forces during or since World War II.

If they should step on a nail, get a bad splinter or be injured by a blank cartridge or cap, a booster shot of toxoid will give them as much protection from tetanus as the tetanus antitoxin usually given prophylactically in such injuries. And they will then not have to run the risk of sickness due to reaction to the horse serum of the antitoxin.

Figures showing this were reported to the American Surgical Association meeting in Cleveland by Drs. Edward S. Stafford and Thomas B. Turner and Leon Goldman of the departments of surgery and microbiology of the Johns Hopkins University, Baltimore.

Every one of 72 men and women who served in the Armed Forces during World War II and got their last tetanus toxoid inoculation from five to 11 years ago still had a measurable amount of tetanus antitoxin in their blood when tested by the Hopkins scientists. Three-fourths of them had 50% of the amount considered protective against tetanus.

A single booster dose of toxoid brought the antitoxin levels in their blood way up within one week. Those who had the lowest level got a hundred-fold or more increase.

The rise began about the fourth or fifth day after the booster dose was given. This is as fast as the rise in serum antitoxin level after injection of the usual dose of tetanus antitoxin given as prophylaxis in injury cases.

A group of 73 persons who had been given tetanus toxoid within the past five years had a generally higher level of antitoxin than those given toxoid earlier. However, as could have been predicted, no tetanus antitoxin could be found in the blood of any of a group of 30 persons who had not had toxoid.

The value of tetanus antitoxin as treatment in cases of tetanus if it develops is not questioned. And occasionally a patient may get such an overwhelming dose of tetanus germs that he will develop tetanus in spite of having been immunized by toxoid. Such a patient will need antitoxin for treatment.

Patients who need antitoxin and who are sensitive to horse serum might be helped, preliminary studies show, by blood or blood serum from someone who has been immunized against tetanus.

The Hopkins scientists make three recommendations:

1. In treating injuries of persons known to have had active service in the Armed Forces during or since World War II and of children and adults who are sure they have had tetanus toxoid, a booster shot of toxoid alone should be given to prevent tetanus.

2. Effort should be made continuously to enlarge the portion of the population enjoying basic immunity to tetanus through toxoid inoculations.

3. Local health departments should consider establishing a permanent immunization roster so that a surgeon treating an injured person could learn through a quick phone call whether or not his patient had had toxoid against tetanus.

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GENERAL SCIENCE

Local Science Fairs

► ARE LOCAL science fairs really finding the boys and girls today who will be the nation's future scientists?

"Yes!" is the emphatic answer given by Science Clubs of America, sponsors of nationwide science fairs under SCIENCE SERVICE and local newspaper auspices.

Figures on finalists to the first four National Science Fairs show that local judges boast a .800 batting average when it comes to singling out the boys and girls most likely to become scientific leaders.

Four out of every five finalists are pursuing scientific studies. A few are undecided and others either have settled down to rear families, have taken jobs, are in specialized technical training or are in the armed forces.

Of all the sciences, engineering has recruited the largest number of the finalists. Twenty-two have elected to study general, aeronautical, chemical, civil, electrical, industrial or mechanical engineering.

Chemistry has attracted the second largest number, 15, including a girl who is majoring in biochemistry. Seven others are pursuing physics courses.

The biological and medical sciences have called 16 into their ranks. These finalists have spread themselves through biology, genetics, wildlife conservation, zoology, medicine, medical technology, nursing and occupational therapy.

Others of the former finalists now are taking up geology, meteorology, education, psychology, agricultural economics, finance,

• RADIO

Saturday, May 15, 1954, 3:15-3:30 p.m., EDT

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Dr. Willard F. Libby, professor of chemistry in the Institute for Nuclear Studies, Dept. of Chemistry, University of Chicago, will discuss "Radio-Carbon Dating." Dr. Libby delivers the principal address at the Fifth National Science Fair at Purdue University, Lafayette, Ind.

MEDICINE

Alcoholism Hits More Than Polio or Cancer

► ALCOHOLISM IS an "important illness" that hits 10% more people than tuberculosis, 50% more than cancer and 225% more than polio, Edward L. Morris, executive director of Portal House, Chicago, declared at the meeting of the Industrial Medical Association in Chicago.

Industrial physicians, he said, should realize that rehabilitation of the alcoholic is slow and progress uneven. But, he said, "the problem drinker in industry is by no means a lost cause or a waste of time."

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industrial management, home economics, and political science.

Compiled by Margaret E. Patterson, executive secretary of Science Clubs of America, these figures are based on returns of a questionnaire sent to 163 finalists. A few questionnaires are still out, but the ratio of scientist selection would still be four-out-of-five, Miss Patterson believes.

The Fifth National Science Fair is being held May 13, 14, and 15 in Lafayette, Ind. About 100 new finalists are expected to attend the three-day session on the campus of Purdue University. The teen-aged boys and girls will vie for more than \$1,000 in awards of their own choosing.

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PSYCHOLOGY

Warns Against Use of Sarcasm

► DO NOT be sarcastic toward employees, a psychologist warned, in effect, at the Industrial Medical Association meeting in Chicago.

Sarcasm, either public or private, brought the worst results, intelligent supervision the best of 12 types of activity by which industrial psychologists tried to effect good mental attitudes among employees, Dr. W. A. Eggert, chief psychologist of the Lumbermen's Mutual Casualty Company, Chicago, reported.

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