

MEDICINE

Can Predict Sex of Baby

► EXPECTANT PARENTS can know whether the baby will be a boy or a girl almost as soon as they know a baby is coming. They can, that is, if doctors can find a safe way to get from the mother's body the fluid needed for the test.

Of course even at the earliest that this test could be made, it would be too late to change the unborn baby's sex.

Findings showing that the baby's sex can be told before birth have now been reported by three groups of scientists: Dr. Landrum B. Shettles of Columbia University, New York, (See SNL, Feb. 11); Drs. Leo Sachs and Mathilde Danon of the Weizmann Institute of Science, Rehovoth, Israel, and Dr. David M. Serr of Rothschild-Hadassah University Hospital, Jerusalem, Israel; and Drs. E. L. Makowski, K. A. Prem and I. H. Kaiser of the

University of Minnesota Medical School, Minneapolis. The last two groups report their findings in a communication to *Science* (March 30).

All three groups make their pre-birth sex predictions by examining cells found in the amniotic fluid which surrounds the baby in the womb. The cells in this fluid come from the baby. The sex chromatin body which shows the baby's sex can be seen in these cells when they are examined under the microscope.

The Israeli scientists report having determined sex of babies in the sixth and seventh months, that is, two and three months before birth. And they point out that amniotic fluid can be obtained from living human fetuses from 12 weeks on to birth.

Science News Letter, April 14, 1956

MEDICINE

Stomach Ulcer Danger

► One out of every four stomach ulcers "harbors stomach cancer," the American Cancer Society announces.

The figure is from a study by Dr. Mark A. Hayes of Yale University School of Medicine. Dr. Hayes reviewed the histories of patients with ulcer symptoms treated over the 20-year period 1929-1949 in New Haven. He found that 468 of the patients turned out to have stomach cancer.

Only one in 100 stomach cancer patients survived five years during the period of study. Modern treatment methods have raised this to between five and 10 per 100 five-year survivors.

Of those operated on within four weeks of the appearance of the stomach ulcer symptoms who were found to have a can-

cer, 66 of every 100 survived, Dr. Hayes found.

The moral, he said, is to operate soon after stomach ulcer is diagnosed and is found not to respond to the usual medical treatment.

Best way to determine whether stomach ulcers contain cancer cells is to remove the tissues and examine them under the microscope. Any other method is uncertain, Dr. Hayes said.

In his study, the size of the ulcer, its location in the stomach and analysis of the stomach contents were unreliable for distinguishing between ulcer and cancer.

X-ray pictures gave a correct diagnosis in only one-half the cases.

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PLANT PHYSIOLOGY

Plants Have Own Clocks

► PLANTS have their own clocks, and these clocks tell them when to send out their first flowers, when to prepare for winter, and even, as seeds, when to sprout.

Animals have similar clocks which serve a like purpose.

Dr. Sterling B. Hendricks, U. S. Department of Agriculture chemist, reports some of the relationships between the problems of plant and animal adjustment and their time-telling mechanisms in a paper prepared for delivery to Sigma Xi audiences across the country.

Light-sensitive pigments in plant leaves are the clocks with which plants measure time. Knowledge of animals' ability to measure time is still largely descriptive, but

it is easy to see how a shrimp in an ice-covered pond might know that the water will soon be warm because the nights are growing shorter.

Dr. Hendricks says his lecture is intended as a philosophical discussion of the methods of science.

"I intend to indicate how science starts with some very strange procedures to learn what often become commonly accepted truths," the USDA chemist declares.

Some of these "strange procedures," according to Dr. Hendricks, are well illustrated in investigations of the responses of plants and animals to changing seasons.

The first step in the investigations, begun a quarter of a century ago, involved over-

coming the prejudice that seasonal change in living things depends solely upon temperature and demonstrating that photoperiodism exists. Photoperiodism is the influence of length of day and night on plant and animal growth and reproduction.

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PSYCHOLOGY

Demand for Surgery May Be Suicide Attempt

► THE PATIENT who insists on having a surgical operation he does not really need may unconsciously be trying to commit suicide, Drs. Charlyne T. Seymour and A. Estin Comarr of the Veterans Administration Hospital, Long Beach, Calif., told the Western Psychological Association meeting at Berkeley.

They told of a patient who continued to complain of pain in the neighborhood of an injury received in service in 1942.

Doctors finally resorted to a brain operation (prefrontal lobotomy) in the hope of preventing the patient's addiction to narcotics he took to ease his pain.

The operation failed to control his pain or stop his addiction. He should have been treated for his suicidal drives, the psychologist said.

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PHYSIOLOGY

Findings Upset Theory Of Bleeding Control

► A THEORY about normal control of bleeding which scientists have held for nearly 40 years is upset by findings of scientists at the National Heart Institute, Bethesda, Md.

The findings and the theory are about a chemical called serotonin. This is found in the brain and in the blood platelets, tiny disc-shaped corpuscles throughout the blood. Serotonin can constrict blood vessels. Almost from the time of its discovery in 1918 scientists thought that when it was set free from ruptured platelets in wounds it slowed bleeding and encouraged blood clot formation.

Now the heart institute scientists find that when they give reserpine, a tranquilizing and blood pressure lowering drug, to laboratory animals, serotonin is set free from blood platelets.

More than 90% of the serotonin can be set free from the blood platelets by this method. But the time for wounds to stop bleeding in rats, rabbits and guinea pigs is the same as for animals not treated with reserpine. This means that serotonin is "unlikely" to function in control of bleeding.

The findings were made by Drs. Parkhurst A. Shore, Bernard B. Brodie and associates and are reported in the *Journal of Pharmacology and Experimental Therapeutics*.

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