

DENTISTRY

# Cavities and Polio

Exposed tooth pulp may be one route by which infantile paralysis virus enters the body. Teeth should not be pulled too near the polio season.

► CAVITIES in the teeth which expose the tooth pulp may be one route by which the infantile paralysis virus enters the body, Dr. Myron S. Aisenberg and Dr. Thomas C. Grubb, of the University of Maryland School of Dentistry, report. (*Journal, American Dental Association, May.*)

They warn, at the same time, against having teeth pulled "too near" the infantile paralysis season, since this might open an invasion route for the polio virus. They report six cases in which the disease started 5 to 10 days after having teeth pulled.

The pulp of a tooth, the scientists point out, is richly supplied with nerves arising from the fifth cranial nerve. It is reasonable to believe that the polio virus could travel this route to the brain and spinal cord.

To test this theory, they exposed the pulps of the front teeth of five rhesus monkeys, using an anesthetic to deaden the pain of the grinding. Infantile paralysis virus was carefully dropped into the cavity after bleeding had stopped. One of these monkeys developed paralysis while the others developed the non-paralytic form of the disease.

Finding that infantile paralysis could invade by this route, the scientists next examined the teeth of several hundred children in North Carolina and Baltimore during last summer's polio epidemic. In North Carolina, 69.85% of the children who had polio also had exposed tooth pulps, whereas in the group who did not get the disease, only 26.92% had exposed pulps.

In Baltimore, the figures were 65.04% of children with polio having exposed pulps and 24.07% of those without polio. Some young adults were included in the examinations but as far as practical the scientists tried to compare children in the same age groups.

Dr. Aisenberg and Dr. Grubb do not think exposed tooth pulp and sockets of recently pulled teeth are the only routes by which the polio virus enters the body. They do suggest, however, that a large scale field study will show whether this is one route.

For such a study, they advise careful examination and treatment of the teeth of all susceptible children in a given area several months before the polio season. As a control, the teeth of children in another area should be examined and records made of all pulpal exposure but no treatment given.

"If such a study were conducted over several years," they state, "the importance of pulpal exposure as a portal of entry could be evaluated."

*Science News Letter, May 19, 1945*

PUBLIC HEALTH

## Fly-Fouled Food Seen as One Way Polio May Spread

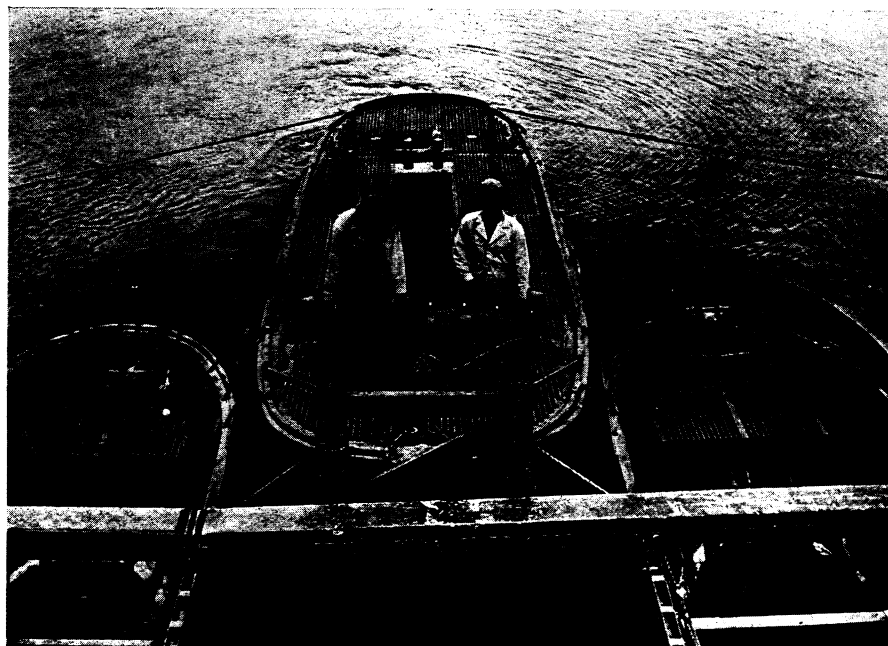
► EATING FOOD contaminated by flies may be one way of getting infantile paralysis, it appears from studies reported by Dr. Robert Ward, Dr. Joseph L. Melnick and Dr. Dorothy M. Horst-

mann, of Yale University School of Medicine. (*Science, May 11.*)

During last summer's epidemic in North Carolina, these scientists put plates of food and fly bait on back porches and yards of the homes of 16 polio patients. This was done within a week of the time the patients got sick. The food and fly bait were left exposed to any flies in the vicinity for 24 to 48 hours.

The fly-contaminated food was then fed to two chimpanzees. Tests showed these animals were not previously infected with infantile paralysis virus. After they had eaten the fly-contaminated food, the virus was found in the chimpanzees' excreta. Although the chimpanzees did not get sick, the virus from their bodies caused typical infantile paralysis injury to the brains and spinal cords of monkeys into which it was injected.

The studies, the scientists state, give additional evidence to support a working theory of the spread of infantile paralysis. According to this theory, the disease may be spread by a number of different routes. Although it may occur at any time of the year, the tremendous concentration of cases during the warm season is the result of increased distribution of the virus. This may depend on



**UTILITY POWER BOAT**—This new boat, capable of propelling bridge-rafts or ferries with loads up to 80 tons in swift currents, is now being shipped overseas. Each of its two propellers is driven by a gasoline engine capable of developing 80 horse-power at 3,000 revolutions per minute. The maximum pulling power is 4,000 pounds and the top speed is 15 miles per hour. Official U. S. Army photograph.