

MEDICINE

Birth Control by Chemical

Discover mystery synthetic compound, now being tested on mice, that promises future birth control of the world's population. Further studies needed.

► A MYSTERY chemical which promises future birth control of the world's population, so that the earth will be able to support its people, is under study in a laboratory at New York University.

The existence of this chemical and promising results in preliminary trials with laboratory mice were reported briefly by Dr. Eli D. Goldsmith of the university's college of medicine at a New York Academy of Sciences conference on world population problems and birth control.

Dr. Goldsmith would not state the name of the chemical because of fear that it might be used illicitly and even dangerously before further careful animal studies had established a safe dosage for humans.

When given to mice a few days after they have become pregnant, the chemical prevents the birth of baby mice. The uterus, 21 days after the chemical has been given, shows that there has been a pregnancy, but the fetuses are not there. They have disappeared by the process known as resorption.

The chemical is fed to the mice in a routine laboratory diet. Experiments are

now starting to determine whether the chemical will prevent conception if fed before the mice are inseminated.

Dr. Goldsmith does not know whether the mystery chemical will have the same birth-controlling effect in humans as in mice. Studies with larger animals closer to humans in the evolutionary scale will be needed before human trials are made.

The correct dosage must also be determined, even for laboratory animals. At present Dr. Goldsmith has worked out a dose which has a birth-control effect without killing the mice. But he wants to find the least amount needed for the birth-control effect. Also to be determined is the minimum period the chemical must be taken.

The mystery chemical is a synthetic which has been made only in the last few years. At present it is being tested in humans under carefully controlled conditions for an entirely different purpose. More than this Dr. Goldsmith would not say by way of identification.

Science News Letter, October 27, 1951

PHYSICS

Radiation Sets Life's Stage

► EVIDENCE THAT atomic radiations bombarding the earth in the early stages of the earth's history could have set the stage for the origin of life has been obtained in cyclotron atomic energy experiments.

A team of University of California scientists exposed carbon dioxide water solutions to 40,000,000 electron volt helium ion beams from the 60-inch cyclotron in Berkeley. They found that it is possible to "reduce appreciable quantities of carbon dioxide to formic acid by means of water through the agency of radiation."

This means that before there was any life organic matter could be created. Since one popular and plausible theory is that life originated in the beginning in organic matter, this discovery reinforces this idea.

Radioactively labeled carbon isotope 14 was used in the tests. Formaldehyde as well formic acid, which are basic organic chemicals, were formed in the tests, but by just what chemical path is yet to be determined.

In the youth of the earth it is possible that

cosmic radiation was even more intense than it is now, giving the necessary radiation.

Drs. W. M. Garrison, D. C. Morrison, J. G. Hamilton, A. A. Benson and M. Calvin were the scientific team reporting to the journal *SCIENCE* (Oct. 19).

Science News Letter, October 27, 1951

MEDICINE

Drug Makes Permanent Abstiners of 50%

► SOME 2,500 alcoholics have gone on the wagon permanently and another 1,250 have made "basic improvement" through treatment with Antabuse, Dr. John Jewell, medical director for Ayerst, McKenna and Harrison, Ltd., stated in New York.

Dr. Jewell's statement covered reports from more than 100 clinics in the United States and Canada on over 5,000 patients. The tests have been going on since 1949 when Ayerst introduced the drug in this country.

Antabuse, termed "the drug that builds a chemical fence around the alcoholic," is now available for general prescription use. Chemically it is known as tetraethylthiuram disulfide. Its anti-alcoholic action was discovered by three Danish scientists, Drs. Erik Jacobsen, Jens Hald and O. Martensen-Larsen.

The drug is taken as a small white tablet to be swallowed. Taken alone in proper dosage it produces no reaction. But if the patient takes even small amounts of alcohol while under Antabuse treatment, he is afflicted by intense flushing, perspiration, difficulty in breathing, palpitation and nausea. The reaction is so unpleasant that the patient stops drinking.

Antabuse is intended for use under close medical supervision. While the patient has this "chemical fence" around him, treatment for his underlying emotional difficulty which led to excessive drinking can be given effectively.

Science News Letter, October 27, 1951

DENTISTRY

Nipple Will Keep Baby's Gums in Line

► A NURSING bottle nipple designed to prevent crooked teeth was shown at the meeting of the American Dental Association in Washington by its inventor, Dr. W. H. Griesinger of Portland, Ore.

The tip is oblong with a somewhat flattened top and bottom, designed to stimulate and widen the dental arch and relieve pressure in the middle of the baby's mouth. A transverse bar puts some stress in the front part of the mouth to help keep the dental arches in correct relation.

A vent on the part of the nipple that goes on the floor of the mouth is intended to prevent baby from swallowing air and to relieve colic.

Science News Letter, October 27, 1951

NATURAL RESOURCES

U. S. Uranium Reports Opened to Prospectors

► URANIUM PROSPECTORS will now have the chance to study reports previously not available on the atomic metal, the Atomic Energy Commission and the U. S. Geological Survey have announced.

The reports cover exploration work done by AEC and the Geological Survey in Arizona, Colorado, Montana, New Mexico and Utah. They can be read at nearly 50 different libraries, Commission offices and Survey offices scattered throughout the country. Information in the reports is for prospectors, mining companies and other persons or organizations interested in looking for and developing uranium deposits.

Results on mineralogical studies are also covered in some of the reports.

Science News Letter, October 27, 1951