

## MEDICINE

# Aviators May Get Bends

Men required to perform moderate exercise in combat airplanes at altitudes as low as 26,000 feet may suffer from divers' afflictions.

► BENDS and chokes, commonly thought of as divers' and sand-hogs' afflictions, may attack aviators as well. Men called upon to perform duties requiring only moderate exercise in combat ships at altitudes as low as 26,000 feet may suffer from bends and chokes, Capt. Cosmo G. Mackenzie and Lieut. Austin H. Riesen of the Greenville Army Air Base, Greenville, S. C., report. (*Journal, American Medical Association*, Feb. 19)

It has generally been supposed that diver's paralysis, often seen after men who work under high atmospheric pressures have returned to the ordinary atmosphere, occurs very seldom if at all at altitudes less than 30,000 feet.

Moderate exercise and delayed elimination of nitrogen from the body in a flight lasting two hours at 28,000 feet produced pains in the bones and lungs, necessitating descent in 36% of the cases. These symptoms occurred in 33% of the men tested at 27,000 feet, in 21% at 26,000 feet, and none at 25,000 feet.

Exercise seemed to be the primary cause of bends at an altitude of 28,000 feet, occurring in 28% of the men tested by moderate exercise alone. A deep, sickening pain was felt, frequently associated with the loss of the use of the affected member of the body.

At an average altitude of 18,500 feet

during descent the symptoms of bends disappeared.

There seemed to be no correlation between body build or physical fitness and susceptibility to bends among the group tested. Older men seem to be less susceptible, however, Captain Mackenzie and Lieutenant Riesen report.

All the men participating in these experiments were volunteers from the 16th Altitude Training Unit and represent a fair cross section of Air Corps enlisted personnel. They were all in good physical condition because of daily calisthenics and athletics.

"With the exception of the officers, these men had not experienced nor had they seen bends and chokes prior to the chamber flights," the authors report. "There is no reason to believe that any prejudice existed as to the results or that psychic factors played an important or significant role."

When the desired altitude had been reached, each man did five deep knee bends and extended five times at arm's length a 14-pound high-pressure oxygen cylinder held in the palms. These two exercises were repeated every ten minutes during the flight. The altimeters were covered, except for the first two flights, so that men in the chamber were unaware of their simulated altitude.

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**GIANT**—This massive tong has a lifting capacity of 80 tons, weighs 12,489 pounds itself and has an opening 69 inches wide. Constructed by Heppenstall Co., Pittsburgh, it was specifically designed for use in handling ingots in a steel plant. The small tong between the claws of the larger one has a lifting capacity of 1,600 pounds.

finish of the war in less than three years.

By next October, however, Admiral McIntire said, "We will know pretty well where we stand."

Young men being inducted into the Service from now on, he continued, must be able to meet physical requirements for full combat duty, because both Army and Navy plan to use for limited service those who have already seen combat duty and been too severely wounded or disabled to return to it. Their experience makes them of great value for teaching and other limited service activities. The new Navy plan for rehabilitation of the wounded includes an arrangement whereby industrial organizations that will employ the men when they have recovered are teaching them a trade while they are still in the hospital.

Admiral McIntire gave high praise to medical researchers and said that thanks to their efforts malaria control in the Southwest Pacific is now better in hand.

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## PUBLIC HEALTH

# Navy To Hold Doctors

About one-third of its physicians will be kept from going back to civilian life for some time after the war. Navy has new plan for rehabilitation of wounded.

► MEDICAL planning for the future must be based on the fact that the Services will need many physicians for some time after the war, Rear Admiral Ross T. McIntire, surgeon general of the U. S. Navy, declared at the Congress on Medical Education and Licensure held in Chicago under the auspices of the American Medical Association.

If the Navy can give back within the first post-war year two-thirds of the doctors it has taken from civil life, it will be doing well. It will need one-third of them for a long time after that, Admiral McIntire said.

Doctors and medical educators were warned by Admiral McIntire that they have no right to make plans for the

## Relocation of Physicians

► AN ANSWER to the question of peace-time distribution of medical care may be found in the wartime experience with relocation of physicians to meet the