

seriously malignant disease, either the removal of all source of androgen or the administration of estrogen causes some amelioration of the pain and other symptoms of the patient. Such treatment is palliative only; it does not "cure" the cancer.

When androgen is administered to older men with diminishing sexual activity, the effect gained is usually more psychological than physiological. In the minds of many physicians there is always the knowledge that cancer of the prostate, referred to above, is at least activated by this hormone.

Estrogens and other steroids are frequently used in attempts to correct disorders of menstruation, though without marked or uniform success.

Thus the only clinical indications for the use of these hormones is where a distinct lack of the particular hormone is shown.

The process of growing old, and the loss of vigor of men and women, is more complex than a decline in estrogenic or androgenic hormones. The elasticity of the arteries and of the skin changes after middle life. The tone of the muscles and recovery from fatigue changes with age. Experimental medicine is greatly concerned with these matters, and many experiments have been made in the use of androgens and estrogens. Some of the experiments have been carefully and precisely done, with constant checking with that god of the experimentalists, the control experiment. A most useful control in such experiments is in the elimination of the power of suggestion. While men may "feel lots better and peppier" when being given androgen treatment, they frequently show just as marked improvement when being given an inert and harmless substance. They are better merely because they believe and wish it so.

And the woman who won't admit to 50 years and invests in hormone preparations to avoid the wrinkled cheek is being not only deluded, but is dealing in self-medication with a drug which is potentially dangerous.

The man past 60 who hopes to restore his aging arteries and consummate the dreams of by-gone years by using the chemists' magic steroid hormones will be, at best, disillusioned.

Workers in experimental medicine are interested in these problems both for their theoretical and their practical value. When new methods are found for preventing undesirable features of growing old, the public will then be told authoritatively. Until then, we will continue

the search instituted by Ponce de Leon for that limpid spring—but the source of that spring is not to be found in a

MEDICINE

Still Have Jaundice

► **ALTHOUGH** the great majority of soldiers who suffered from jaundice in connection with vaccination against yellow fever have probably fully recovered, about 12% of them still have some evidence of the liver disease.

Detailed study of a group of 200 soldiers returned from overseas because they had failed to convalesce satisfactorily is reported in the *Journal of the American Medical Association* (June 2), by Col. Julien E. Benjamin and Major Ralph C. Hoyt, of the Medical Corps, Army of the United States.

"As a group, they were pale, thin, exhausted and utterly devoid of animation," these medical officers report. "Their reactions, mental and physical, were slow and indifferent."

Part of the group were found to be suffering from a neurosis. In many cases, the men had been neurotic before the attack of jaundice or even before induction, or they had had a latent neurosis which was aggravated or brought on by the illness and the long hospitalization.

This group was greatly benefited by a carefully planned program of rehabilitation. They were put into uniform, became once again part of the armed forces and spent a portion of each day at the sports arena indulging in graduated games and calisthenics.

However, 37 patients, 18.5% of the group studied, were extremely weak and exhausted, and suffered from nausea and vomiting brought on by the first bite of food or by walking even a short distance. Fingers and feet were icy cold, yet it was not unusual to see perspiration actually dripping from the tip of each finger. Even the effort of shaking hands would bring on a tremor of the hands.

The medical officers term the weakness of these men as "devastating and overwhelming."

"For example," they report, "it was impossible for many to complete the writing of a postcard without resting at least once, nor could they dress themselves without noticeable exhaustion."

This group of 37 patients showed but little improvement under rehabilitation. They failed to gain in weight, and sweating of hands and feet was still excessive. The tremor remained constant. There

bottle of hormone tablets at the corner drug store.

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was, however, objective evidence of improvement in the liver functions and at the end of the period of observation, 23 had fully recovered in this respect.

Whether all will eventually recover completely, only further time will tell, the investigators conclude.

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ORNITHOLOGY

Hummingbirds Must Learn To Get Food from Flowers

► **YOUNG** hummingbirds apparently do not realize that honeysuckle, larkspur and bird-of-paradise blossoms offer an inviting source of food until at least two weeks after they have left the nest, Frank Bene of Phoenix, Ariz., reports in the *Condor*, a magazine of Western ornithology.

The earliest acts of the young birds which bear any semblance to feeding behavior, Mr. Bene finds, are extension and retraction of the tongue, and probing twigs and leaves with the bill, at first while perched on a twig and later while hovering about it on the wing.

Hummingbirds seem to recognize flowers as a source of food only after



NOT BY INSTINCT—This black-chinned hummingbird seemed to recognize the honeysuckle blossom as a source of food only after it had acquired sufficient strength for sustained flight. Photograph by Frank Bene.

they have acquired sufficient strength for sustained flight. Before that, even though an adult would probe a blossom only a few feet away, the fledglings still made no attempt to search the flowers.

Only upon tasting the food can they decide whether or not they want it. Most hummingbirds prefer syrup made with white sugar, provided the solution is not too dilute. Commercial honey ranks next, but instead of taking long drinks, the birds only sip the honey-and-water mixture. Brown-sugar syrup is least desired, and salt water refused.

Several nasturtium blossoms with some of the spurs clipped were placed by Mr. Bene over the mouths of small vials and one ounce wine glasses filled with honey or brown-sugar syrup. When

the vials were hidden in the nasturtium beds so that the flower decoys could not be distinguished from genuine nasturtium blooms, the birds were surprised to discover the abundance of sweets they held. Thereafter these blossoms were sought in the nasturtium beds, the birds flying straight to the decoy.

A hummingbird can discriminate the color, taste and form of flowers, Mr. Bene believes, and through association learn to recognize and locate them.

Having once associated a place with a specific source of food, hummingbirds will return to the site although the food source has been removed. Apparently only one visit is enough for them to remember a place, a five-year-study of black-chinned hummingbirds showed.

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GENERAL SCIENCE

Soviet Science Celebration

A group of American scientists will attend the 220th anniversary of the Academy of Sciences of the U.S.S.R., June 15 to 28.

➤ A GROUP of American scientists will attend the 220th anniversary celebration of the Academy of Sciences of the Union of Soviet Socialist Republics to be held in Moscow and Leningrad, June 15 to 28.

Signalizing the return of scientific interchanges between the Soviet Union at peace and the United States, the visits of American scientists are expected to aid in the establishment of even closer relations in the coming months.

The American scientists will be the guests of the Soviet government and will fly to Moscow.

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Academy Celebration Includes Popular Festival

By IVAN KUZNETSOV

Soviet Scientist Antifascist Committee
Writer

➤ The 220th anniversary celebration of the Soviet Academy of Sciences to be held late in June will, in addition to meetings, include a popular festival honoring the scientists of the U.S.S.R. and what they have done to serve their nation in peace and war.

The academy consists now of 145 academicians, including some of the leading figures in Soviet science, among them Dr. V. Komarov, botanist, who is

president, Dr. P. Kapitsa, physicist, Dr. N. Semenov, chemist, Dr. I. Vinogradov, mathematician, Dr. I. Orbeli, physiologist, and Dr. N. Burdenko, surgeon.

Fifty-seven institutes or sections equivalent to institutes are operated by the Soviet Academy today, with a total staff of more than 5,000 scientific and technical workers. The work is divided into eight departments: Physics and mathematics, chemistry, geology and geography, biology, technology, history and philosophy, economics and law, literature and language.

The academy is the guiding body in all Soviet research work and it is a sort of general headquarters for science where fundamental problems are studied.

Differing from foreign scientific bodies in organization and work as well as size, the U.S.S.R. Academy of Sciences is directly responsible to the Council of the People's Commissars. It renders an annual account of its work to the Council. The chief function of the academy is to promote pure and applied science in the U.S.S.R. and to study and develop achievements in world science. A fundamental task given the academy is to "apply all scientific achievements to the work of building up a new socialist classless society."

The academy was founded in 1725 by Peter the Great and soon became

Russia's authoritative scientific body. Most of the leading Russian scientists have been members, including Lomonosov, father of Russian science, the biologist Kovalevsky, the chemist Butlerov, the mathematicians Ostrogradsky, Chebyshev and Markov, and the physiologist Pavlov.

In 1725 the academy had 15 members and a hundred years later there were 22. In 1916, shortly before the revolution, there were 47 members and in 1925 when the 200th anniversary was celebrated there were 48 members.

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PUBLIC HEALTH

Suicide Rate in Germany Double What It Is in the U. S.

➤ IF MANY Nazi leaders killed themselves as some reports indicate, they followed a tendency that is much stronger in Europe than it is in the United States.

The suicide rate in Germany in 1936, the last year for which any reliable figures are available, was 28.6 per 100,000 population—just double the rate for the same year in the United States, 14.3.

The only European countries with suicide rates lower than that of the United States in that year were the Netherlands, with a rate of 8.1; England and Wales, 12.3; Romania, 10.5; Norway, 6.3; Eire, 3.3; and Italy, 7.9. It is believed that the low rate in Eire and Italy may be accounted for by the large Catholic population; the Catholic teachings are very strong with regard to suicide and burial in consecrated ground is refused to those who are known to have deliberately killed themselves.

If the effect of war is the same in Germany as it generally is in other countries, however, it is probable that the suicide rate is lower there now than it was in 1936. The first World War caused a drop in the German suicide rate. From a rate of 23.1 per 100,000 in 1913, it dropped to only 15.3 in 1918.

The U. S. suicide rate has dropped in the present war to 10.2 in 1943, the latest available Census Bureau figure.

Japan, contrary to popular belief due to the practice there of the traditional hara-kiri, has only a moderate suicide rate. In 1936, the rate was only 22.0 per 100,000. The rate in Austria was 40.2.

But even in countries where the suicide rate is highest, self-murder does not compare as a cause of death with the most serious diseases. The U. S. death rate from cancer in 1936 was 111.4.

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