

PHYSIOLOGY

Discoveries in Pure Science Conquer Deadly Poisons

Stain That Makes Germs Visible Under Microscope Found To Counteract Effect of Cyanide and Carbon Monoxide



PETTED ANTELOPE

Warden Edgar McHugh, in charge of antelope at Nemiskam Park, feeding some of his charges

from the extinction which threatened it not long ago with the advance of settlements.

A small herd of 42 animals was found grazing near Medicine Hat. The area on which it was living was fenced in, unknown to the antelopes, and now the shy animals will come to be fed. The preserve here is one of two established in southern Alberta to save this once numerous animal.

Science News Letter, January 28, 1933

PHYSIOLOGY

Insulin Stimulates and Fattens Thin People

FOR HEALTHY lightweights who otherwise cannot be stuffed to pleasing plumpness, Dr. Harry Blotner of Peter Bent Brigham Hospital in Boston, recommends insulin.

In a recent report to the American Medical Association he describes the results of this use of insulin in nineteen healthy but skinny persons. They all gained weight immediately on three daily doses of ten units of insulin. Most of them held the gain after stopping the insulin.

Dr. Blotner found from careful study of these persons that insulin probably increases the appetite, so that the individual eats more; increases the assimilation of the food; acts as a tonic, making the individual feel stronger, more active and less nervous. No bad effects were reported, but insulin should be used on doctor's orders only.

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SEVERAL thousand persons are killed each year by carbon monoxide gas and by cyanides. If half this number can be saved by the newly-discovered antidote, methylene blue, Mrs. Matilda M. Brooks and Dr. J. C. Geiger of San Francisco, will have made an epochal contribution to medicine and the welfare of mankind.

For Mrs. Brooks, working in the department of zoology, University of California, hit upon the idea of using the common bacteriological stain as an antidote for these two poisons, and Dr. Geiger, Director of Public Health, promptly put the idea into use and two lives have already been saved.

Mrs. Brooks, who also holds a doctor's degree, was doing research in biology, working in pure science when she made the methylene blue discovery. She knew that earlier investigators, chief among them Prof. Otto Warburg of the Kaiser Wilhelm Institute for Biology, Berlin, found in connection with work on yeast cells and other organisms that methylene blue counteracts the effect of cyanide and of carbon monoxide on living tissues. Dr. Brooks took the next step and tried the effect of methylene blue on animals that had been poisoned with carbon monoxide or with cyanide. She found it a successful antidote with small mammals, such as mice and guinea pigs, and in a report of her work to the Society for Experimental Biology and Medicine in April, 1932, she suggested the use of methylene blue in human cases of cyanide or carbon monoxide poisoning.

For First Aid Kits

When Dr. Geiger called on Drs. P. J. Hanzlik and C. D. Leake, professors of pharmacology at Stanford University and the University of California, respectively, for modern methods of treating poison cases, they suggested to him, among other methods, the methylene blue method for cyanide and carbon monoxide.

As a result of its successful use, methylene blue may become part of

professional first aid kits, such as those carried by fire and police rescue squads. The method used at the Park Emergency Hospital, San Francisco, consists of injecting into the patient's vein a one per cent. sterile aqueous solution of methylene blue, which is listed in the U. S. Pharmacopoeia as methylthionine chloride. In the first cyanide poisoning case reported, 50 cubic centimeters, or nearly two ounces, were used. The patient stated that he had taken 15 grains of potassium cyanide in about 4 ounces of water.

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BOTANY

Plants of Yellowstone Springs Like it Hot

THERE IS an old nursery rhyme, "Some like it hot, some like it cold." The microscopic threadlike plants of the Yellowstone Park hot springs belong to the former category, Joseph J. Copeland of New York City College found.

The plants belong to the group known as the blue-green algae, and are among the most primitive forms of vegetable life. They are found in the coldest as well as the warmest of the earth's waters, and their special abundance in the Yellowstone hot springs gives those formations much of their rich coloring.

The temperature at which the algae grow most freely, Mr. Copeland found, was 40 degrees Centigrade, 104 degrees Fahrenheit. Some species, however, like it much hotter than that, refusing to grow at temperatures below 50 degrees Centigrade, 122 Fahrenheit. And there are certain species of these vegetable Salamanders that thrive at 80 degrees Centigrade, 176 Fahrenheit. The highest temperature at which living plants were found was over 85 degrees Centigrade, 185 Fahrenheit, or just 15 degrees centigrade below sea-level boiling point.

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