


GENERAL NECROPSY RULES



Pre-Necropsy and General Considerations

- Time
 - Place
 - Disposal of the carcass
 - Protective clothing
 - Basic Necropsy Equipments
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WHEN AND WHERE TO DO A NECROPSY?



TIME

The best time to do a necropsy is **immediately** after the death of an animal to minimize postmortem autolysis.

When a necropsy has to be delayed, the carcass should be refrigerated. Refrigeration slows, but does not stop, autolysis by slowing down enzymatic reactions.

Postmortal changes especially "autolysis" starts early in tissues with high enzymatic activity.

Otherwise, post mortal changes; in particular, as a result of autolysis (self-dissolution) and putrephase (stasis) develops decomposition of organs and tissues (structural deterioration).


However, these changes do not develop at the same intensity in all organs and tissues of the organism at the same time.

☐ Muscles → 2 h → contraction

☐ Cornea, skin and kidneys → 6 h transplantation

☐ Bone and connective tissue → after 12 h

☐ Spermatozoon → 72 h

- **Postmortal changes do not always constitute an obstacle for macroscopic diagnosis!!!**
 - Some lesions protect their intravital appearance exactly. Like abscess, exudate, thrombosis, granuloma and valvular defects in the heart, anomaly, pathological changes.
 - Long after death, they do not lose their properties.
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PLACE

The most suitable place is the [necropsy halls](#).



The necropsy location should have adequate **light, water, ventilation, drainage, and provisions for cadaver storage and disposal.**

Necropsy should be done in sufficient light preferably broad **day light.**



Exercise extreme care in selecting possible sites for necropsy, especially in the field. The selected site should be away from sources of feed, forage and water for the rest of the herd or flock. Avoid those sites that will be frequented by other animals in the herd in gaining access to other places. Insects, predators and other biological vectors of diseases should be warded off from the examination site.



Rural/country →

- ✓ from residential,
- ✓ Animal shelters,
- ✓ Field/grass,
- ✓ Underground and surface waters (well, source, and streams)

Pay attention to be as far away as possible.

- ✓ The necropsy area should be close to the cadaver (to be buried, burned) or necropsy should be performed in the same place.

DISPOSAL OF THE CARCASS

- It is especially important to prevent spread of epidemics.
- The cadaver should be destroyed by burning or burying.

1- Cremation is used for this work in institutions or faculties.

In the disposal of the animal cadaver after examination, incineration is still the best method for the disposal of small animal cadaver. This procedure may not be suitable for large animals at the country or rural areas.

The amount of time involved in the incineration and the amount of fuel required turning the large heap of flesh and bones into ash preclude this procedure.

2- For both small and large animals, burying deep into the ground may be practical. However, the pit should be dug deep enough so that stray animals and other predators cannot have easy access to the disposed cadaver.

Also, consider the chances of contaminating the surrounding and the odor that may emanate from it should the pit be not deep and large enough to fully hold and cover the whole carcass. Exercise caution in selecting the site for the pit.

The site should not be away from sources of feed or where underground water is being pumped. All dead animal cadavers should be considered possible sources of contamination that should be disposed responsibly.



PROTECTIVE CLOTHING

It is important to protect the personnel who work with necropsy!

Maybe **zoonoses**?

No one can guarantee that the dog died in a traffic accident is not rabies or the horse died with a painful pain is not anthrax the horse.

It should protect the examiner from contamination with blood, tissues and body fluids from the cadaver that are potential carrier of infectious particles.


The primary clothings should be

- surgical scrubs
- the wearing of cotton coverall,
- rubber boots,
- overshoe/ Paper booties,
- gloves,



- **Butcher's plastic vest / Plastic apron** is recommended and provide ample protection from contamination.




- ❖ **Disposable paper facemask, face shields, or goggles** are generally not used doing a routine necropsy unless a contagious zoonotic disease is suspected.
 - ❖ In particularly autolytic and rank carcasses, practical techniques such as placing **Vicks VapoRub®** ointment underneath the nostrils to mask the odor can be employed.
 - All these articles must be **washed clean and disinfected** after each use (autoclave etc.).
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BASIC NECROPSY EQUIPMENT

The choice of equipment for necropsy depends in part on the size and type animal, the type of examination requested, and the individual preferences of the examiner.

Most small animal necropsies will require:

- One or more sharp **knives**
- **Costotome**
- **Scalpel**
- One or more pairs of specialized **scissor** (**Scurved scissors, Enterotomy scissors** etc.)
- **A ruler** (plastic or metal) and **a tape measure**

- An ink pen/marking pen and note paper
 - A plastic cutting board
 - Large syringes for collecting and measuring fluids
 - Some means of cutting bone; either manual hacksaw, bone shears, and/or a Stryker saw.
 - Plastic or metal containers for temporary viscera holding
 - Specialized necropsy table and spiked table
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- Scale of some type for weighing organs
 - Formalin-filled container for collection of tissues for histopath
 - Multiple, variably-sized Whirl-Pak or Ziploc bags for fresh tissue collection
 - Supplies and containers for collecting specimens (formalin jars and whirl-pak bags)
 - Digital camera (optional)
 - Rope
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- For the fixation of pathological specimens, especially **alcohol**, **with 10% formalin, Zenker, Bouin** and other solutions.
- After the necropsy, disinfection is always necessary for equipments and areas.