

Veterinary advisory: Livestock exposed to lead

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Livestock Exposed to Lead

Meat from livestock exposed to high levels of lead poses a health risk for humans and should not be allowed to enter the food chain. Exposure to lead also poses a serious health risk to livestock. Clinical signs associated with lead poisoning are predominantly gastrointestinal and neurological, and very high levels can result in seizures and death.

Meat from livestock exposed to high levels of lead poses a health risk for humans and should not be allowed to enter the food chain.

Some potential sources of lead exposure to livestock:

- Discarded vehicles and machinery, such as:
 - Used crankcase oil
 - Discarded batteries
 - Grease
 - Leaded gasoline
 - Used engine oil filters
- Leaded equipment such as soldered buckets and tanks, leaded pipes, bronze and brass fittings, and terneplate surfaces
- Lead-based paints
- Some crop applications
- Ammunition (lead shot)
- Exposure to environmental contamination from industrial areas (past and present)

- Contaminated feed and feed supplements
- Contaminated soil or soil with naturally elevated lead levels
- Contaminated water or water with naturally elevated lead levels
- Boiled linseed oil which is sometimes used as a laxative

Key steps to reduce the risk of lead exposure in livestock

- Check pastures and areas accessible to livestock for objects that could contain lead, remove and properly dispose of these materials.
- Check watering and feeding equipment and replace any lead-bearing components and surfaces that may come in contact with water or feed. If unsure, test using commercially available lead test kits.
- If an obvious source of lead cannot be found, then test soil and water that could be naturally occurring sources of lead for grazing animals and feed crops.

What to do if you suspect (or have confirmed) lead toxicity in livestock

Under the *Animal Health Act, 2009* veterinarians are required to report incidents that pose serious risk to animal health, human health or to the safety of food. If lead toxicity is suspected or confirmed, the following actions are required:

- Do not transport affected livestock off premises.
- Do not allow affected animals to enter the food chain.
- Contact an OMAFRA veterinarian through the Agricultural Information Contact Centre

Basic information will be forwarded to a staff veterinarian who will follow up with the attending veterinarian and farmer or animal custodian.

What to expect if lead levels are high

Where high levels of lead are detected or suspected in livestock being raised for food consumption, affected animals may be required to remain on the property until laboratory testing concludes that blood levels are below 0.10 ug/ml. Private veterinarians may need to submit blood samples from the animal for laboratory testing (EDTA or heparinized samples are required). Costs associated with testing are the responsibility of the farmer or animal custodian.

Additional information

- [Lead Toxicity and its Effects on Animals and Animal Products - California Department of Food & Agriculture](#)
- [Managing lead exposure and toxicity in cow-calf herds to minimize the potential for food residues - Journal of Veterinary Diagnostic Investigation](#)
- [Lead poisoning still No. 1 toxin killer for cattle - Grainews](#)
- [Lead Toxicity in Cattle - Alberta Agriculture and Forestry](#)
- [Lead poisoning in cattle - Implications for food safety - Large Animal Veterinary Rounds](#)