

Signs and Symptoms of Lead Poisoning in Dogs

Dogs in Flint, Michigan have had opportunities to get tested for lead at a series of events. Dogs in urban areas and those living in older homes may also be at risk of lead poisoning.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- The Michigan State University College of Veterinary Medicine has held a series of dog lead testing events in Flint, Michigan
- Lead poisoning often leads to gastrointestinal and central nervous system symptoms, including loss of appetite, vomiting, convulsions, muscle spasms and more
- Your dog may be exposed to lead via lead-based paint, contaminated dust, food and water dishes with lead-based glaze, lead weights, lead shot and more
- If your dog has ingested a large amount of lead (such as lead weights or peeling lead-based paint), seek emergency medical care
- It's a good idea to offer your pet intermittent detoxes to help remove accumulated toxins (from food, water and environmental pollutants) from his body

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In 2014, the state of Michigan switched the water supply in Flint, Michigan from treated Detroit Water and Sewerage Department water to water from the polluted Flint River.

The switch was made to cut costs, but ended up poisoning city residents with toxic amounts of lead. Many adults and children have been affected, and so, too, have their pets.

To find out the extent of the problem, the Michigan State University College of Veterinary Medicine has held a series of dog lead testing events in the area. Any dog that resides in a home with a city of Flint address is eligible to get free lead testing during one of the events.

Nearly 200 dogs have been tested during previous events. The test checks for levels of lead and other metals, including copper, mercury, zinc and iron. At least five area dogs have tested positive for lead, according to figures from the Michigan Department of Agriculture and Rural Development.

Signs of Lead Poisoning in Dogs

Lead is a well-known toxin to people, animals and the environment. If enough lead is consumed, it can be fatal, but even chronic exposure to low levels of lead can cause serious health damage, especially to the gastrointestinal system and central nervous system (CNS). Common signs of lead poisoning in dogs include:¹

- Loss of appetite
- Colic (pain, inflammation, gas or discomfort in the colon)
- Vomiting
- Diarrhea
- Constipation
- Anxiety
- Hysterical barking
- Jaw champing
- Salivation
- Blindness
- Problems with coordination and movement
- Muscle spasms
- Convulsions
- Opisthotonos (abnormal posture caused by severe muscle spasms)
- Head pressing (pressing the head against a wall)

While some dogs display hyper behavior due to CNS excitation following lead exposure, other dogs may show signs of CNS depression, such as staggering, lethargy or slowed reflexes and breathing.

Is Your Dog at Risk of Lead Poisoning?

Dogs in Flint, Michigan may have been exposed to lead via contaminated water, but there are other sources of lead in the environment as well.

Dogs living in urban areas or in old houses (those built prior to 1978), especially those that are being renovated, are among the most at risk due to the potential presence of lead-based paint.

Dogs may (intentionally or accidentally) consume flakes of lead-based paint or pick up contaminated dust on their paws. Cats are at risk also. Although they're less likely to eat paint flakes, they may consume lead-contaminated dust while grooming. Your dog may also come across lead in:²

- Linoleum
- Lead weights
- Lead shot
- Contaminated foliage (especially along roadsides or near smelting plants)

- Lead-poisoned animal carcasses
- Car batteries
- Plumbing and roofing materials
- Lead foil
- Golf balls
- Toys
- Contaminated pet food or treats
- Lead-containing food or water dishes (older ceramic or pottery dishes may contain lead-based glazes)

If you're concerned your dog may be at risk of lead poisoning, consult an integrative veterinarian for diagnosis and treatment.

Lead concentrations in the blood, and sometimes, certain tissues, will typically be measured for accurate diagnosis and to rule out other diseases, such as rabies, distemper and hepatitis, which can cause similar symptoms. Generally, blood lead levels above 0.25 ppm (or 25 mcg/dl) is considered to be lead poisoning.

Treatment for Lead Poisoning

If your dog has ingested a large amount of lead (such as lead weights or peeling lead-based paint), seek emergency medical care. Vomiting may be induced or surgery may be used to remove the source of the lead. In cases of chronic exposure, chelation therapy is often necessary, using a chelating agent such as Calcium EDTA. Calcium EDTA binds to heavy metals in the blood so they can be excreted in the urine.

If your pets show elevated levels of lead on test results but are clinically normal, (don't have symptoms) most integrative vets will use IV vitamin C therapy to help expel the excess lead from the body.

You will also need to remove the sources of lead in your home (or prevent your pet from accessing lead in his outdoor environment). If your pet was shot with a lead-based pellet, the wound must be treated, but the pellets pose little risk of lead poisoning.

It is lead that is ingested and absorbed into the body (which happens very efficiently in the gastrointestinal tract) that is riskiest to your pet. In addition, filtering your home's water to protect yourself, and your pet, from toxins, including heavy metals, in the water.

A fresh, properly balanced, and species-appropriate diet will also help support your pet's overall health as well as his **ability to detoxify**. Adding fresh cilantro and chlorella in the diets of pets to detox them from heavy metals. The following natural detoxifying agents can also be helpful in cases of lead poisoning, however you should talk with an **integrative veterinarian** to develop the best treatment plan for your pet.

- **Bentonite clay** — Many native cultures and wild animals have been documented to use clay as a means of detoxification early on in toxicosis. Clay (which is negatively charged) binds to positively charged molecules (lead and other heavy metals) and efficiently removes them from the gut.
- **Oral vitamin C** — Supplementing with additional vitamin C may facilitate the excretion of lead from the body. Supplemental C may loosen your pet's bowels, so using buffered C (sodium ascorbate) may be preferable

for long-term use.

- **Schisandra fruit** is included in many Traditional Chinese Medicine (TCM) formulas because it helps protect the liver against various toxins. The hepatoprotective nature of this fruit assists in keeping healthy cells resilient against the effects of environmental toxins.
- **Curcumin** is what gives turmeric its yellow color. This potent antioxidant supports both phase 1 and phase 2 liver detoxification. Curcumin is known to have anti-inflammatory activity because of its ability to inhibit pro-inflammatory enzymes.

This phytonutrient has been shown to be anticarcinogenic, which means it fights cancer, primarily due to its ability to heighten the body's detoxification reactions. Studies also indicate curcumin may have a protective effect against mercury and other heavy metals.

- **Phosphatidylcholine** is critical for a detoxification process known as methylation. Pets' bodies are wired with very potent hormones needed for emergencies, but these hormones are very damaging to body tissues with chronic exposure.

The faster your pet's body can get rid of these hormones once they are no longer needed, the less damage is done. The process of getting rid of these hormones is called methylation, and phosphatidylcholine does a great job of assisting with this.

- **Resveratrol** is the active ingredient in the plant known as Japanese knotweed. Resveratrol reduces liver enzyme elevations by reducing lipid peroxidation in the liver. It helps the liver clean house by flushing accumulations of fat so that the organ can function optimally.
- The catechins found in **green tea** dramatically reduce or modify cancer-causing molecules that damage cellular DNA. Inactivation and excretion of carcinogens are also a big part of keeping your pet's body healthy. Green tea leaf extract can be very beneficial for your pets in this fashion.
- **Superoxide dismutase (SOD)** is a potent enzyme responsible for the removal of free radicals from your pet's body, which helps your pet's lymphatic system to work optimally.
- **N-acetylcysteine (NAC)** is a cellular antioxidant that boosts your pet's tissue glutathione levels. NAC protects against oxidative stress and is a potent free radical scavenger.

It's a good idea to offer your pet intermittent detoxes to help remove accumulated toxins (from food, water and environmental pollutants) from his body. In the case of a serious issue like lead poisoning, however, a more intense protocol supervised by your integrative veterinarian will be necessary.

Sources and References

[MLive, April 2, 2016](#)

^{1,2} [Merck Manual, September 2024](#)
