# The Menace of Rabies

*Hygiene*

WILLIAM H. PARK, M. D. and ANNA W. WILLIAMS, M. D., in *Who's Who Among the Microbes* (Century):

. . . The next filterable virus found is the one causing a disease which might be said to be spread chiefly through the sentimentality of people. This is that much-discussed but little understood disease called rabies or hydrophobia.

The dog is the animal in which this virus is most commonly found. Though other animals are susceptible to it, the dog is the practical carrier. We have long made this cry our slogan for the prevention of rabies, "No stray dogs, no rabies," but we still have stray dogs even in the most civilized countries, and we still have rabies.

Indeed, some of the wealthiest (unfortunately, wealth does not always mean intelligence) communities seem to have the most sentimentalists, who believe that nothing should interfere with the liberty—should say liberties—of that noble friend of man, the dog. This would be more reasonable if there were not so many dogs throughout the land that run at their own sweet will, and if they happen to have been bitten by a rabid animal, they in turn may bite man, dogs or other animals.

Many people say: "Why all this hue and cry about rabies?" We have seen a number of persons bitten by dogs, even by dogs said to be mad, and these persons, though they had no treatment, did not come down with rabies. We answer: "It is true that cases of human rabies rather seldom occur after the bite of a dog." This is due chiefly to two reasons:

First, only a small percentage of biting dogs are mad; though in the last two years this percentage has increased materially. Thus, about one-half of the 942 dead dogs sent to our Health Department laboratories during 1927 for diagnosis gave evidence of having died of rabies. Two years ago only 85 of the 360 dogs sent to us had died of rabies—a 100 per cent. increase of the proportion of dogs mad, and 500 per cent. of the actual number of mad dogs sent to us for diagnosis. Of course, there are many non-suspected biting dogs that do not reach our laboratories, so the total percentage of rabid dogs among biting dogs still remains small.

The second reason why we see so few human rabies cases after a dog bite is that human beings are not very susceptible to rabies, and so only a comparatively few come down with the disease after a mad-dog bite, even if they take no treatment. It is estimated that on an average only about 10 per cent. of humans bitten by mad dogs and untreated develop rabies. This is not a very great risk to incur. Of course, this is only an average percentage. Those people develop the disease more readily who are bitten on parts near the brain—that is, about the head—especially the face, and on other parts well supplied with nerves, such as the tips of the fingers. On the other hand, we know that people who take the Pasteur preventive vaccine immediately after having been bitten by a mad dog run on the average only a 0.1 per cent. risk of developing the disease. In other words, if you don't take the specific treatment you run 100 times a greater chance of having rabies than if you do. It's up to you to choose. Most people choose to take the treatment.

For, once a case begins to show symptoms, we see a sight that we may never forget. The convulsed victims present a terrible appearance. At this stage there is no known cure for the disease. The same fatal outcome occurs in dogs, so that those who truly love mankind and dogs and are informed are eager to stop the disease.

The virus was shown by Remlenger, in 1903, to pass readily through the finest filters. The virus from the salivary glands is more filterable than that from the brain.

The virus, after it enters a wound, passes up the nerves and multiplies exceedingly in the central nervous system. It also develops in the large nerve cells of the salivary glands. It may be demonstrated in the sputum of infected animals before any symptoms of rabies appear.

As soon as the virus reaches the brain peculiar bodies appear in the large nerve cells. These cell inclusions are commonly called "Negri bodies," after the one who first published their discovery. One of the authors discovered these bodies at the same time independently and with Lowden made extensive studies of their nature. The conclusion was reached that these bodies are one form of the specific cause of rabies, and Williams gave them a scientific name which is long enough to forget. The practical point about these bodies is that they are diagnostic of rabies. We have developed a quick method of demonstrating them which is now used in all the laboratories of the world. These bodies only show well by this method if the brain is fresh; therefore, an animal suspected of having died of rabies must be taken to the laboratory immediately if the best results are to be obtained.

All of the anxiety due to the fear of rabies, and all of the discomfort and inconvenience in taking the many injections of the otherwise wonderful Pasteur vaccine treatment, may be avoided by the simple and rational expedient of having no stray dogs. Cats are usually not dangerous, because while they are very susceptible to rabies they nearly always have what is called dumb rabies; that is, they become gradually paralyzed and die without biting anyone. So, while we should be on our guard against the occasional cat that may develop the furious form of rabies, our slogan, which we reiterate, "No stray dogs, no rabies," is true in practice.

The recent increase in rabies in New York City and in many parts of the United States is due chiefly to the fact that people have been too sentimental or too careless to check the wanderings at large of their canine friends. They don't seem to realize that they confer a benefit on all dogs, as well as on people, by keeping their own dogs under control.

*Science News-Letter, June 15, 1929*

---

Relief funds sent by America following the Japanese earthquake of 1923 provided a surplus so large that two memorial hospitals have been built.

---

A monument at Pennsylvania State College, known as the Polylith, contains every known variety of building stone to be found in Pennsylvania.

---

Recent tests of the amount of energy expended in different occupations showed that washing clothes required more energy than any other household task.