

MEDICINE

Hallucinations Banished

► FRESH TRIUMPHS for a drug that relieves mental and emotional sickness were reported in the *Journal of the American Medical Association* (April 9).

The drug is chlorpromazine, used also to treat high blood pressure. Mental patients who had not talked for five to 10 years began to talk again after treatment with the drug. Children so acutely upset and badly adjusted that they had to be kept in locked rooms became cooperative and quiet.

Results "justifying a sense of optimism that has rarely resulted" from trial of new methods of treating mental sickness were obtained in treatment of 500 mental patients at Longview State Hospital, Cincinnati, Dr. Douglas Goldman reported.

Within a week nine severely disturbed and sick children showed improved behavior and continued to improve as they continued taking the drug, Dr. Robert L. Gatski of Danville, Pa., and the Governor Bacon Health Center, Delaware City, Del., reported.

Hallucinations, including alcoholic ones, were relieved "almost specifically" early in the treatment, Dr. Goldman found. Wildly excited patients were calmed to some extent almost immediately, though in rare cases electroshock treatments were needed in addition to the drug.

In chronic mental disease, the effects of the drug are "less dramatic," but gratifying results are obtained.

Severe paranoid ideas, such as the patient believing he is under the control of the Communists even with regard to body functions, take a little longer to clear up than the hallucinations.

In some cases chlorpromazine "happily" worked with electroshock or insulin to produce better results than either alone did.

Jaundice, itchy skin rashes and very low blood pressure were among reactions to the drug in some cases. The "most important and frightening" reaction Dr. Goldman reported was agranulocytosis. This is an anemia of the white blood cells which can be fatal. All the reactions, however, could

be controlled by stopping the drug and if necessary giving it again in smaller doses with appropriate treatment to control or ward off the reactions.

Science News Letter, April 23, 1955

MEDICINE

Special Sugar Clue to Longer Blood Storage

► DISCOVERY OF an enzyme chemical in red blood cells which might lead to means of preserving blood twice as long as now possible was announced at the meeting of the Federation of American Societies for Experimental Biology in San Francisco.

The discovery was made by Drs. Beverly Gabrio, Frank M. Huennekens and Clement A. Finch of the University of Washington.

Previously, they found that the deterioration of stored blood could be retarded by an organic chemical called adenosine.

With the addition of adenosine to the usual blood preservation solution, blood can be stored for at least six weeks, instead of a maximum of three weeks. However, until now, adenosine has proved too toxic for human transfusions.

Drs. Gabrio and Huennekens have found an enzyme in the red cell which will beneficially break down adenosine so that only a non-toxic portion is used in the process.

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PHYSIOLOGY

Cough Winds Supersonic

► WHEN A person coughs, he starts air moving through his windpipe at a speed approaching or exceeding the speed of sound.

By the time the air gets up to the level of the Adam's apple, its speed has dwindled to hurricane velocity of about 100 mph. When it blows out of the mouth, it is moving at the 15 mph of a zephyr, Dr. Benjamin B. Ross of the University of Oregon School of Medicine, Portland, reported at the meeting of the Federation of American Societies for Experimental Biology in San Francisco.

The findings were made while Dr. Ross was working with Drs. Hermann Rahn, Raymond Gramiak and George H. Ramsey at the University of Rochester School of Medicine, Rochester, N. Y. The study started when a physician acquaintance, Dr. Howard G. Dayman of Buffalo, N. Y., noticed by means of a fluoroscope that the lower region of the windpipe of his patients constricted dramatically when they coughed. He mentioned this to Dr. Rahn.

Since a cough is over in one-tenth of a second, a slow motion camera was needed to investigate the mechanics of the cough. The



PLASTIC TANK DROPPED—New 225-gallon fuel tank tumbles through the air after being released from an Air Force F-84 fighter. The reinforced glass fiber tank was designed as a substitute for the conventional aluminum one attached to the other wing. Produced by the Molded Products Division of Admiral Corporation, West Chicago, Ill., the new tanks were tested at Wright Air Force Base, Dayton, Ohio.

University of Rochester scientists were able to use an X-ray motion picture camera that takes 60 frames per second, compared to 16 of an ordinary camera.

The big wind down in the windpipe was "clocked" with the aid of a flow-meter placed at the mouth. This instrument measured the volume of air that came out during a cough, and the X-ray motion picture film revealed the simultaneous changes in diameter of the lower windpipe, which was outlined by a radio-opaque liquid inserted by means of a tube and which coated the walls of the windpipe. With an exact knowledge of the amount of air involved and the size of the "tunnel" it was coming through, computing its speed was mathematics.

Science News Letter, April 23, 1955

Camels, yaks, water buffalo, ewes and reindeer are used as a source of *milk* in some parts of the world.

The oldest tagged *halibut* ever caught was landed at Seattle in 1950; the fish was about 25 years old and weighed 100 pounds dressed.

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