

Electron Bullets Deadly to Germs

Medicine

ELECTRONIC bullets, fired with electricity as low as thirty volts, which can be obtained from a battery of twenty dry cells, are capable of killing at least one common form of germ. In a study made at the University of Cincinnati, Dr. D. A. Wells has found that *Staphylococcus albus*, the mildest of several germs that produce boils, are destroyed by these relatively low speed electrons, moving at speeds of a few miles a second. High speed electrons driven by voltages of several thousand, have already been observed to have a germ-killing effect.

Modern theories suggest that electrons are similar to forms of radiation like the ultraviolet rays, which also kill germs. To help find how this happens, Dr. Wells began the work on the electrons.

The germs must be rayed in a vacuum tube, but those used in the experiment could be kept for eight hours in a vacuum one fifteen millionth the density of ordinary air without killing them. When bombarded with electrons of 30 volts energy they were quickly killed, but with lower voltages they survived. The more energy in the electrons, the more germs were killed.

Asthma

ASTRANGE case of asthma, in which the patient suffered severe attacks when he was in a musty atmosphere, such as is found in damp old houses, musty store rooms or trunk rooms, antique shops and the like, has been reported to the American Medical Association by Dr. J. G. Hopkins, Dr. Beatrice M. Kesten and Rhoda W. Benham of the Columbia

University College of Physicians and Surgeons.

The cause of the asthmatic attacks was finally discovered to be a certain kind of fungus. This fungus was found in the air of certain rooms and houses in which the patient had had attacks, and caused the mustiness of the atmosphere which the patient had associated with his attacks.

How Many Sick?

TELLING how many people in the country are sick is a public health problem in statistics that is not yet solved, Dr. Edwin B. Wilson of the Harvard School of Public Health has reported to the National Academy of Sciences.

Since, as Dr. Wilson observed, "a person dies but once," death rates are obtained with fair accuracy. On the other hand sickness rates or morbidity are complicated not alone by the failure of the physicians to report cases but by the way the statistical facts are handled.

Reports of cases of sickness come to health departments daily or weekly, but these reports do not furnish a very reliable basis for analysis of the amount and kind of sickness actually occurring in the country. To begin with the reports are not complete and they do not take into account the duration of the sickness.

"A person dies at an instant," Dr. Wilson said, but he explained that the dividing line in point of time between health and the onset of sickness is not nearly so sharp as that between life

and death. Yet we use the same unit period of time for our calculations of mortality rates and of morbidity rates. Dr. Wilson suggested that morbidity rates and new-case rates be sharply distinguished.

That cancer causes a person to be sick over a longer period than typhoid fever and other such diseases is often ignored. Dr. Wilson urged statisticians to provide for duration of disease in applying their figures.

He pointed out that if death rates and findings at autopsies are properly considered in relation to the whole population it will be possible to have a truer picture of how disease affects everyday life.

Parrot Fever

PARROT fever is "essentially a medical curiosity and need occasion little alarm among the people of the United States," the Journal of the American Medical Association commented in its last issue.

"The development of cases at widely separated points suggests anew the reflection that it is no longer possible for any person or any nation to live in isolation," the comment continued. "The possibility of unusual disorders must be ever present in the medical mind."

Discussing the disease itself, the Journal said:

"The disease is attributed to an organism called *Bacillus psittacosis*, or *Bacillus aertrycke*, but there is doubt whether this organism is the real cause of pneumonia transmitted to man by parrots. Some investigators, Jordan says, attribute it to a special variety of streptococcus. *Bacillus psittacosis* closely resembles *Bacillus paratyphosus*, *Bacillus suipestifer* and the bacillus of mouse typhoid (*B. typhi-murium*). Since the symptoms resemble those of other infectious disorders, identification of the disease rests on isolation of the specific organism from both the patient and the suspected parrot."

Science News-Letter, January 25, 1930

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SCIENCE NEWS-LETTER, The Weekly Summary of Current Science. Published by Science Service, Inc., the Institution for the Popularization of Science organized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Edited by Watson Davis.

Publication Office, 1918 Harford Ave., Baltimore, Md. Editorial and Executive Office, 21st and B Sts., N. W., Washington, D. C. Address

all communications to Washington, D. C. Cable address: Scienservc, Washington.

Entered as second class matter October 1, 1926, at the postoffice at Baltimore, Md., under the act of March 3, 1879. Established in mimeographed form March 13, 1922. Title registered as trade-mark, U. S. Patent Office.

Subscription rate—\$5.00 a year postpaid. 15 cents a copy. Ten or more copies to same address, 5 cents a copy. Special reduced subscription rates are available to members of the American Association for the Advancement of Science.

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