

Lead Poisoning in Dogs

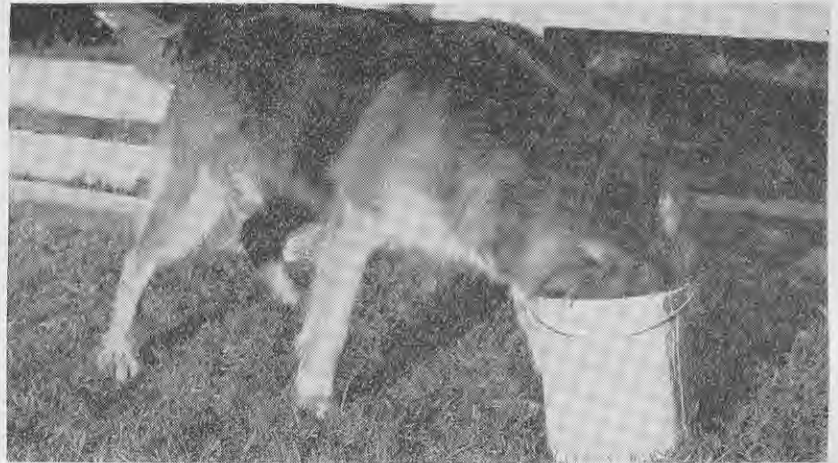
By E. L. J. STAPLES,
Technical Officer,
Department of Agriculture's
Wallaceville Animal Research
Station

THE danger of lead and its compounds to farm animals, especially old and young cattle, has been stressed many times, but only in recent years has the high incidence of lead poisoning in dogs been recognised. This article discusses the symptoms of lead poisoning in the dog and summarises the possible sources of lead from the histories of the numerous cases of poisoning diagnosed at the Wallaceville Animal Research Station over the past 5 years.

LEAD is a cumulative poison and a sudden attack may occur after a long period of administration of small doses. This attack is similar to an acute attack caused by the ingestion of large amounts. It is known that both the chronic and acute forms of lead poisoning occur in dogs in New Zealand. Records show that the incidence in young dogs is higher than in older animals, and puppies have been shown experimentally to be more susceptible to lead poisoning than are adult dogs.

There is little doubt that in the past lead poisoning has been confused with the virus diseases distemper and contagious hepatitis. Symptoms shown by animals affected with any of these diseases may be very similar.

A number of complicated cases have also been handled in which dogs suffering from distemper or contagious hepatitis have also shown on analysis abnormal amounts of lead in the liver and kidneys. In some cases these levels cause fatal lead poisoning. As mentioned previously, lead is a cumulative poison and exposure over a long period allows high concentrations to be stored in the bones. While lead is stored in this way it does not affect the animal, but this stored lead may be mobilised by a metabolic upset or an infectious disease and symptoms of lead poisoning then develop. In these complicated cases it is probable that the distemper or contagious hepatitis initiated the mobilisation of lead stored in the bones of the affected animals.



Care in the use of lead paints and in the disposal of empty paint tins may save the life of your dog.

Whether the dogs died from lead poisoning or the virus disease is a debatable but somewhat academic point.

Symptoms

The symptoms noted have not been consistent in all cases. With acute poisoning the dog may be seized with convulsions and die within a few hours without showing other obvious signs of distress. Usually, however, the animal appears listless, refuses food over a long period, and becomes emaciated. Signs of colic may be exhibited with restlessness and moaning. Some dogs develop diarrhoea, often bloodstained; others become constipated. Vomiting, trembling, champing jaws, and frothing at the mouth usually precede convulsions. There may be partial paralysis in the hind-quarters and a discharge from the eyes and nose. Blindness has been reported in some field cases. Normally quiet dogs often become vicious and show a marked change in temperament.

Sources of Lead

Though it has not been possible to trace the sources of lead in most cases of poisoning, over the past 5 years sufficient evidence has been accumulated for some conclusions to be drawn. Dogs probably have a greater opportunity than most animals to eat lead in the form of paint because of their habit of chewing all manner of foreign objects. Puppies are the worst offenders in this respect.

In many of our cases painting has been done around the house before the dog's illness. Several of the dogs have been owned by painters, and one animal was seen drinking from a pot of white paint. Another dog was seen eating the flakes of paint as they were burnt and scraped from the woodwork. Empty paint tins left lying about to fill with water from which an animal may drink are another possible source. The lead in the paint is not soluble in

the water, but dogs probably dislodge and swallow particles of paint as they drink from the paint tins.

Sticks used for stirring paint should not be thrown into the yard for the dog to chew, and if the kennel or pen requires painting, many brands of non-lead paint are available.

Paint adhering to the hair has undoubtedly been the source in at least two cases. The dogs had evidently brushed against a freshly painted surface, and as they have a natural dislike for anything sticking to their coats, have licked themselves to remove it. Food for the dog should not be placed on painted woodwork. Loose flakes of paint will cling to the food and be eaten with it.

Overseas workers have reported cases of lead poisoning in dogs following the swallowing of lead foil and a lead drapery weight. In two of our cases metallic lead was suspected—in one a lead door stop which the dog continually chewed in attempting to open the door, and in the other an old leadlight.

There is little doubt that paint has been responsible for most of the cases of lead poisoning diagnosed, but it seems that lead in any form could be a possible hazard to dogs, which may develop a depraved appetite similar to that of cattle for lead and its compounds.

Treatment

Veterinarians have reported the successful treatment of lead poisoning in dogs with a drug called calcium disodium ethylene diamine tetraacetate. Speed in beginning treatment is usually necessary for success.

However, prevention is better than cure, and a little care and thought in the use of lead paints and the disposal of empty paint tins may save the life of your dog.