

# Lead Poisoning in Dogs and Cats

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## Toxin

### Lead

## Source

Lead-containing paint, linoleum, tile, batteries, plumbing materials, putty, lead foil, solder, golf balls, some roof coverings, lubricants, wine bottle cork foils, rug pads, acid (soft) drinking water from lead pipes or improperly glazed ceramic water bowls, lead weights, fishing sinkers, drapery weights, newsprint, dyes, insulation, lead-containing burnt lubricant oil, and lead shot.

## General Information

The most common route of exposure to lead is either a large amount ingested in a short time or a smaller amount ingested over a longer period of time. Younger animals are at a higher risk due to their mouthing objects as they play and explore and because their bodies absorb a greater amount of ingested lead. This is especially true if the young pet is calcium deficient. Inorganic lead is not absorbed through intact skin but tetraethyl lead in automotive gasoline is. Lead is also highly absorbable when heated and fumes are released such as from the exhaust of leaded gasoline.

Lead affects many body systems especially the GI tract and nervous system. Anytime a pet shows symptoms involving both the GI tract and nervous system, lead poisoning should be on the list of possible causes. Lead may cause an increase in red blood cell fragility and/or bone marrow suppression causing anemia. Lead crosses the placenta and some may pass into the mother's milk.

If a pet is diagnosed with lead poisoning, all members of the family, human and animal, should have their lead concentration levels evaluated.

## Toxic Dose

Varies depending upon the source and time period of exposure.

## Signs

Gastrointestinal: Vomiting, abdominal pain, lack of appetite, and occasionally diarrhea or constipation.

Neurological: [Seizures](#), ataxia, blindness, and behavior changes including head pressing, chomping of the jaw, vocalizing, running aimlessly, and circling.

## Immediate Action

Seek veterinary attention. Depending on how exposure occurred, the induction of vomiting may be indicated.

## Veterinary Care

General treatment: Radiographs may be taken to determine if the source of lead is still in the GI tract. If it is, surgery or [endoscopy](#) may be indicated to remove it.

Supportive treatment: The animal is monitored and treated for cerebral edema, anemia, and seizures. Antibiotics and IV fluids are also administered.

Specific treatment: The blood lead concentration levels will be measured before starting chelation therapy. The chelation therapy will aid in removing the lead from the body. Chelation agents include succimer (DMSA), dimercaprol (BAL), calcium EDTA, and penicillamine. Thiamine (vitamin B1) may also be given. The treatment and monitoring of lead levels will continue until they are normal.

## Prognosis

Good, if chelation is started early. Guarded to poor, if symptoms such as seizures or cerebral edema are present.