

## MEDICINE

# Hoarseness Warning

➤ **HOARSENESS IS** not a sickness in itself. It is a symptom or sign of something wrong with the vocal cords in the larynx, or voice box, in the throat.

More than 100 different diseases may affect these delicate cords and cause hoarseness, the Illinois State Medical Society has reported. Some of these diseases are more common than others. A common cause of hoarseness is the cold.

Just as the nose is clogged during a cold by the swelling of the inflamed tissues, so the vocal cords may become inflamed and swollen with hoarseness resulting, the society explained.

Another common cause of hoarseness is the presence of a growth or tumor in the larynx. Such tumors may be benign or malignant. An example of the benign would be the so-called "singers' nodules," which occur after prolonged overuse of the voice. In the cancerous type of tumor, however, the cause is not known and hoarse-

ness is usually the first and only symptom that a malignancy has developed.

Hoarseness results from a number of conditions, ranging from the simple excessive cheering at a ball game to the serious hoarseness associated with diseases of the heart and brain.

Tuberculosis of the larynx, once a common cause of hoarseness, is rapidly being eradicated through the tremendous medical progress in the management of this disease.

Hoarseness is a warning signal in a children's disease commonly known as "croup." Because the breathing space is reduced by the swollen vocal cords, the results can often be serious and even fatal.

When hoarseness persists for more than three or four weeks, a physician should be consulted. Its persistence could be a warning of the presence of any one of a number of conditions.

Science News Letter, July 31, 1954

## MEDICINE

# Stiff Shoulder Mystery

➤ **DOCTORS AT** the Mayo Clinic, Rochester, Minn., have been pondering the mystery of why some patients with coronary heart disease get a painful, stiff shoulder.

The painful, stiff shoulder condition is called periarthritis. It is not the same as the pain that radiates from the heart to the arm in an attack of angina pectoris or certain other heart conditions. It afflicts about 12 to 22 out of every 100 coronary patients, according to reports by various doctors.

This is too often for mere coincidence, Dr. Charles H. Scheffley points out.

There are two theories to account for the condition. One of these is the reflex theory. According to this, the pain during a heart attack travels up nerves to the brain and then down other nerves to cause disability of the shoulder muscles.

The second theory is the disuse theory. The rest in bed after a heart attack may, according to this theory, result in loss of tone of the muscles and ligaments supporting the shoulder. This would lead to relaxation of the shoulder joint capsule, producing a mechanical misfit that in turn would lead to inflammation, pain and stiffness.

If disuse starts the trouble, use of the affected shoulder and arm should be the best treatment. At least one physician has reported good results from active exercise under a competent physical therapist, which seems to give evidence supporting the disuse theory.

On the other hand, another group of doctors got good results by repeatedly injecting an anesthetic to block the sympathetic nerves presumed responsible for the trouble if it were caused by a reflex nerve action.

Questioning 50 physicians with considerable experience with heart patients who had the stiff, painful shoulder condition, Dr. Scheffley found them equally divided in support of the two theories of the condition's cause.

The bulk of the evidence, he states, seems to be in favor of reflex changes starting the condition. However, he says, proof will probably not come until there is an entirely new approach to the problem.

Science News Letter, July 31, 1954

## VETERINARY MEDICINE

## Cattle Now Have Own Vaccine for Rabies

➤ **RABIES VACCINE** for cattle is now available. Cattle are far more susceptible than dogs to this disease.

While dog rabies vaccine has been used for cattle immunization, it has not proved satisfactory. The new vaccine, a modified live virus grown in chick embryos, was developed by Lederle Laboratories, New York. It gives protection for a minimum of two years against rabies that can be transmitted by bites of dogs, foxes and vampire bats.

Rabies is most prevalent among cattle today along the east coast from New York to Florida, with the heaviest concentration in the southeastern part of the country. More than 1,000 cases throughout the nation were reported to the animal disease eradication division of the U. S. Department of Agriculture, and this figure is regarded as a small percentage of the total 1953 cases.

Science News Letter, July 31, 1954

# Questions

**ASTRONOMY**—In what two ways could lunar craters have been formed? p. 77.

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**FORESTRY**—What are the advantages of thinning crowded trees? p. 74.

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**GERONTOLOGY**—How have disabled older persons been restored to some usefulness? p. 69.

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**MEDICINE**—Why are low salt diets dangerous? p. 70.

□ □ □

**METEOROLOGY**—What is the highest temperature ever recorded in the United States? p. 71.

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**NUTRITION**—How are eggs graded? p. 68.

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**TECHNOLOGY**—What industrial applications could a hydraulic tooth drill have? p. 75.

□ □ □

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## AERONAUTICS

## Prototype Turbine Blades Made of Titanium Alloy

➤ **PROTOTYPE TURBINE** blades forged of a titanium alloy have been produced for the jet engine to power Canada's CF-105, new fighter plane designed to fly a supersonic 1,200 miles an hour.

Believed to be the first such blades in the world, they were pressed from dies by Canadian Steel Improvements Ltd., Toronto, for A. V. Roe Canada Ltd.

Tests with titanium alloy blades at high temperatures and under high spinning stresses left them unchanged in shape. They did not corrode or otherwise break down at increasing speeds.

The forgings are also of such accuracy that only the leading edges of the blade and the blade root need any machining, except for overall polishing.

Science News Letter, July 31, 1954

## REFRESHER COURSE IN MATHEMATICS

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