



Circular No. 140
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RABIES

The Rabies Law

Summary of Powers and Duties of
Health Officials, Physicians and Others

Methods of Transmission, Symptoms,
Treatment and Prevention

Department of Health,
State of New Jersey.

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RABIES

The Rabies Law

An Act for the Prevention and Control of Rabies (Chap. 291, P. L. 1915)

1. It shall be the duty of all persons owning or having interest in, or having in their possession or under their control, or having knowledge of any dog or cat, or other animal, affected by rabies, or suspected of being affected by rabies, or that has been bitten by any animal known or suspected to be affected by rabies, to forthwith notify the local board of health of the sanitary district in which such animal is located. Such notification shall be in writing, signed by the person making the same, and shall state where such animal may be found.
2. It shall be the duty of the local board of health of every township, city, borough, town, village or other local municipal government in this State, to serve a notice, in writing, upon the owner or other person having control over any dog, cat or other animal known or suspected to have been bitten by an animal known or suspected to be affected by rabies, requiring such owner or person having control of such animal either to kill such animal or securely confine such animal for a period of not less than six months, and any such animal so confined shall not be released until a written certificate of release has been issued by the local board of health.
3. Whenever the local board of health of any sanitary district in this State or any officer or inspector thereof has reason to believe or has been notified by the State Board of Health that there is danger that rabies is liable to spread in the district in which said board has jurisdiction, such board, officer or inspector shall cause a notice, in writing, to be served on all persons within said district (so far as the same may be known to said board, officer or inspector) owning, having interest in, or having in their possession or under their control any dog, or dogs, requiring such persons to securely confine said dog, or dogs, until a permit has been issued, in writing, by such board for the release of such dog, or dogs. Other animals may be included in the order whenever, in the opinion of the said board of health, this is necessary.
4. The local board of health of any city, borough, town, village or township in this State is hereby authorized to furnish the Pasteur treatment for any indigent person residing therein who has been bitten by an animal known or suspected to be affected by rabies, and any expense thus incurred shall be provided for by the body having control over the finances of said city, borough, town, village or township in the same manner that the regular funds of the board are provided for.
5. Whenever the Board of Health of the State of New Jersey shall have knowledge that the disease known as rabies or hydrophobia exists among dogs or other domestic animals in any sanitary district in the State of New Jersey, and, in the judgment of the State Board of Health, the disease is liable to be

introduced and spread among animals in an adjoining sanitary district, the said Board of Health may issue an order requiring the local board of health, or any officer or inspector thereof, of any sanitary district in this State to serve the notice provided for in section three of this act and to cause its provisions to be enforced. Any local board of health, or any officer or inspector thereof, shall furnish information to the State Board of Health concerning the prevalence of rabies in the sanitary district in which said board, officer or inspector has jurisdiction whenever or as often as requested to do so by the said State Board of Health.

6. The State Board of Health shall, within thirty days after the approval of this act, prepare a circular containing a description of the symptoms, methods of transmission, treatment and the preventive measures to be taken against the spread of rabies or hydrophobia, and, upon application, shall provide with sufficient copies thereof for distribution, as hereinafter provided, to the person in each sanitary district in this State who is empowered under the law to register or license dogs, and if there be no provision for such person in any sanitary district of this State, the local board of health is empowered to act, and such person or board shall apply to the State Board of Health for a sufficient number of such circulars and shall, at the time of such registration, furnish a copy of said circular to each person who may register or obtain a license for a dog.

7. Any person or persons who shall violate any of the provisions of this act or the provisions of any notice served thereunder shall be liable to a penalty of fifty dollars for the first offense and one hundred dollars for each subsequent offense, such penalties to be collected in an action of debt brought by and in the name of the local board of health or the Board of Health of the State of New Jersey.

8. Nothing in this act shall be construed to change or affect the provisions of any act or parts of acts conferring upon the mayor or governing body of any municipality the power to enforce measures for the restriction and control of rabies.

9. This act shall take effect immediately. (Approved April 14, 1915.)

A Supplement to an act entitled "An Act for the prevention and control of rabies," approved April fourteenth, one thousand nine hundred and fifteen.

1. Every physician shall, within twelve hours after his first professional attendance upon any person bitten by any dog, cat or other animal, report to the person designated by law or by the local board of health under authority of law to receive reports of reportable communicable diseases in the municipality in which the person so bitten may be, the name, age, sex, color and the precise location of such person.

If any child is bitten by any dog, cat or other animal and no physician attends such child the parent or guardian of the child shall report to the person designated by law, or by the local board of health under authority of law, to receive reports of reportable communicable diseases in the municipality in which the child so bitten may be, the name, age, sex, color and the precise location of such child. Such report shall be made within twelve hours after the parent or guardian shall first have knowledge that the child was so bitten.

If any adult is bitten by any dog, cat or other animal and no physician attends him it shall be the duty of such adult, if not incapacitated, or if he be incapacitated then it shall be the duty of the person caring for him, to report to the person designated by law or by the local board of health under authority of law to receive reports of reportable communicable diseases in the municipality in which the adult so bitten may be, the name, age, sex, color and the precise location of such adult. Such report shall be made within twelve hours after the adult was bitten as aforesaid or, if he be incapacitated, then such report shall be made within twelve hours after the person caring for him shall first have knowledge that the adult was so bitten.

2. The local board of health of every municipality in this State within the district in which said board has jurisdiction, may serve notice upon the owner or person in charge of any dog, cat or other animal which has attacked or bitten any person, to confine such dog, cat or other animal at the expense of the owner or the person in charge of such animal, upon the premises of said owner or person in charge or at some other place designated in the notice, for a period of at least ten days after the dog, cat or other animal attacked or bit any person and any such animal so confined shall not be released until the local board of health shall have received satisfactory evidence that said animal is not affected with rabies and until the local board of health shall have issued a certificate of release.

3. The local board of health of every municipality in this State or the duly authorized agent of such board within the district in which said board has jurisdiction, shall be permitted by the owner or person in charge of any dog, cat or other animal which has attacked or bitten any person, to examine said dog, cat or other animal at any time, and daily if desired, within a period of ten days after said animal attacked or bit any person, for the purpose of determining whether the animal shows symptoms of rabies. No person shall refuse, obstruct or interfere with any local board of health or any authorized agent thereof in making such examination.

4. Any person or persons who shall violate any of the provisions of this act or the provisions of any notice served thereunder shall be liable to a penalty of fifty dollars for the first offense and one hundred dollars for each subsequent offense, such penalties to be collected in an action of debt brought by and in the name of the local board of health or the Board of Health of the State of New Jersey.

5. Nothing in this act shall be construed to change or affect the provisions of any act or parts of acts conferring upon the mayor or governing body of any municipality the power to enforce measures for the restriction and control of rabies.

6. This act shall take effect immediately. (Approved April 3, 1930.)

Powers and Duties of Health Officials, Physicians and Others

According to the provisions of the rabies law and its supplement:

Each Local Board of Health is EMPOWERED:

1. To furnish free Pasteur treatment for an indigent person residing in its district who is bitten by an animal known or suspected of having rabies.
2. To serve notice upon the owner of any dog, cat or other animal which has attacked or bitten a person, to confine such animal for at least ten days thereafter.
3. To examine for symptoms of rabies any dog, cat or other animal at any time within ten days after such animal attacked or bit a person.

Each Local Board of Health is REQUIRED:

1. To serve a notice, in writing, upon the owner or other person having control over any dog, cat or other animal known or suspected to have been bitten by an animal known or suspected to be affected by rabies, requiring the owner or person having control of the bitten animal either to kill it or securely confine it for a period of not less than six months from the date bitten.
2. To issue a certificate releasing such an animal from confinement after six months.
3. To give notice in writing to all owners of dogs, and of other animals if considered necessary, when there is reason to believe that rabies is liable to spread in the district, to securely confine such animals until a permit has been issued in writing for their release.
4. To serve such notices when ordered so to do by the State Department of Health, and upon request of said Department, to furnish information concerning the prevalence of rabies in the district.

The State Department of Health is EMPOWERED to issue an order to any local board of health requiring the local board to have confined all dogs, and other animals if necessary, in its district if rabies is present therein, and if it is the judgment of the Department that there is danger of the disease spreading to an adjoining sanitary district.

The State Department of Health is REQUIRED to prepare a circular of information concerning rabies and to furnish upon request sufficient copies for distribution to dog owners by persons empowered to license dogs.

Persons empowered to license dogs are REQUIRED to apply to the State Department of Health for circulars on rabies and to furnish a copy to each person who may register or obtain a license for a dog.

Each physician is REQUIRED to report to the local board of health the name, age, sex, color and address of any person bitten by a dog, cat or other animal and attended by such physician.

Each parent is REQUIRED to report to the local board of health the name, age, sex, color and address of his child if the child is bitten by a dog, cat or other animal and is not attended by a physician.

Each adult is **REQUIRED** to report to the local board of health the fact that he was bitten by a dog, cat or other animal if not attended by a physician for such bite.

EVERYBODY IS REQUIRED:

1. To report immediately to the local board of health any dog, cat or other animal that has rabies, or is suspected of having rabies, or that has been bitten by an animal known or suspected to have rabies. Such report must be in writing, signed by the person making the same and must state where such animal may be found.

2. To obey all orders issued under the authority of the law by the local board of health for the destruction or secure confinement of any dog or other animal.

Rabies, An Infectious Disease

Rabies is an acute communicable disease which may affect warm blooded animals and man. In practically every instance it is fatal.

METHOD OF TRANSMISSION. The disease is transmitted by infected animals and in this section of the country chiefly by dogs. The causative agent of the disease is present in the saliva of a rabid animal and enters the body of another animal or a person through the skin. Usually the infection is introduced through the skin by a bite; it may also be introduced through scratches or abrasions in the skin if saliva from infected animals reaches such abrasions.

PERIOD OF INCUBATION. The infective agent apparently travels from the point of inoculation to the central nervous system along the nerves. Thus, if a person is bitten about the face the disease is apt to develop sooner than if bitten upon a portion of the body further distant from the brain. In general, the period of incubation may be said to vary from 15 to 90 days in man, though the disease has been known to develop as early as 10 days and as late as a year or more after the infecting bite. In dogs the period of incubation is usually from two to four weeks. However, it may be as long as five to six months or even longer in rare cases. In larger animals like the cow or the horse, the average incubation period is slightly longer than in small animals.

DIAGNOSIS OF RABIES IN AN ANIMAL. In the brain of an animal with a well developed attack of rabies there are tiny bodies called Negri bodies. The presence of the bodies in the brain of an animal warrant a positive diagnosis of rabies. The cells can be seen only by the use of a powerful microscope. Therefore, a laboratory examination of parts of an animal's brain is of great help in establishing a diagnosis. Unfortunately, if the disease has not developed so that the animal shows very marked physical symptoms, there is much less chance of the laboratory finding these Negri bodies. Therefore, if a dog or other animal bites a person and does not, at that time, show definite symptoms of rabies, it is much better to confine the animal and to observe it carefully during the next 10 days for the development of rabic symptoms than to kill it and depend upon laboratory findings alone. If an animal shows symptoms of advanced rabies, a diagnosis may be confirmed by laboratory examination.

USUAL SYMPTOMS OF RABIES. Among the symptoms most noticeable in a case of rabies running the usual course are the following:

1. Change in disposition.
2. Unusual nervousness or irritability.
3. Tendency to leave home.
4. Tendency to snap or bite without provocation.
5. Difficulty in swallowing, particularly of fluids.
6. Swallowing abnormal substances, such as wood, stone, etc.
7. Change in voice.
8. Weakness or paralysis of the legs or lower jaw.

Beware of the dog showing any of the above symptoms. A rabid dog does not have "fits" until the disease is far advanced. Other causes will often account for convulsions or fits seen in dogs and cats. In describing a typical case of rabies in a dog it is convenient to divide its course into stages.

The First, or Prodromal Stage, is one of melancholia. The dog is apt to hide away in dark corners, avoid noise and obey the call of its master unwillingly. There may be a remarkable uneasiness, a frequent changing from place to place, walking uneasily around, suddenly stopping and after a moment of attentiveness, barking and biting at the air without cause. Often the dog will become excited and snap at the hand of its master when approached and especially when teased. In some instances it may show excitability towards strange dogs or persons while yet friendly with its master.

At this time the dog will scarcely touch its favorite food, or will refuse to swallow it even after having it in the mouth. Later, all food is rejected, but often the animal will chew other objects and swallow them, if possible. Paralysis of the throat muscles prevents the swallowing of liquids, when the affected animal is still able to swallow solids.

The Second Stage, or Stage of Excitement, comes on from one-half to three days after the first appearance of symptoms. All the symptoms become more pronounced. The unrest and excitement develop into a violent rage. During this stage the dog usually leaves home, and it may travel for miles, biting and snapping at other animals and occasionally at people if irritated or excited. If the dog is confined, this stage may be marked with spells of rage followed by periods of depression. During an attack of rage the dog may jump sidewise against the bars of the cage and bite them violently. If teased it will make a furious attack and grab any object within reach. The dog may even bite its own body.

A period of exhaustion, with perhaps unconsciousness, usually follows such an attack of rage, or of aimless wandering if the animal is free. After a short period of exhaustion, during which the animal has lain quietly, breathing with difficulty, it will rise, stand for awhile with staring eyes and a peculiar expression of cunning and fright, then, stimulated by the sight of other animals, or other outside influences, or perhaps without such stimulant, a new attack of rage or aimless wandering begins.

A prominent symptom during this stage is the characteristic change in voice. The bark becomes hoarse and double, and is often accompanied by loud and prolonged howls. Some dogs bark frequently, others only when excited. Swallowing becomes increasingly difficult.

The Third Stage, or Stage of Paralysis, follows after three or four days of excitement. The attacks of rage become less frequent and less violent. As these symptoms subside an already existing paralysis of the hind legs and lower jaw is made more conspicuous, and the paralysis may extend to other parts of the body. The power to bark and swallow is lost. Often the tongue hangs out of the open mouth and saliva drips in long threads from the lips.

The paralysis usually appears first in the hind legs and causes the animal to tumble when running and later when walking. When the power to use the hind legs is entirely lost the dog will drag them for awhile and finally give up all attempts to move and will lie helplessly on the ground. At this time attempts to rise result in only a few ineffectual movements with the forelegs. Exhaustion now becomes more pronounced, and the animal soon dies, usually in convulsions. Symptoms comparable with those described above are also shown by other animals affected with rabies.

MODIFIED CASES OFTEN OCCUR. Variations from the typical case described above often occur. This is especially true of the duration of the various stages. Sometimes the second stage, or stage of excitement, is very pronounced and such an attack is often referred to as furious rabies. In some cases the stage of melancholia may be followed almost immediately by the paralytic stage, and the name "dumb rabies" is frequently applied to this form of the disease. Most dogs suffering from dumb rabies are weak from the beginning; they neither bark nor bite, and usually die in three or four days from the onset of the symptoms.

TREATMENT. There is no cure for rabies after the disease is once developed. The only treatment that has any value, except to relieve pain, is that directed toward the prevention of the disease.

If a person is bitten by an animal known or suspected of having rabies, the wound should be cauterized at once by a physician with fuming nitric acid. In children it may be necessary to give an anæsthetic on account of the pain. The use of other germicidal agents in treating wounds for the prevention of rabies is not recommended.

The only reliable method of treatment for prevention of rabies is the Pasteur treatment. This consists of a series of injections with a liquid containing killed or attenuated rabies virus and has been shown to reduce the death rate from 15 to 20 per cent of those bitten to less than one per cent. It is recommended that all persons bitten or infected by dogs or other animals known or suspected of being rabid, immediately take the Pasteur treatment.

PREVENTION. Cauterization of the wound and the Pasteur treatment are measures to prevent the development of the disease after being bitten by a rabid animal. Obviously if the biting of one animal by another could be prevented the prevalence of rabies among animals would be practically ended, and the danger to persons proportionately reduced. Therefore, it has been urged that by the universal muzzling of all dogs allowed at large and the destruction of stray dogs without muzzles, rabies would be eradicated. While this is correct in theory, the necessity of control in this country by local authorities rather than by the Federal government, the objections by dog owners to muzzling in spite of the fact that such a procedure protects dogs as well as human beings, the extensive unprotected borders of the country,

together with the presence of wolves, skunks and other wild animals that may spread the disease in some sections, have rendered this method of control impracticable in the United States.

The laws of New Jersey relating to rabies provide for the spread of knowledge of the disease by means of circulars, compulsory notification of known or suspected cases by all persons, compulsory notification of persons attacked or bitten by dogs or other animals, and rigid quarantine regulations enforced by local boards of health. These laws will be made effective only by every one concerned doing his full duty.

What to Do When Bitten

1. Call a physician at once that he may cauterize the wound with fuming nitric acid, using a general anæsthetic if the wound is large or the patient a child. If dropped in, drop by drop, the acid will diffuse to all parts of the wound.

2. If the animal is rabid, or is suspected of being rabid, take the Pasteur treatment at once in addition to the above precaution. This is the best preventive measure of all. Remember that there is no cure after the disease develops.

3. Capture the dog and securely confine it, if possible, instead of killing it at once. Hold the dog in quarantine for ten days. A dog's bite may be infective several days before symptoms of the disease develop, but if ten days have elapsed, during which the animal does not die nor show symptoms, there is no danger that it had rabies. If an animal has not shown fairly marked symptoms of rabies, there is little chance of the laboratory finding evidence of infection in the dog's head.

4. Report the case to the local board of health immediately as required by law.

How to Ship a Head to the Laboratory

When killing an animal, do not shoot it through the head or beat its brains out. Injury to the brain may prevent a satisfactory laboratory examination and result in loss of time and delayed treatment which might be fatal to the person bitten.

As soon as the animal is killed or dies, remove the head, wrap it in a cloth, place in a tight container, preferably a can with a close fitting cover, tightly solder, and pack the container in ice and send by messenger or by express to the Bureau of Bacteriology, State Department of Health, at Trenton, without delay. Sawdust or other absorbent material should be used to prevent leakage of blood if a perfectly tight container cannot be secured. Care should be used to prevent wounding the hand or inoculating scratches or abrasions with saliva or blood while handling the head.

When shipping a head, mark the package plainly with the name and address of the sender. Then write a letter to the State Department of Health giving full particulars concerning the case. In this letter be sure to give all the following points of information:

Sender's name -----Address-----

Health officer's name-----Address-----

Name of owner of animal-----Address-----

Description of animal -----

Where the animal was found-----

Whether the animal was killed or allowed to die-----Period of illness-----

Diagnosis from symptoms -----

Mention other animals bitten by this one-----

Names of persons bitten-----

State to whom report is to be sent and whether by telegraph (collect) or
mail -----