

MEDICINE

Hormone Aids Rheumatics

Compound E, rechristened cortisone, may be effective against both rheumatic fever and rheumatic heart disease. It is on trial for rheumatoid arthritis.

► RHEUMATIC fever and its dangerous sequel, rheumatic heart disease, may eventually be conquered by the same gland hormone that is now under investigation as a treatment for rheumatoid arthritis. This is the hope in the latest report from the Mayo Clinic scientists who have pioneered the work with this hormone. (See SNL, April 30, p. 277).

Success in treatment of four patients with rheumatic fever and one with rheumatic heart inflammation with fever was reported by the group at the International Congress on Rheumatic Diseases. The Mayo Clinic anti-rheumatism team consists of Drs. Philip S. Hench, Edward C. Kendall, Charles H. Slocumb and Howard F. Polley. Dr. Kendall is the biochemist who discovered the compound used.

Known first as "compound E," it has now been rechristened cortisone. The name was changed because too many people were confusing this synthetic hormone with vitamin E, an entirely different substance, and buying the vitamin at drugstores in the mistaken belief that it would help their arthritis.

Dr. Kendall first discovered cortisone as

a hormone produced by the outer part of the adrenal glands, small organs lying one atop each kidney. He and chemists at Merck and Co. have since developed methods for producing it synthetically.

Although it has produced striking relief of symptoms in 16 patients with rheumatoid arthritis, literally enabling some bed-ridden arthritics to get up and walk, symptoms return when the drug is stopped. And the difficulty of making it keeps the supply so short that the doctors have only enough for 20 patients and only can get enough for one week in advance.

Women taking the compound get rounded faces, but this baby-face effect is marred by a growth of hair like a beard. They do not get any masculinizing effects, such as change of voice, however. They also get very hungry, eating up to 6,000 calories a day if allowed that much food. And they gain weight, sometimes as much as four pounds in a day. The weight, however, is mostly water which they later lose.

These side effects, which afflict women more than men, are among the problems still to be overcome before cortisone can

be considered ready for general use. Biggest of the problems is the one of supply. Others are concerned with the best dosage and best method of giving the compound, whether daily or weekly.

Science News Letter, June 18, 1949

MEDICINE

Scientists Discover What Happens in Heart Flutter

► SCIENTISTS now know what happens when some hearts flutter. In physically ailing hearts in some cases, the flutter contraction flies off in all directions from a point. It was previously supposed the flutter went in one direction in a "circus" or ring movement.

Slow motion pictures of the flutter wave, taken through an opening in the chest wall in dogs, showed this to be the case, Drs. Myron Prinzmetal, Eliot Corday, T. C. Brill, Alvin L. Sellers, Walter A. Flieg and H. E. Kruger of Los Angeles reported at the meeting of the American Heart Association in Atlantic City.

The heart flutter they studied is one occurring in the auricles of the heart. These are the two chambers that receive blood from the lungs and general circulation. The ventricles, which pump blood out of the heart, are no longer able to respond to the impulse from the auricles when they start fluttering, so a partial or complete heart block is set up.

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MEDICINE

Heart Disease Is Greatest Killer Among Mine Workers

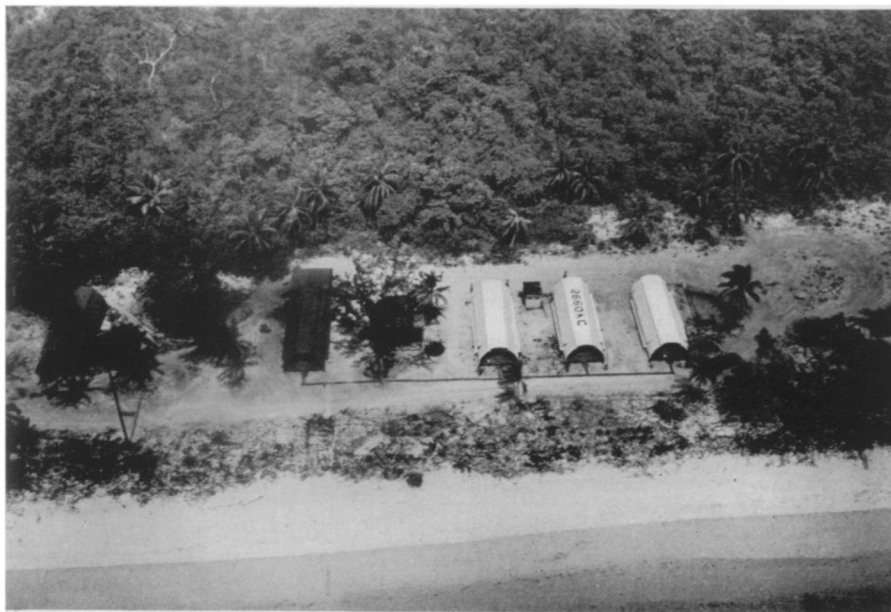
► HEART DISEASE and not tuberculosis takes the greatest toll of lives among coal miners. This fact, contrary to popular impression, was reported by Dr. H. A. Slesinger of Windber, Pa., to the meeting of the American Medical Association.

Although the development of miners' asthma, the name sometimes given for the disease which results from inhaling too much dust, makes the patient more susceptible to TB, other factors also enter into the picture, he said. The prevalence of TB in the community and the presence of previous infection influence the frequency of TB in these patients.

Two other diseases, pneumonia and lung abscess, have lost their position as common causes of death among miners, thanks to the antibiotics and sulfa drugs.

Hard coal miners have until recently been thought to be the only ones exposed to the danger of developing the lung infection which comes from inhaling minute particles of dust in the mines. It is now recognized as an occupational disease among soft coal miners as well, Dr. Slesinger pointed out.

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LINK IN LORAN CHAIN—A typical loran station of the type now in use on a dozen islands in the Pacific is shown above. It perhaps is a symbol of the lonely life lived by the Coast Guard men who operate them. These stations play an important part in both surface and air navigation. By means of radio beams received simultaneously from two of them, a ship or airplane gets its true geographical position.