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ASTRONAUTICS

Men Live in Space Home

TWO MEN will soon take up housekeeping in the world's tiniest efficiency apartment—a cabin that closely resembles the capsule that will house future space crews.

The two men will eventually be able to stay within the eight-by-12-foot cabin for periods up to 30 days, Dr. Billy E. Welch of the School of Aviation Medicine, Brooks Air Force Base, Texas, told scientists attending lectures in space medicine.

The exact date for the first 30-day run has not yet been chosen, due to flaws that have snarled smooth operation of the cabin apartment. Nevertheless, many of the creature comforts of home will be aboard when the men finally say good-bye to the outside world for their 30-day stay.

There is one seven-foot bed, with a two-inch foam rubber mattress, built into the side of the cabin. There is also one chair in front of the instrument panel. The two-man crew will have a coffee pot and small oven.

The simulated space compartment will carry a 30-day supply of food, which may include irradiated or dehydrated food as well as some canned portions. The men will have 22½ gallons of water in the cabin, plus a system that will recycle all liquids to replenish the water supply, Dr. Welch said.

Only one-man cabins have been tested previously, and the time record is prob-

ably held by a Strategic Air Command pilot who remained in a cabin eight days. The first men to be chosen for the two-man experiment will be cabin technicians, the chief of the space ecology department said.

They will be watched 24 hours a day through one-way windows, and television screens. The "passengers" will be allowed to communicate to the outside, but they will receive no responses from the men on guard.

They will wear ordinary clothes, and will be allowed to smoke. The men may read books they bring aboard or listen to music, individually chosen before the trip. They may have to listen to the music with earphones since both men will not always enjoy the same music at the same time. Very likely one will have duties to perform that might be impaired by such distraction, Dr. Welch said.

Every effort will be made to simulate the isolation of space. Even atmospheric noises and disturbances will be superimposed on the men's radio circuit.

The new cabin, built by Minneapolis-Honeywell's aeronautical division plant in Minneapolis, is an improvement over the school's one-man simulator in which Airman First Class Donald C. Farrell made a seven-day "moon trip" last year.

Science News Letter, January 30, 1960

SURGERY

Heart Massage Succeeds

A BRITISH doctor's quick action in starting heart massage is credited with saving the life of a patient who had "died" of a coronary thrombosis.

The patient is alive and well, some nine months later.

Heart massage is now a common and successful technique performed when the heart stops during and immediately after anesthesia. However, Dr. R. S. Walton of Preston, Lancashire, reports in *British Medical Journal* (Jan. 16) "there is no record in this country of complete cardiac asystole from coronary thrombosis being resuscitated with uneventful recovery and well-being."

(Asystole is an incomplete or imperfect systole—the contraction of the heart's ventricles by which the blood is driven into the aorta and pulmonary arteries.)

Time is the important factor in attempts to revive a person with a stopped heart following a coronary thrombosis, Dr. Walton warns. If there is a question as to diagnosis or if suitable equipment is not available, an incision should be made in the chest wall. No bleeding points to asystole and heart massage can be tried. If there is bleeding, Dr. Walton explains, the patient's heart muscle is "most certainly" fibrillating, or contracting irregularly, and the physician may have time to wait and try the effects of electrical or chemical agents to restore normal heart action.

The irregular heart muscle contractions—ventricular fibrillation—that followed the successful heart massage were stopped by administering procaine hydrochloride, which restored normal rhythms. Procaine is known to reduce the irritability of the heart muscle, Dr. Walton reports, but this appears to be the first such record of its use.

Science News Letter, January 30, 1960

Questions

ENGINEERING—What is the basis of the system "TPR"? p. 69.

METEOROLOGY—What is the Bermuda High? p. 67.

NATURAL RESOURCES—How many maps did the Geological Survey prepare during 1959? p. 72.

PUBLIC HEALTH—What seven flavoring substances have not been entirely cleared as far as being safe for human consumption is concerned? p. 66.

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