

MEDICINE

Best Migraine Preventive

► MIGRAINE HEADACHES can be an expensive misery, but a new drug can prevent them—at a price.

Fifty little yellow sugar-coated pills called Sansert cost the migraine sufferer from nine dollars to \$15, depending on the drug-store that fills the prescription.

Sandoz Pharmaceuticals, Hanover, N.J., which produces this new drug (methysergide) points out, however, that patients with really severe and frequent migraine headaches spend much more than one dollar a day to get relief from less effective drugs.

Dr. John R. Graham of Harvard Medical School and director of the Headache Research Foundation, Faulkner Hospital, Boston, reported in the *New England Journal of Medicine*, 270:2, 1964, that methysergide is the "best pharmacologic agent for the prevention of vascular headache of the migraine type that has so far been tried."

His research was based on experience with 500 patients over a three-year period in an effort to find out just how this new drug prevents headache.

One of the theories is that the drug is a powerful antagonist of the blood-dwelling serotonin, a chemical that causes blood vessels to constrict.

However, Dr. Graham said still more research is needed to find out exactly what happens.

Sandoz officials said that they have a number of cheaper remedies for persons having headaches only once a month.

The officials agree with Dr. Graham, however, that Sansert is the best available drug for patients severely enough handicapped to warrant this expensive and potent preventive.

In a report last July (see SNL, 84:39, July 20, 1963), SCIENCE SERVICE pointed out

that 85% of the people in the United States have headaches and that Sansert had been licensed for use against the most severe types of migraine.

Sandoz pharmacists as well as Dr. Graham say side effects such as nausea occur when Sansert is taken, especially in large doses.

They do not recommend the drug for patients who have peripheral vascular disease, hardening of the arteries or severe liver and kidney impairment. Nor should pregnant women take it.

Close supervision by the physician is advised and individual attention to the patient "as a person" is recommended.

• Science News Letter, 85:114 Feb. 22, 1964

BIOTECHNOLOGY

Artificial Heart Keeps Dogs Alive 27 Hours

► AN ARTIFICIAL HEART that has kept dogs alive for as long as 27 hours was described at the Sixth International Transplantation Conference, New York, by Dr. T. Akutsu and his associates at Cleveland Clinic, Ohio.

It is easily inserted into the chest cavity and has two separate ventricles, each a flexible sac in a rigid housing.

Compressed air pumped into the space between the sac and the housing squeezes the sac and pumps blood through the arteries.

The amount of blood pumped at each beat is regulated by a servo-control mechanism.

The new all-plastic device has sustained circulation in calves, and is designed to meet the demands of an adult human.

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SPACE

Astronauts Studied For Personality Clashes

► POSSIBLE PERSONALITY clashes among astronauts enclosed together on long journeys through space is a problem being studied by scientists at the United States Air Force Aerospace Medical School, Brooks Air Force Base, Texas.

Now that the single-man phase of the national space effort has ended, the problem is one that Americans in space will soon be facing.

The larger the group of astronauts, the more likely there will be problems in adjustment, said Dr. Bryce Hartman, chief of the school's psychobiology branch.

Dr. Hartman said that all man-in-space programs now underway, however, put no more than three men in a capsule at a time.

Studies of submarine crews on long trips have shown that a man's role in the mission, his equipment and the interest he has in his job may be factors that can overcome an inability to adapt to other crew members.

Three times the school sent unselected and mismatched crews on mock space missions, and feelings generally were suppressed while the men worked together to finish the missions.

This was found true even when men who disliked each other were thrown together closely for six weeks.

On one such pretended space flight, Dr. Hartman said, an immature, impulsive and self-centered man intentionally remained aloof to avoid provoking trouble.

But on another flight a clash developed between a cocky, outspoken crewmate and a rigid authoritarian.

The disagreement was so intense that an inquiry was made after the flight to see if charges should be preferred against one of them for behavior unbecoming an officer.

Through it all, Dr. Hartman said, other crew members kept a balance and prevented an open fight.

Dr. Hartman believes small crews will have few serious problems in space because each member will depend so much on each of the others for survival.

• Science News Letter, 85:114 Feb. 22, 1964

SPACE

Egg Embryos Unscramble Space Weightlessness

► THE REAL "SCRAMBLE" in outer space is shaping up as scientists prepare to launch one and one-half dozen chicken eggs wired for shock and containing embryos, plus a hard-boiled egg as a control.

How weightlessness or zero gravity affects the normal development of the embryos will be telemetered back to earth via miniature thermistors attached to the egg.

Engineers with North American Aviation's Space and Information Systems Division in Downey, Calif., hope the switch-board wiring effect will permit the eggs to survive blast-off, acceleration and reentry unscrambled.

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North American Aviation

EGGS FOR SPACE STUDY—Chicken eggs with developing embryos may be sent into space in a study on space survival and the effects of weightlessness. A research engineer at North American Aviation's Space Division, Downey, Calif., is inspecting some eggs for vibration testing.