

RABIES

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DEFINITION

Rabies is a natural virus disease of dogs and related animals, such as the wolf, fox and coyote. The virus attacks the brain and produces insanity and paralysis. Man and all warm-blooded animals are susceptible to the disease. Rabies is always fatal once it develops.

SEASONAL PREVALENCE

Rabies is most common in the late winter and the spring, contrary to the popular opinion that the disease is practically limited to the "dog days" of the fall. Outbreaks of rabies may develop at any season of the year and in any climate. The reason for the high prevalence in the spring is that stray dogs range the country at this time in search of food and mate.

METHOD OF INFECTION

The virus is often present in the saliva of rabid animals, and the disease is therefore most commonly transmitted by a bite. The virus cannot get through the normal skin but can enter the body if infected saliva gets into a fresh scratch or wound.

RABIES IN DOGS

A normal dog that is bitten by a rabid animal may develop rabies in as short a time as ten days, or it may show no symptoms until several months later. In most instances rabies will develop from twenty-one to sixty days after exposure. The virus is not present in the saliva until the early symptoms of the disease appear.

Rabies in dogs is usually classified as furious or dumb depending upon the symptoms shown by the animal.

Furious Rabies—During the early stage of the disease the dog may appear quite normal and be even more affectionate than usual. Despite its friendly actions the dog will be

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easily irritated, especially if restrained in any way. If picked up it will immediately try to break away, and if not promptly freed will bite savagely. This is usually the way children are bitten, because they will pick up the friendly looking dog and try to hold it when it attempts to get away. Other early symptoms shown by the dog are restlessness and excitement. It will seldom lie still for more than a moment and will snap at flies and chase chickens, cats, and domestic animals. It also has a tendency to eat sticks, straw, earth, and other indigestible material. After a period of one to three days the dog may become extremely vicious and bite any living thing that gets in its way. The eyes are glazed and constantly wide open. There is often weakness of the voice resulting in a peculiar howl-like bark. During this stage the dog will usually wander away from home, roam the countryside, and attack any person or animal it sees. Within a few days paralysis will develop, first shown by a wobbly or staggering walk and paralysis of the jaw. Paralysis then extends until the animal cannot get up. This is the course of the typical furious form of rabies. Dogs with this type of the disease usually live several days and may live as long as ten days after developing symptoms.

Dumb Rabies—In this type of the disease the early symptoms consist of sleepiness and melancholia, and the dog will try to hide or get away by itself. These symptoms are soon followed by paralysis of the jaw, throat, voice, and leg muscles. There is no irritability or tendency to bite, but persons may be exposed to rabies by trying to look at the throat or give medicine. Animals so affected seldom live more than three days after developing symptoms.

The majority of rabid dogs show symptoms of both types of the disease; that is, a period of restlessness, excitement, and irritability during which they appear friendly and unusually alert, rapidly progressing to paralysis of the dumb rabies type.

Dogs and other animals suffering from rabies are without fear. Rabid wild animals,

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such as foxes and skunks, will fearlessly invade farm premises and attack persons, dogs, and domestic animals. The disease makes them insensible to pain, and blows or gunshot will not frighten them. *A rabid animal will scarcely ever attack a person that stands completely still.*

HOW TO PREVENT RABIES

As rabies is spread almost entirely by dogs it is possible to eradicate the disease completely. This has been accomplished in some countries by a strict quarantine for all dogs, continued for a period of several months after the last reported case of rabies. All stray dogs are impounded and destroyed.

It is a well-known fact that rabies occurs in proportion to the number of stray dogs in the community. This does not necessarily mean ownerless dogs, but includes all dogs which roam the street and countryside. Dogs tend to congregate in groups and, should one of the animals be infected, cases of rabies may develop for a period of months thereafter. *Children should be instructed to avoid all stray dogs when rabies is present in the community.*

It has been conclusively shown that a single injection of rabies vaccine will afford a high degree of protection to a dog. Therefore all dogs should be vaccinated. This is especially important to prevent the exposure of children and adults by their own dogs. Rabies vaccine, however, is not 100 per cent effective, and vaccinated dogs if bitten by a rabid animal may possibly develop the disease. The vaccines now in use contain no live virus, so there is no danger of the dogs' developing rabies from the vaccine. Dogs under nine months of age are difficult to immunize. They are also more susceptible to the disease than older dogs. It is therefore best to vaccinate a dog when he is six months old and again when he reaches one year of age. The immunity produced by vaccination is not permanent but probably persists for at least one year.

REGULATIONS FOR THE CONTROL OF RABIES IN ALABAMA

The Alabama Dog Control Act for combating rabies was adopted by the Legislature in 1937. This law requires all dog owners who do not constantly keep their animals confined or on leash when out of the kennel to have them vaccinated once a year against

rabies. The law also provides for the impounding of stray unvaccinated dogs, penalties for not having dogs vaccinated, and confinement of biting dogs and animals suspected of having rabies. Rabies inspectors are appointed annually by each County Board of Health and have full police power to enforce the act.

Wherever the cooperation of the public has been obtained in enforcing this regulation, dog rabies has completely or almost entirely disappeared. Each citizen should, for his own safety and that of his family, his dogs, and his domestic animals, regard it as his duty to report stray dogs and to see that they are impounded and that owned dogs allowed freedom are vaccinated. When rabies is present in the community, every dog owner should keep his dogs from roaming the streets and countryside, for his own protection as well as that of other persons.

WHAT TO DO IF BITTEN BY A DOG

If rabies is present in the community every biting dog must be suspected of having rabies. The wound produced by a dog bite or scratch should be *immediately* washed thoroughly with soap and water and bleeding encouraged. This will remove most of the infected saliva if the dog has rabies. Immediately after this first cleaning of the wound a doctor should be consulted as to whether further local treatment is needed and whether the vaccine treatment should be given.

Any dog that has bitten a person should be locked up either on its owner's premises or in a veterinary hospital for a period of fourteen days. If the animal has rabies it usually will die in a few days, and will assuredly die of the disease within a two-week period. If rabies is present in the community a veterinarian should be consulted as to whether the dog had rabies. If the biting dog is a stray the rabies inspector or a veterinarian should be called, so that the dog can be caught and held for observation. Even if the biting dog appears to have rabies, it should *not* be killed unless this is absolutely necessary. During the early stages of the disease it is often impossible to make a diagnosis of rabies by examining the brain of the animal. But if the dog is allowed to die of the disease microscopic examination of the brain will usually show quickly whether or not the animal had rabies.

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LOCAL AND VACCINE TREATMENT FOR PERSONS EXPOSED TO RABIES

If a person has been bitten by an animal and the veterinarian and the physician feel that the animal had or probably had rabies, the wound produced by the bite should be cauterized with nitric acid or some equally efficient substance. Such treatment must be given by a physician.

Because it usually takes several weeks for rabies to develop in man, it is possible to prevent the disease by vaccination after exposure. The usual treatment consists of fourteen daily injections of vaccine. It is advisable to begin the treatment promptly, at least within the first few days after exposure. In rare instances the vaccine fails to prevent the disease.

Vaccine treatment should be started immediately when:

1. The animal was apprehended and presented clinical signs of rabies.
2. The animal was killed and the brain found positive for rabies by microscopic examination.
3. The animal was killed and, though the brain was negative, the animal was suspected of being rabid.
4. The person was exposed by a stray animal which escaped, and where rabies is known to be present in the community.

The vaccine treatment is also recommended for persons who have handled animals diagnosed as rabid by clinical or laboratory means and when fresh abrasions of the skin were contaminated by the saliva of the infected animal.

It must be emphasized that when an animal is apprehended after attacking a person

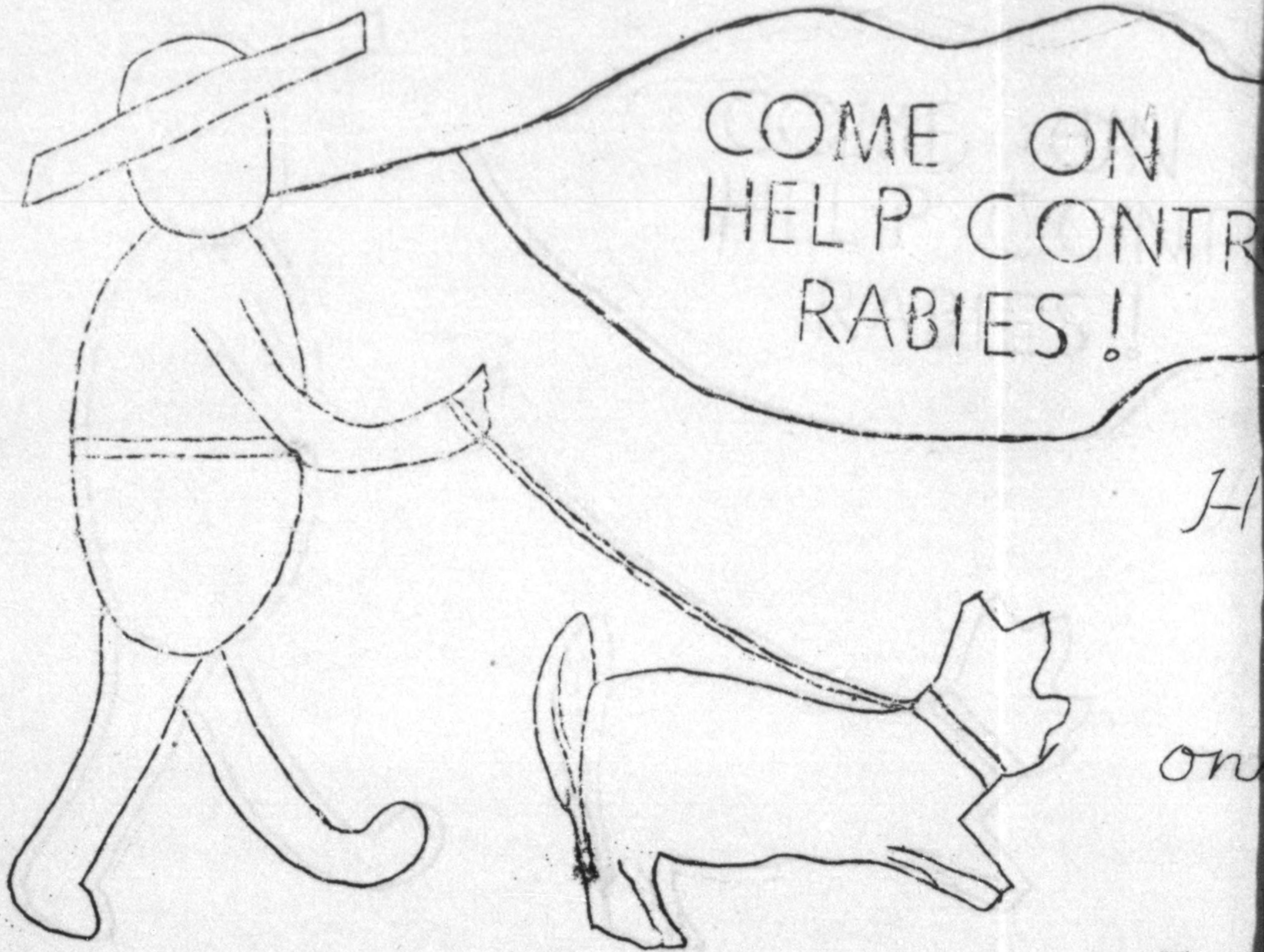
and rabies is suspected, it should not be killed but should be confined under the supervision of a veterinarian. If the animal has rabies it will usually die within two or three days. This is important, as the immediate laboratory diagnosis of rabies depends on the demonstration of specific inclusion bodies in the brain of the animal, and these are often absent in the early stages of the disease.

HOW TO OBTAIN A LABORATORY EXAMINATION OF THE HEAD OF AN ANIMAL THAT IS THOUGHT TO BE RABID

If a dog that has bitten someone dies or is killed it is important that the head should not be mutilated in any way. A positive diagnosis of rabies can usually be made by microscopic examination of the brain. If this examination is negative the diagnosis depends on the inoculation of brain material into mice. If the animal had rabies the virus is always present in the brain and will reproduce the disease in mice.

Animal heads that are to be sent to the State Health Department for examination should be removed by a veterinarian or someone especially familiar with the nature of rabies. The operator should wear rubber gloves, and the instruments and gloves which he uses should afterward be disinfected by boiling. The animal's head should be put in a water-tight container and this should be put in a larger tin container in which equal parts of sawdust and ice have been placed. The container should be labelled "Rush—Rabies Suspect" and dispatched to the nearest laboratory of the State Health Department.

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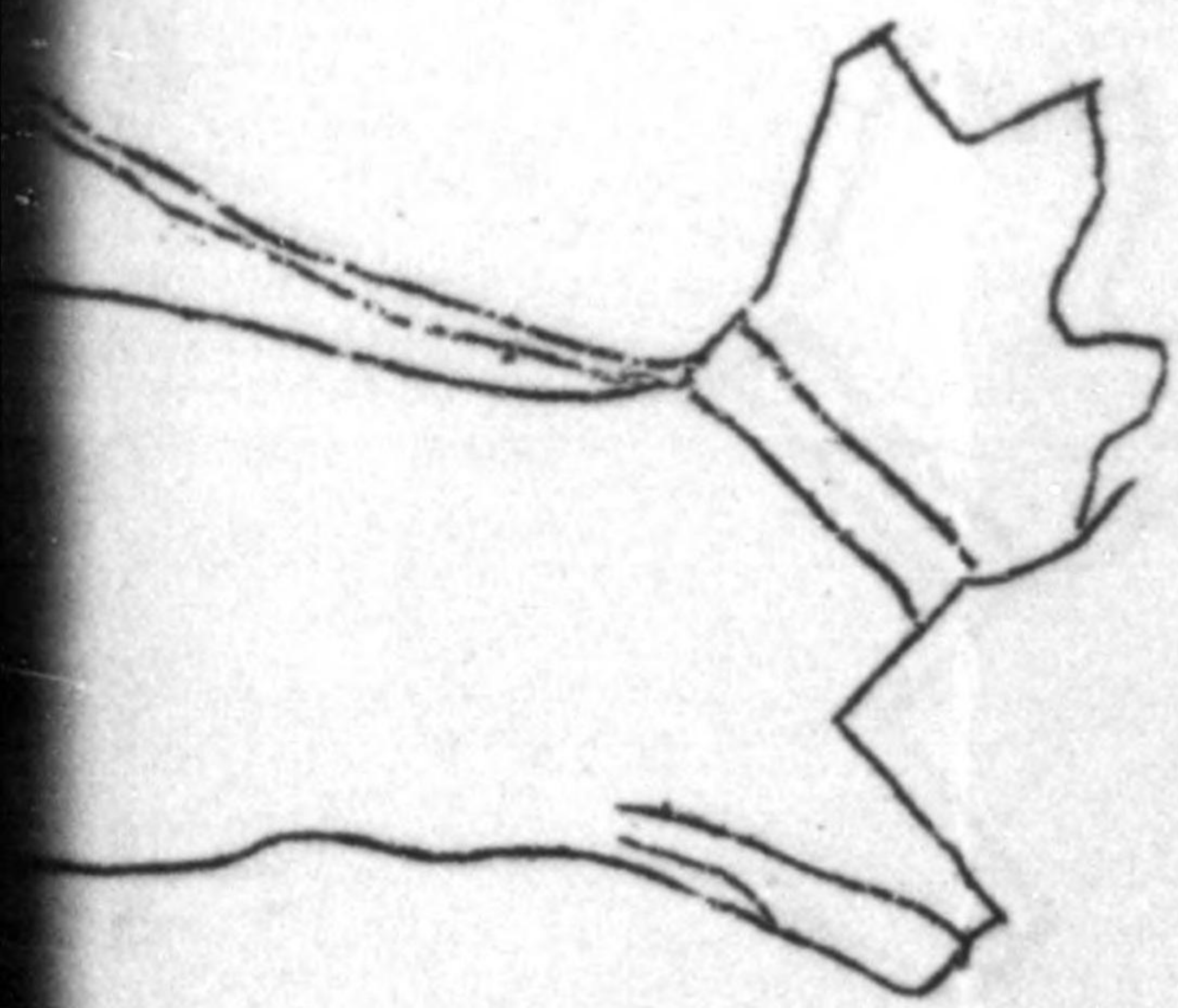
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Spartanburg County Health D

COME ON
HELP CONTROL
RABIES!



Have your Dog
Vaccinated
on Tuesday, August 27
at Pacolet Mill

Time — 1 — 5 O'clock
County Health Department

514

HEALTH BULLETIN

JUNE, 1946

DOGS AND BITES

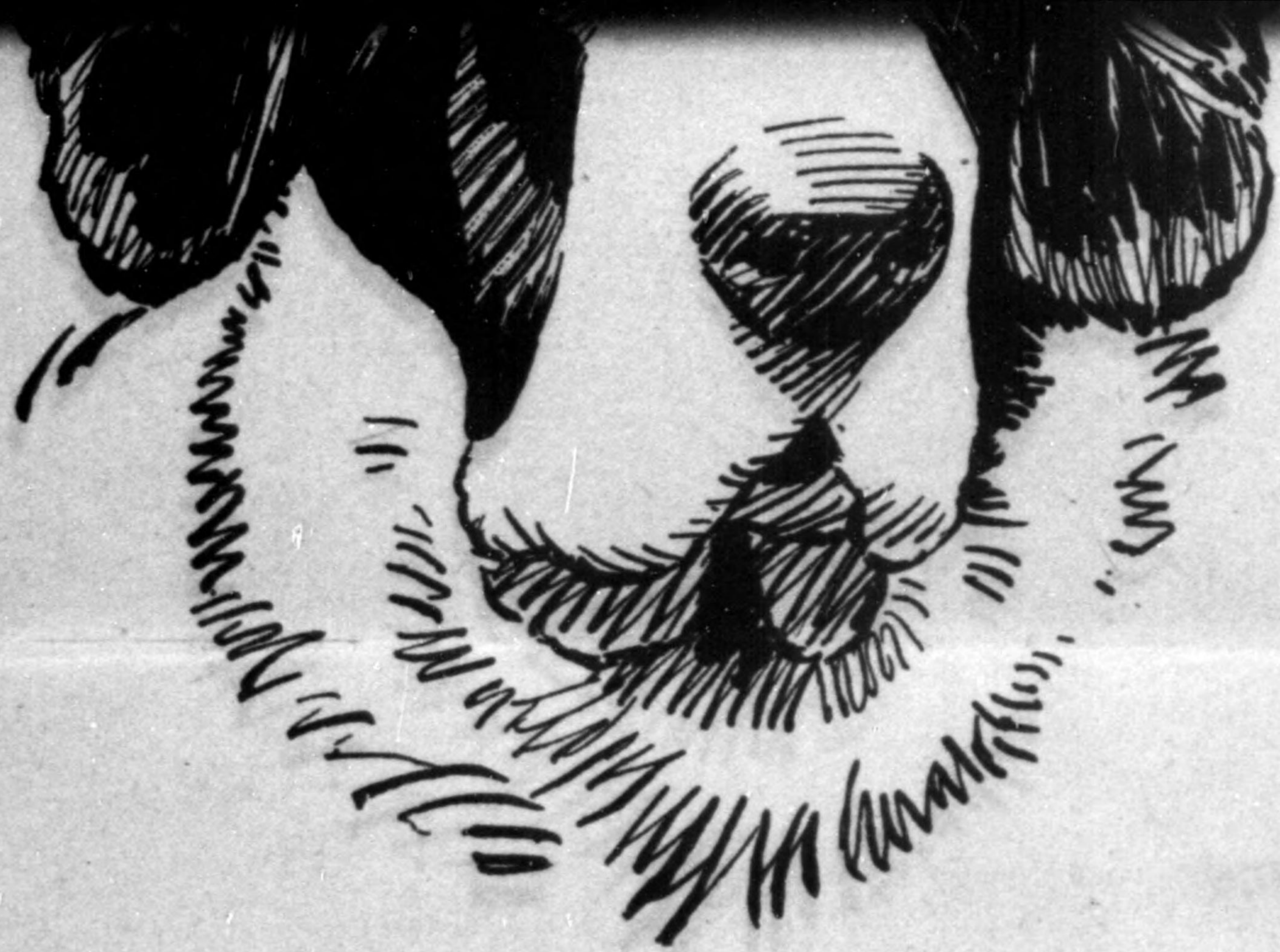


KNOW THESE FACTS:

Every dog bite should be treated immediately by a doctor.

The doctor must report the case to the Board of Health.

If there is any evidence



**The doctor must report
the case to the Board of
Health.**

**If there is any evidence
that the dog might be
rabid, the person bitten**

**must take Pasteur Treatment. This is necessary to save
life. Rabies can be prevented, but it can't be cured.**

IF YOU HAVE A DOG:

Have it inoculated against Rabies.

Keep it restrained during quarantine periods.

THE PUBLIC HEALTH FEDERATION

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

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THE PUBLIC HEALTH FEDERATION

(Health Division of the Community Chest)

In cooperation with

ACADEMY OF MEDICINE

CINCINNATI BOARD OF HEALTH

RABIES

(Hydrophobia)



DEFINITION:

Rabies is a disease that affects the nervous system, including the brain and spinal cord, of animals and man. Once it develops in either, it is always fatal.

CAUSE:

The disease is caused by a virus present in the saliva of infected animals. It is injected into another animal or a person by a bite.

OCCURRENCE:

Although cases of rabies in man are rare as compared to other diseases, it is widespread in animals in the United States, and in recent years has been on the increase.

It occurs in dogs during any season of the year. However, more animal cases are reported during the warm weather when animals are wandering and therefore there is greater possibility then for human exposure.

METHOD OF TRANSMISSION:

The bite of infected dogs accounts for 90 percent of human cases in the United States, though cats, cows, horses, hogs, sheep and all warm-blooded animals may contract the disease and occasionally spread it. Recently the incidence of fox rabies has soared and a number of people have been attacked by rabid foxes.

The disease may also be transferred if the saliva of the infected animal comes in contact with open wounds.

After entering the body, the virus of rabies travels along the nerves to the brain and spinal cord. Some of the virus overflows from the brain into the glands which produce saliva. This accounts for the danger of the bite of the infected animal.

INCUBATION PERIOD:

The period from the time infection enters the body until the virus reaches the brain and produces symptoms is known as the incubation period. In humans this interval varies from 14 days to a year or more, the average being 50 to 60 days.

The length of the incubation period is influenced by the location and the serverity of the wound through which the virus enters the body. Wounds of the head, neck, hands and other skin areas having many nerve endings, are apt to produce symptoms most rapidly.

SYMPTOMS OF RABIES:

There are two types of the disease in dogs and other animals. One is called "furious" rabies, the other "dumb" rabies.

Furious type: One of the first symptoms is the changed disposition of the animal. A previously playful dog becomes sullen, prefers to be alone and refuses food. A day or so later it grows unnaturally restless. It may lie down for a moment, then jump up suddenly, move to another place, lie down again only to repeat its restless movements. Restraint increases its nervousness and irritation. It may attack strangers without warning. As the disease progresses, the dog snarls viciously, barks and growls at imaginary objects, and may chase and bite other animals with which it had previously lived in harmony. If free it may wander long distances from home, and unless killed, will keep on, biting as it goes, until it drops from paralysis or exhaustion. The furious type also is observed in other animals including cats, foxes, cattle, swine, squirrels, skunks, horses, and wild cats.

Dumb type: This type occurs in about 20 per cent of cases, and is more difficult to recognize. The symptoms of excitement and irritability are absent or so slight as to be unrecognized. The progress of the attack is more rapid than is the furious type, and death from paralysis usually occurs within two or three days from the onset of the disease. The paralysis is frequently first noted in the lower jaw, and the appearance and actions of the animal may lead one to believe that the dog has a bone in its throat. Any attempt to relieve the animal is dangerous since it may result in getting infectious saliva into some slight skin wound. The dumb type is observed in all animals that are susceptible to rabies.

It is especially dangerous in cattle and horses because farmers or attendants often attempt to remove the object that is thought to be the cause of the choking. In this way the person attempting to assist the animal may injure himself unknowingly and hence allow infected saliva to enter the wound.

In Man: The characteristic symptoms of rabies in man are readily recognized by physicians. Death results from exhaustion and paralysis.

TREATMENT:

Once symptoms have developed, the disease cannot be cured.

The prevention of rabies is considered under the following four heads:

1. Treatment of Wound.

Wounds produced by the bite of a rabid animal should be thoroughly cleaned at once with soap and water, preferably green soap solution. Use a syringe to apply the soapy water with force to the full depth of the wound.

2. Pasteur Treatment for Prevention.

In all cases where the animal is known to be rabid, or when it cannot be caught and examined, and when the physician believes that actual exposure has occurred, the patient should receive the 14 daily injections known as the Pasteur treatment as soon as possible. This treatment is useless if begun after symptoms appear.

3. Control of the Disease in Dogs.

Compulsory impounding of all stray dogs the humane destruction of ownerless:

dogs and the intelligent restraint of all others are essential steps in the eradication of the disease. The mass vaccination of dogs is recommended and is necessary if the disease is to be eliminated.

4. Fox Rabies Control.

Where fox rabies is serious, the fox population should be reduced by trapping, poisoning and shooting.

HANDLING OF DOGS THAT HAVE BITTEN MAN OR ANIMAL:

It is best not to kill the dog. Early in the course of the disease, the signs of rabies may not have developed in the dog's brain, which will leave the diagnosis in doubt.

If the dog can be caught without killing it, it should be locked up and kept under observation for 14 days. If the dog appears to be normal at the end of this period, there need be no fear of rabies and the person bitten need not take the Pasteur treatment.

If the dog is killed, or if it dies during the 14 day period of observation, the head should be packed in ice and shipped immediately to the nearest Board of Health laboratory with the request that it be examined for rabies.

DO NOT INDULGE IN SELF-DIAGNOSIS OR SELF-TREATMENT. CONSULT YOUR DOCTOR.

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