miles, after which the balloon bursts and the instrument slowly descends to earth by parachute. A tag attached requests the finder to return the instrument, offering a small reward for safe return. A large per cent. of the instruments are thus recovered.

But, the observer on the ground has received the desired upper air data promptly by radio. With these data the weather forecaster tries to analyze the numerous elements which determine our weather and to present them systematically on the weather map in the form known as air mass analysis. This assists the forecaster in estimating how the various air masses and their characteristic elements will interact to produce future weather. In this way he makes up the weather forecast.

With an extension of these upper air observations to fill in the wide gaps which now exist in our information of atmospheric conditions and processes, it is expected that the day to day changes in weather can be better analyzed and more thoroughly understood, and their future trend more accurately anticipated. Then the demands of the farmer and the aviator, the engineer, the business man and the general public for specialized forecasts of a positive nature can be more adequately satisfied.

For an official explanation of the daily weather map prepared by the U. S. Weather Bureau, send a postal card to SCIENCE NEWS LETTER, 2101 Constitution Ave., Washington, D. C., asking for weather map bulletin.

Science News Letter, February 18, 1939

PHYSIOLOGY

New Life-Saving Property Discovered in Hormone

Gland Essence That Prepares Mother for Child-bearing Can Pinch Hit for Cortin To Treat Addison's Disease

NEW, life-saving power has just been discovered in a hormone that is primarily concerned with the life-creating process.

This fact, termed "amazing" by its discoverers, is reported by Dr. Robert Gaunt, of Washington Square College, New York University, and Dr. Harry W. Hays, of Princeton University. (*Science,* Dec. 16.)

Crystalline progesterone, the hormone that functions primarily to prepare the maternal body for child-bearing, can double for the life-essential hormone, cortin, to save lives threatened by disease or failure of the adrenal glands.

Cortin is a product of one part of the adrenal glands, the other part of the glands producing the more familiar adrenalin or epinephrin. Life cannot go on when these glands fail to produce cortin, as they do in Addison's disease, unless the deficiency is made up by giving the patient doses of cortin, just as diabetics get insulin to supply this deficiency of their own body.

Crystalline progesterone, Drs. Gaunt and Hays now report, will keep animals alive and healthy apparently indefinitely after total removal of the adrenal glands. Neither cortin nor salt need be given, if the animals get small daily doses of the progesterone.

Progesterone is not likely to take the place of cortin in treatment of Addison's disease sufferers, Dr. Gaunt said, because it is much more expensive. Only possible advantage of progesterone over cortin for such patients is the fact that progesterone can be obtained in chemically pure crystals, which is not yet possible for cortin.

The significance of the discovery that progesterone can double for cortin is not yet known. Dr. Gaunt said, however, that studies are under way now which he hopes will show what the discovery means in terms of body function and possible clinical application.

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PSYCHOLOGY

Blind Spot Hampers One-Eyed Drivers

THE next time you are a passenger in the front seat of an automobile (we won't recommend it for the driver) shut one of your eyes and see how restricted is your view ahead. See how much your field of vision is decreased and your judgment of distance impaired. Then realize the handicap faced by from one to two per cent. of all American motorists who, it is estimated, possess only one eye.

Studies of drivers with handicapped vision have been made recently by Dr. Harry R. DeSilva, W. H. Frisbee, Jr., and P. Robinson of Harvard University. They find that while a person with two eyes can see through a field of view of about 190 degrees—more than a half circle—a one-eyed driver has his vision restricted to 110 degrees or to 135 degrees depending on how much his good eye protrudes and how far out from his face is the bridge of his nose.

Although normal people never realize it, each normal eye has a blind spot which corresponds to the small round region where the optic nerve enters the eyeball and which is not receptive to images cast upon it. With two good eyes these blind spots do not coincide. What is a blind spot for one eye is not a blind spot for the other. Persons with only one eye can only overcome the handicap of such a blind spot by regularly turning their head while viewing the road ahead.

The blind spot covers an area of only 7 degrees, report the Harvard scientists and, at the distance of the windshield, this area amounts to a circle about three inches in extent. However at a distance of 50 feet ahead of the car this same angle blocks out an area of six feet. At a twelve-foot distance a standard road sign falls within the blind spot. A child four feet tall is concealed at a distance of 32 feet, a man at 48 feet, and a whole truck at a distance of 57 feet.

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