

GENETICS

Polio Susceptibility Due to Double Inheritance

► SUSCEPTIBILITY TO infantile paralysis, or poliomyelitis, may be due to having inherited a "double dose" of a recessive gene for susceptibility to the disease.

This theory is supported by a study of polio in twins reported by Dr. C. Nash Herndon of Wake Forest College, the Bowman Gray School of Medicine, Winston Salem, N. C., to the National Foundation for Infantile Paralysis in New York.

The theory implies, Dr. Herndon explains, that "while both parents might be resistant to poliomyelitis, if they both happen to carry a hidden tendency (a recessive gene) for susceptibility, their child might receive this tendency from both parents."

The probability that any given child of such "carrier" parents would be susceptible, Dr. Herndon calculates, would be one in four, with about three-fourths of the children resistant.

In the twin study, Dr. Herndon found that if one member of a pair of identical twins, from a single fertilized egg, develops paralytic polio, the likelihood that the other twin will also develop the disease is about 36%. For fraternal twins from two separate fertilized eggs, the probability that the second twin will be affected is only about six percent. This is about the same percentage as in a second child in a family without twins coming down with the disease.

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BIOCHEMISTRY

Blood Stored Safely For Months at -110°F.

► THERE IS hope that human blood red cells can be stored at very low temperatures for long periods of time and still be useful for transfusions.

Experiments by Dr. H. A. Sloviter at the National Institute for Medical Research, London, show that 70% of treated blood held at 79 degrees below zero Centigrade (110 degrees below zero Fahrenheit) is still intact after nine months.

If it proves satisfactory in human experiments now in progress, the new method is expected to be used at least for the preservation of red cells of rare blood groups.

The present researches, which were supported by Runyon and American Cancer Society funds through the U. S. National Research Council, were based on the discovery of three years ago that glycerol (glycerin) mixed with blood largely prevents the death or disruption of living cells when subjected to temperatures well below the freezing point. The glycerol is removed from the blood after it is thawed out and before it is used. The report appears in the journal NATURE (June 14).

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WALKING FOR AIR—The shark shown here is being given a form of artificial respiration. He is being "walked" by Floyd Adams of Marine Studios, Florida, to force water through its gills to restore normal breathing, lost during the exhausting catch.

ELECTRONICS

TV Scans Ocean Floor

► TWO NEW and improved "diving" television cameras especially built to scan ocean floors with their electronic eyes will be used by the British Navy for salvage and hull-inspecting operations and by the Admiralty Research Laboratory for scientific studies soon.

One complete system is scheduled for immediate delivery to the Navy. It will be put through extensive sea trials on the deep-diving vessel Reclaim.

Underwater television, which escapes many limitations of human divers, already has been used in England and in the United States. Scientists employed underwater video in 1947 to evaluate results of the Bikini atom bomb tests. It was used in England last year in the search for the sunken HMS Affray.

The new television cameras are to be housed in watertight casings capable of sinking to depths of 1,000 feet. A lighting system attached to a stabilizing fin outside the casing will illuminate the 70-degree field of vision provided by the cameras' wide-angle lenses.

Remote facilities will permit shipboard viewers to change lenses for close-up pictures, to adjust the aperture to let in the proper amount of light, and to focus the camera. Shipboard screens will be linked to the underwater cameras by a complex, mul-

ticore cable which will transmit the camera's electronic signals.

Television cameras can work at greater depths and for longer periods of time than can divers, and no risk of life is involved. They can be maneuvered easily. Since they present pictures to shipboard viewers, less accurate verbal descriptions are eliminated.

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ENGINEERING

Circuit Breaker Passes Severe Test

► A CIRCUIT breaker tested by General Electric engineers in Philadelphia passed a short circuit test severe enough to blow fuses in 800,000 homes.

A circuit breaker is a device used by power companies to protect their transmission lines from electrical overload just as fuses protect household circuits from too much current.

The device was supplied the highest amount of short-circuit current available in any laboratory in the world during the tests.

During the test two generators combined to create the tremendous amount of short-circuit current needed for the test, which did no damage.

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