

MEDICINE

Virus Link to Disease

► **STORED BLOOD SAMPLES** in two huge walk-in freezers at the National Institutes of Health, Bethesda, Md., may hold the clue to why a child in Memphis, Tenn., or Portland, Ore., is mentally retarded or otherwise abnormal.

Fifteen medical centers in the United States are collaborating in an unprecedented study of the blood of expectant mothers. The study is being conducted by the National Institute of Neurological Diseases and Blindness and the National Institute of Allergy and Infectious Diseases.

So far, 21,000 samples have been received for storage at sub-zero temperatures. Eventually, 75,000 samples will be stored and tested to find out how large a role virus infection plays in disorders of infancy and childhood. Although it is expected that results will be reported by the end of 1962, the study will continue for at least ten years.

At each of the 15 medical centers, blood samples are obtained from pregnant patients and sent to the National Institutes of Health for testing.

To test the serum, antigens (substances that stimulate a chemical defense mechanism in the blood) are used to discover evidence of exposure to certain viruses. If a patient has been exposed to infections this will be shown by a greater number of antibodies in her blood.

Specific information concerning the pa-

tient's pregnancy is kept with the blood sample data.

If a child is mentally retarded, has cerebral palsy or some other neurological disorder with which infants are sometimes born, the NIH scientists hope to find out whether or not virus infection is a contributing cause.

Dr. John L. Sever, director of the National Institute of Neurological Diseases and Blindness, and Dr. Robert J. Huebner, director of the National Institute of Allergy and Infectious Diseases, supervised the production of more than 100 viral antigens in connection with the tests.

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MEDICINE

"Cure" Not Permanent

► **MORE THAN 90%** of 1,912 drug addict patients living in New York City became readdicted after hospital discharge.

The patients were followed up after discharge from the U.S. Public Health Service Hospital in Lexington, Ky. More than 90% of those who became readdicted did so within six months.

The Lexington hospital is one of two PHS institutions authorized by Congress for

CHEMISTRY

Study of Detergents By Vibrating Jet Method

See Front Cover

► **BETTER UNDERSTANDING** is needed of the relationship between the basic properties of detergent solutions and their cleaning ability.

To this end the Midwestern Research Institute, Kansas City, Mo., is carrying on a fundamental study, sponsored by the Whirlpool Corporation Research Laboratories.

Chemists Daniel A. Netzel and Geraldine Hock, seen of this week's cover, are using the vibrating jet method to study the surface tension changes at freshly formed detergent solution surfaces. The results of their study are expected to give better understanding of washing processes.

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confining and treating persons who have committed offenses against Federal law and who are addicted to narcotic drugs. It treats both men and women in a geographical area east of the Mississippi River who enter voluntarily. There is a similar hospital for men only in Fort Worth, Texas, for the southwestern geographical area.

The New York Demonstration Center assisted in the follow-up study of Lexington hospital patients. The New York Center, under the direction of the PHS National Institute of Mental Health, is one of the few in the United States that is attempting to help addicts after their hospital discharge.

The study disclosed that men less than 30 years of age had higher readdiction rates than men more than 30, but among female voluntary patients age had no significant effect.

No improvement in readdiction rates was seen in cases where hospitalization was prolonged more than 30 days.

Dr. G. Halsey Hunt and Maurice E. Odoroff, National Institutes of Health, Bethesda, Md., reported the follow-up study in Public Health Reports.

They emphasized the need for after-care and pointed out that hospital treatment cannot provide lifelong immunity to protect the patient against relapse.

The treatment of drug addicts assumes that narcotic drug addiction is primarily a symptom of emotional disturbance or functional inadequacy, and that addiction has the two separate aspects of physical and psychological dependence. Notwithstanding the addict's tendency toward criminal acts, he is considered to be mentally ill and in need of medical treatment.

Following relief from physical dependence on drugs, psychological treatment and work therapy are used to rehabilitate the patient.

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BLOOD DEEP-FREEZE—Blood of expectant mothers is stored in huge freezers and tested for clues regarding the role of virus infection in infant and childhood disorders.