

BIOCHEMISTRY

Secret Hormone Source

Production of female hormone, after ovaries and adrenal glands are removed puzzles scientists. Finding made in cancer cases treated by removal of both adrenals and ovaries.

► EXISTENCE OF a "secret source" of the female hormone, estrogen, somewhere in the female body has been discovered by Dr. Charles B. Huggins of the University of Chicago Medical School, the American Cancer Society has reported.

And cortisone, famous anti-arthritis remedy from the adrenal glands, apparently can make dark hair grow in on heads that had turned white.

These are among several findings resulting from 80 operations in which Dr. Huggins has removed both adrenal glands to aid cancer patients.

About one-half of the patients who had far-advanced breast or prostate gland cancers have been helped by the operation.

The adrenal glands are vital organs situated one above each kidney. They produce cortisone, famous anti-arthritis remedy, and according to some authorities also produce some 20 other hormones.

In the past, patients whose adrenal glands were removed could not live. Dr. Huggins' patients, however, have been kept alive and able to return to useful occupations by treatment with cortisone. This is thought to show that of all the hormones presumably produced by the adrenal glands, only cortisone is essential.

An "odd finding," the Cancer Society reports, is that emotional flare-ups are rare in the patients whose adrenal glands were removed. Many of Dr. Huggins' patients have reported that the things they used to fear, they no longer fear. Some who had frequent fits of anger now live relatively complacent and serene lives. Anxiety was banished with removal of the adrenal glands. This is considered "odd" because the adrenal glands are regarded as the "organs of stress."

The hormones they produce enable animals and humans to cope with unexpected strains and the routine stresses of everyday life. When animals' adrenals are removed they die in a matter of a few days, and any sudden stress—such as fright, hunger, cold, injury or exertion kills them outright.

The anti-gray hair action of cortisone appeared in some of the male prostatic cancer patients whose hair was white before the operation. They now have iron gray hair under cortisone treatment. Hair grew in dark at the roots.

To deprive cancers of the sex hormones which appear to make hormone-dependent cancers grow, breast and prostatic cancer patients sacrifice not only their adrenals but their sex glands, testes or ovaries, as well.

By delicate chemical methods, the Huggins group has been studying hormones and

hormone-products excreted in urine. They hope that by these methods they can learn before operation which patients will respond well to adrenalectomy and which will not. So far, this research seems to indicate that breast cancer cases which may be benefited excrete large amounts of female hormone.

One of the puzzling results of these studies is the finding that some breast cancer patients continue to produce and excrete female hormone (estrogen) after their adrenals and ovaries have been removed. These patients derive no benefit from their operations. The big question is: Where do these hormones come from? If their source can be found, it is possible that it might be eliminated and the patient helped.

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MEDICINE

Should Acidify Drops

► DOCTORS WHO fail to prescribe ephedrine or similar nose drops or sprays to relieve stuffy noses during colds are guilty of "complete therapeutic neglect," Dr. Noah D. Fabricant of Chicago charges in a report in the *Journal of the American Medical Association* (Jan. 3).

These medicines are known to doctors as vasoconstrictors because they constrict small blood vessels in lining membranes of nose and sinuses. This reduces the congestion, or stuffiness. Such relief, although temporary and no cure, is "welcome to distraught patients," Dr. Fabricant points out.

Criticizing those who lean too heavily to psychiatric causes of nasal congestion, Dr. Fabricant says:

"There is little to indicate that the current passion for psychosomatic phraseology will alleviate millions of inflamed and allergic American noses."

The nose drops, sprays or jellies used, however, should be slightly on the acid side, or at least should restore the normal, slightly acid state of the nasal secretions, Dr. Fabricant insists.

The acid state is unfavorable to the growth of disease germs, he points out. Lysozyme, antibacterial substance in various body tissues which is a kind of ancestor of penicillin, operates best in an acid environment. So getting the nose back to the acid side during colds should help the lysozyme in nasal secretions fight the germs.

Stuffy noses lead to overventilation and blowing off of carbon dioxide, Dr. Fabricant finds. This changes body chemistry

• RADIO

Saturday, Jan. 24, 1953, 3:15-3:30 p.m., EST
"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Dr. Robert E. Marshak, chairman of the department of physics, University of Rochester, Rochester, N. Y., discusses "High Energy Particles Within the Atom."

VETERINARY MEDICINE

Medicine Saves New-Born Calves

► FARMERS CAN now get a new streptomycin-containing medicine for treating an often-killing disease of new-born calves. The disease is an intestinal infection called scours.

The remedy, also said to be good as a preventive, is a combination of dihydrostreptomycin, kaolin, pectin and hydrated alumina powder. It goes on the market this month under the tradename Kao-Strep and is manufactured by Wyeth Incorporated, Philadelphia.

Scours is marked by fever, diarrhea and pneumonia, and is probably due to a virus.

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VETERINARY MEDICINE

Foresee Conquest of African Cattle Plague

► AUREOMYCIN, ONE of the so-called mold remedies, may become the means of conquering one of Africa's cattle plagues.

The disease is called by several names, among them Rhodesian fever, East African fever and Rhodesian red-water fever. High fever, swelling of the lymph glands, and death after about three weeks make up usual course of this cattle plague. It is caused by a parasite similar to the one that causes malaria, but is spread by a tick instead of a mosquito.

Aureomycin, injected into the veins in repeated large doses after the parasites have gotten into the animal, make the schizont stage of the parasites disappear. The animal then gets well and is immune to further attacks.

These results are reported by Dr. O. W. Neitz of the Department of Agriculture Division of Veterinary Services at Onderstepoort, South Africa, in *Nature* (Jan. 3).

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