

REMOVING ANIMAL HEADS FOR RABIES TESTING

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Modified from Virginia Department of Health, Office of Epidemiology, "Suggestions for Removing Animal Heads for Rabies Testing." July 1, 2006.

Whenever possible, local animal control officers should be involved when an animal bite or potential rabies exposure occurs. Animal control may be contacted to assist with head removal for rabies testing and to ensure the head is shipped for testing appropriately and in a timely manner.

The Scientific Laboratory Division of the New Mexico Department of Health (SLD) performs rabies testing in the state of New Mexico. SLD accepts heads or brains of animals; **bats should be submitted whole** (see rabies submission guide for further laboratory submission instructions). For large animals (horses, cattle, etc.) the entire brain should be removed intact (including medulla, cerebellum and hippocampus) and sent in for testing. Lagomorphs, squirrels and other rodents should be approved for testing by NMDOH Epidemiology and Response Division (505-827-0006) prior to shipment. All specimens should be accompanied by a Scientific Laboratory Division submission form (see link on website http://nmhealth.org/erd/HealthData/nm_vets.shtml).

NMDOH on-call epidemiologists are available for consultation 24 hours a day, 7 days a week by calling: **505-827-0006**.

Submitting brains:

1. The brain may be preferable to the entire head when the size of the animal (e.g., livestock) makes transport difficult or when an owner does not want a pet decapitated.
2. When submitting the brain instead of the head, care should always be taken to ensure that the brainstem is included.
3. The entire brain should be submitted intact. If the brain tests negative for rabies, then specimens for histology or other requested tests can be collected at Veterinary Diagnostic Services (VDS).

I. PURPOSE

- A. Submit a good specimen that will allow for accurate testing.
- B. Prevent human infection.

II. SUPPLIES

- A. Sharp knife and sharpener.
- B. Optional - sharp hacksaw, dehorner, lopping shears, pruning shears, or brush cutters.
- C. Protective clothing:
 1. Waterproof gloves (disposable)
 2. Mask (disposable)
 3. Safety glasses or goggles
 4. Coveralls and/or waterproof apron

D. Cleaning Supplies

1. Detergent
2. Disinfectant
3. Paper towels
4. Plastic trash bags

III. PROCEDURE

A. Head removal for animal carcasses (**NOTE:** These methods are suggestions. Use the technique with which you are most familiar and feel most comfortable).

Step 1

a. Lay animal on its back and extend the head by pushing top of nose toward ground or bend neck back over edge of table.

b. Locate the larynx. Immediately behind the larynx (see example that follows), using a sharp knife, make an incision through the skin and continue cutting down through the trachea and esophagus to the backbone.

c. If you have cut in the correct place, you can identify the membrane covering the spinal cord between the first vertebrae (atlas) and the skull (occipital bone). The joint made by these two bones can be visualized and palpated as the animal's head is flexed and extended.

d. Disarticulate the atlanto-occipital joint. It is possible to dissect the ligaments connecting this joint, but probably easier and faster to hyperextend the head and manually tear the ligaments. You will hear and feel a snap when this is accomplished.

e. After disarticulation of the atlanto-occipital joint, the remaining muscle and skin can be cut with a knife to completely free the head from the body.

Step 2

a. Some individuals may prefer to cut through the vertebra instead of disarticulating the joint. After cutting down to the backbone, use shears or a hacksaw to cut through the first vertebra. DO NOT use an axe, hatchet or power saw because of the danger created by flying debris.

B. Packaging – see document/link on webpage titled, “Rabies Sample Packing and Shipping.” Each animal should be individually identified and packaged.

C. Clean up

a. Instruments and contaminated surfaces should be washed with detergent and water, and disinfected with a virucidal solution such as clorox (100 ppm), alcohol (40-70% ethanol), iodine (25 ppm), or quaternary ammonium (200 ppm) compounds.

b. The body of the animal should be incinerated or properly disposed of according to local guidelines and regulations.

