

Eleven New Pneumonia Types

Bacteriology

Eleven types of pneumonia not hitherto recognized as due to distinct forms of pneumococci, the pneumonia germ, have been discovered by Georgia Cooper, bacteriologist in the research laboratories of the New York City Department of Health, Dr. William H. Park, Director of Laboratories, has announced.

Dr. Park also said that specific antibacterial serums have been developed for the most usual five of these new types, although sufficient experience with them has not yet been obtained to affirm positively the apparently good results from their use in a limited number of cases.

The remaining six types, he said, constitute about three per cent. of all cases studied. Thus type III is the only important form of the disease which remains apparently resistant to antipneumococcic serum.

"Serums which greatly improve the chances of a patient, especially when given early in cases in which the blood stream is becoming infected with pneumococci, have been developed for type I and type II," explained Dr. Park.

"While we are working continuously to find a serum that will be effective in type III cases, we have not yet succeeded. In the past we have classed cases which did not fall into type I, II or III in a miscellaneous group known as group IV. We have known for some time that this group contained other distinct types which had not been classified, but it remained for Miss Cooper to classify eleven of the most important of this miscellaneous group. Those which we cannot classify are now known as group XV.

"Dr. Antoinette Raia, who has conducted research in connection with children at Bellevue Hospital, has made preliminary reports which indicate the value of serum in types IV, V, VI, VII, and VIII. Her work also indicates that these types are more usual with children than adults."

Polyvalent serum, or serum effective in both type I and II, has been prepared for the New York City Health Department for distribution for some time, but the attempt is now being made to prepare serum which will be effective as well for types IV, V, VI, VII and VIII. Dr.

Park advises the administration of polyvalent serum at once when the clinical diagnosis indicates pneumonia.

When laboratory facilities are available, the case can be typed quickly and future administration of serum of the type indicated can be specific. Highly concentrated serum which produces only in rare instances the unfavorable effects of large doses of horse serum is now available.

While the development of anti-pneumococci serum has not yet reached the stage where the results are so certain that there is any hope of virtually suppressing the disease, as has been done with smallpox, and as health authorities are now attempting to do with diphtheria, it is well past the stage of being of doubtful benefit, Dr. Park said.

Many more cases of pneumonia might now be saved, he declared, if facilities for preparing the serum were adequate for the fullest usage, and if the medical profession were fully informed of the progress which has been made in the past year or two.

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Antiseptic Milk

Hygiene

Scientists have known for some time that babies fed on mother's milk were protected in some mysterious fashion from various diseases such as whooping cough, measles, diphtheria and the like.

Now it appears that the mother's milk actually has the power of killing disease germs. Dr. Friedrich Schlaeppli, bacteriologist, has experimented with milk from nursing mothers and found that the milk has this bactericidal power to a very high degree. If the milk is kept at a mean temperature this power may be demonstrated for sixty hours or more. Such bacteria as get into it are at least very much retarded in their development if not actually killed. The milk is even able to destroy bacteria which do not normally occur in it. Boiled milk has not this power. The boiling destroys the milk's germicidal properties.

Dr. Schlaeppli has succeeded in filtering milk, obtaining a clear greenish liquid which contained albumin but no fat. The germs naturally contained in the milk stayed back with the fat, but the power to kill bacteria remained in the clear filtrate.

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Goldfish Fed on Alcohol

Physiology

Oh, for the life of a goldfish in a scientist's laboratory! No grape juice for him when he is feeling low. Alcohol and sugar is the enviable diet fed for thirty hours to goldfish in the laboratory of some University of Illinois scientists.

And the scientists proved by actual measurements that the gold fish lived at a greater rate than their brothers who had sugar alone. At least, the process by which the goldfish turned sugar into body energy and heat was on a speedier level, judging from the much greater amount of sugar they used in the thirty hour period, compared with their dry brothers who dieted on sugar exclusively.

The experiment proved that alcohol can serve as food as well as quench a thirst, according to a report made to *Science*. It has been known for some time that alcohol served one function of foods, that of being oxidized in the body to give rise to heat and energy. The goldfish experiment, carried out by Prof. W. E. Burge, L. D. Seager and D. J. Verda of the department of physiology

of the University of Illinois, proved that alcohol also can perform another function of foods, that of increasing or stimulating the body's conversion of food into heat and energy. This process by which the body turns food into heat and energy is called metabolism. In scientific terms, what the alcohol does is stimulate the sugar metabolism of the body.

Fats and proteins are also capable of stimulating or increasing metabolism. Alcohol is almost as good as fat and protein, the goldfish experiment showed.

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Beaver Planting Successful

Zoology

The attempts recently made to stock the upper Mississippi River Wild Life and Fish Refuge with beaver colonies are beginning to show good results. Superintendent W. T. Cox in a recent report states that the beavers captured in northern Wisconsin last spring and liberated on the flats near Wabasha, Minnesota, are apparently doing well.

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