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TIME SHRINKER—A 24-hour day shrinks to only 14 seconds on this analog computer developed in Honeywell's temperature-control laboratories. The computer electronically simulates temperature, humidity, wind and sunshine to help engineers like researcher Lorne Nelson (above) design building control systems for the future.

MEDICINE

Rh Factor Overcome

The Rh factor danger in second births may be alleviated by giving high antibody gamma globulin to the mother shortly after the birth of her first child—By Faye Marley

► THE DREAD of harming a second baby when the mother has Rh negative blood and the father has Rh positive blood may be a thing of the past if tests now being made in this country and in England are successful.

It is hoped that the blood condition called erythroblastosis, in which Rh positive babies must have their entire blood supply replaced at birth or run the risk of death, will be prevented by giving the mother high-antibody gamma globulin within a few hours after the birth of her first baby.

Dr. Julius R. Krevans, Johns Hopkins University geneticist, said in a short course in medical genetics in Bar Harbor, Maine, that a five millimeter shot of the antibody gamma globulin was expected to prevent "immunization" in the mother so that her next baby would not have the dread blood disorder.

The first baby is never in danger because the mother has not had time to build up enough antibodies to the blood of the Rh positive baby to cross into the placenta in sufficient amounts to harm it. It is expected that shots must be given after each pregnancy, however.

Another speaker, Dr. Allen B. Griffen of the Jackson Laboratory at Bar Harbor, said in an interview that his work with irradiated mice had convinced him that any

amount of radiation is dangerous to the male sperm. This includes fallout.

"There is no direct protection for the patient," Dr. Griffen said, "and the X-ray operator also is in danger. The lead apron he wears is not enough—he needs a lead box an inch thick. We should cut radiation to the lowest minimum necessary."

Dr. Griffen believes too much attention is being paid to DNA, or deoxyribonucleic acid, by scientists who find the protein work with chromosomes too hard. The DNA work is "wonderful chemistry," he said, but scientists are confusing DNA with the chromosome and they cannot be interchanged. Morphology is not chemistry, he warned.

• Science News Letter, 88:115 August 21, 1965

Risk Hereditary Diseases

► SOME COUPLES should probably never have children, a genetics counselor told SCIENCE SERVICE in Bar Harbor, Maine.

Dr. Margaret W. Thompson of the Research Institute at the Hospital for Sick Children, Toronto, Canada, said geneticists could not be sure of all of the specific dangers in heredity, but that they do have an obligation to tell prospective parents whenever science has shown that there is

a risk of producing malformed or diseased children.

More than 500 serious diseases or malformations are known to run in families. In fact, scientists can plot some of them mathematically.

Cystic fibrosis, muscular dystrophy, hemophilia and PKU or phenylketonuria are among the most prevalent hereditary diseases.

Fraternal twins are formed by two cells. Both of them are not as likely to inherit diseases or malformations as are both identical twins, which come from the same cell.

A study done in New York State showed that if one member of a set of identical twins had schizophrenia, the risk that the other twin would also be schizophrenic was seven in 10.

Fraternal twins of schizophrenic parents had only one chance in 10 of developing the disease.

Dr. Kurt Hirschhorn of New York University Medical Center told the scientists attending a meeting that a type of leukemia has been found which is related to damaged chromosomes.

Dr. Hirschhorn said that one variety, the Philadelphia chromosome, seems to be lacking one of the normal number, which is 46. Scientists have associated this defective chromosome with chronic myelogenous leukemia.

Individuals in three generations have now been found to be affected by damaged chromosomes and at the same time have this type of leukemia.

Drs. Thompson and Hirschhorn lectured at a two-week course in genetics conducted by the Jackson Laboratory of Bar Harbor and Johns Hopkins University. It was sponsored by the National Foundation-March of Dimes.

• Science News Letter, 88:115 August 21, 1965

MEDICINE

Woman Has Normal Baby After Radium Treatment

► A RARE CASE of an apparently healthy baby born to a woman who had undergone radium treatment for cancer of the neck of the womb was reported from Madras, India, in the British Medical Journal, Aug. 7, 1965.

Two physicians at the Madras Medical College say that the 31-year-old woman delivered an eight-pound baby girl with no congenital malformations.

The combined program of radium and X-ray therapy currently used in treating cancer of the cervix delivers enough radiation to the gonads to make preservation of ovarian function "a near impossibility," the doctors said.

Earlier medical reports have stated that even after radium therapy alone, regular menstruation, showing continued ovarian activity, is infrequent.

Drs. O. Francis and R. D. Stevens, who reported the case, said they planned to follow the development of the child. They said the possibility of a genetic defect in a future generation cannot be ruled out if the child has babies of her own.

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