MEDICINE

Chemical Remedy Promises Pleasanter Pneumonia Cure

Sulfathiazole May Provide Safe "Cure" of New Group Of Hitherto Uncontrolled Ills; Has Low Toxicity

CHEMICAL "cures" of a whole new group of hitherto uncontrolled germ diseases as well as a new, better treatment for pneumonia are promised by a new chemical remedy just presented to the medical world.

Some 50 patients and their doctors in 40 prominent hospitals throughout the country have already found the new chemical, sulfathiazole, much better for pneumonia treatment than even sulfapyridine, widely hailed for its saving of pneumonia-threatened lives.

The pus-forming staphylococci, germs that cause ailments ranging from boils to a dangerous form of blood poisoning, are also yielding to this new chemical weapon developed in the Squibb Institute for Medical Research by Drs. H. B. van Dyke, R. O. Greep, Geoffrey Rake and C. M. McKee.

"Preliminary studies," Dr. George A. Harrop, director of the Squibb Institute, states, "clearly indicate that sulfathiazole will be very valuable also in the treatment of staphylococcal infections which have hitherto not responded well to chemotherapy."

The reason for this is that sulfathiazole is comparatively so safe that large doses of it can be given over long periods of treatment.

Practically No Nausea

This low toxicity makes the new drug safer to use in pneumonia than sulfapyridine, and experiments backed by clinical trials on human patients have shown that it is just as effective a pneumonia weapon as sulfapyridine. Sulfathiazole has the added advantage of not making patients sick. Nausea and vomiting, distressing features of sulfapyridine treatment, are practically absent when sulfathiazole is given, physicians report.

Unfortunately, only limited amounts of the new drug are available at present. Sufficient supplies, however, are expected to be on hand to treat pneumonia on a reasonably large scale after the first of the year. That is the season when pneumonia is at its worst. The rigorous conditions under which sulfathiazole will then be tried are expected to show its effectiveness most convincingly.

Sulfathiazole is chemically related to sulfapyridine and sulfanilamide. When sulfapyridine gets into the body, however, it is rather rapidly combined or conjugated with acetic acid. This unfortunately makes the drug quite inert and useless in its effect on the pneumococcus, only the combined form being active. The new drug, sulfathiazole, is combined with acetic acid to a much smaller extent, so that most of the drug given is effective until it is excreted. This means that doctors do not have to give as much sulfathiazole to treat a pneumonia patient.

Chronic poisonous effects from accumulations of the drug in the body are much less apt to occur because sulfathiazole is excreted more rapidly than sulfapyridine. Laboratory tests on hundreds of mice before the drug was given to patients showed that the toxicity of sulfathiazole is much less than that of sulfapyridine except in doses far larger than are needed to cure pneumonia.

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PHYSIOLOGY

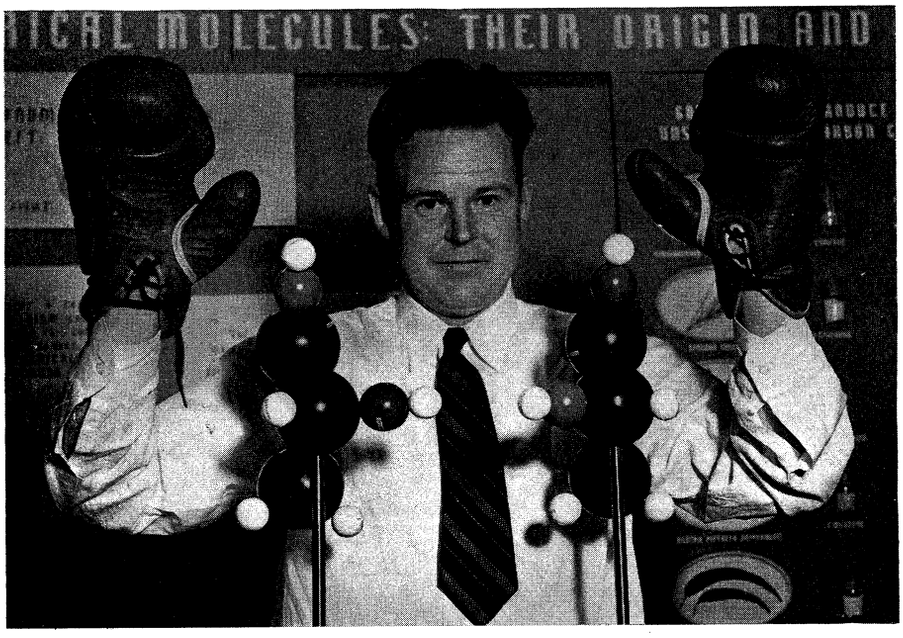
Life of Lower Animals Prolonged by Heavy Water

LOWER marine animals have their lives prolonged by "heavy water" containing double-weight hydrogen atoms, experiments by Dr. H. G. Barbour of Yale University and Dr. F. S. Hammett of the Lankenau Hospital Research Institute at North Truro, Mass., have demonstrated. (*Science,* Dec. 8)

They immersed the lower marine organism, Obelia geniculata, in sea water containing up to 10% of heavy water. The animals' life processes were slowed down, and this accounts for their longer duration.

Drs. Barbour and Hammett, however, call attention to the work of other scientists who used heavy water on mammals without noticeable result in increasing longevity. They state therefore that "it is not to be expected that mammals enjoying the luxury of partial saturation with this substance will exhibit enhanced longevity."

Science News Letter, December 23, 1939



MOLECULES ARE "LEFT-HANDED" TOO

With the thumbs of his boxing gloves, Dr. H. H. Strain, at the annual exhibit of the Carnegie Institution of Washington, illustrates a peculiar property of molecules being explored by Carnegie scientists. The molecule models show a similar relation to each other. "Left-handed" molecules, although otherwise exactly like their "right-handed" twins, are profoundly different in taste, smell and ability to nourish.