There are many causes of digestive problems, and in general the causes are similar for dogs and cats. However, prevalence of the various digestive problems differs for each species.

The most common signs of digestive problems are vomiting and diarrhea. Other less common clinical signs of digestive problems include constipation, bloat, abdominal pain, excessive salivation, difficult swallowing, and lack of appetite. Some of the most common causes of vomiting and diarrhea in dogs and cats will be discussed.

Vomiting is produced by stimulation of the vomiting center in the brain stem. Vomiting is not always due to irritation of the gastrointestinal tract, however. Heart, liver, and genitourinary tract irritations, motion sickness, kidney failure, various infections, and particular drugs or toxins may also produce vomiting.

One of the more common causes of vomiting from gastrointestinal irritation is a dietary problem. This may result from a sudden change in diet or from ingesting foreign materials. Foreign materials (such as dirt, plants, garbage, and poisons) are more commonly ingested by dogs, especially puppies, than by cats.

Internal parasites also may induce vomiting but mainly produce diarrhea. Some internal parasites found in dogs and cats are roundworms, hookworms, tapeworms, whipworms, flagellates, and coccidia. Roundworms and tapeworms are the most likely of these parasites to produce vomiting.

Both bacterial and viral infections of the gastrointestinal tract are also common causes of vomiting in dogs and cats. Bacterial infections include Salmonella, Campylobacter, and E. coli. Viral infections include coronavirus, parvovirus, and rotavirus.

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The stomach produces acid and enzymes which partially break down food. The pancreas produces enzymes which help digest protein, carbohydrates, and fat. The small intestine produces enzymes and absorbs nutrients. Normal stool is produced. The liver produces bile that helps digest fat. Nutrients are absorbed. The large intestine absorbs water so that water is conserved and solid feces are produced. Normal and irritated digestive systems.

Digestive tract obstructions are another common source of vomiting. Foreign bodies are one of the most common obstructions. They may be either in the stomach.

The animal tract may induce vomiting. Some of the most common viral infections which cause vomiting and diarrhea in the dog and cat are canine distemper, panleukopenia (feline distemper), and canine parvovirus. Canine parvovirus has been especially devastating in the last few years.
or intestines. Dogs tend to swallow bones, toys, cloth, metallic objects, or stones. Cats are more likely to ingest hair, thread, string, or cloth.

Intussusceptions, when one part of the intestinal tract collapses or telescopes into an adjoining part of the tract, are another common obstruction. They often are associated with vomiting over an extended period of time.

An additional cause of vomiting in dogs and cats is inflammation of the pancreas. This condition usually occurs in obese, middle-aged dogs. Exact cause of the pancreatic inflammation varies, but often an unbalanced diet is involved. Diarrhea also is present in about half the cases.

**Diarrhea.** Causes of diarrhea in dogs and cats are as extensive as those of vomiting. Although diarrhea often accompanies vomiting, diarrhea may be present by itself.

Diarrhea results from problems in the small or large intestines. Vomiting or weight loss in conjunction with diarrhea is more likely due to a problem in the small intestine than in the large intestine.

Small intestine diarrhea often has markedly increased volume, undigested food, and color variations. Large intestine diarrhea has normal to increased volume, mucus commonly, and usually no undigested food or color variations.

An addition to the causes of diarrhea mentioned under vomiting is pancreatic exocrine insufficiency. The pancreas is unable to produce adequate amounts of the enzymes, lipase and amylase, for the small intestine. This results in an inability to digest fats and starches, which produces a voluminous fatty diarrhea.

Pancreatic exocrine insufficiency affects dogs more commonly than cats. The condition can be inherited or the result of a long-term pancreatic inflammation.

Other causes of diarrhea include overeating, bile deficiency, intestinal tract tumors, lymphatic disorders, and various drugs.

**Hormone Disorders**

Hypothyroidism is a condition in which inadequate amounts of circulating thyroid hormone are produced. The condition may occur with or without goiter (enlarged visible gland in the neck).

The most frequent hypothyroidism in small animals is without a goiter. The thyroid glands shrink in size. Although the syndrome affects both dogs and cats, it most
often is diagnosed in larger breeds of dogs 2 to 5 years old. Decreased thyroid hormone output results in a decreased metabolic rate. Often the animal has a cold body temperature and seeks out warm places to lie down. The hair frequently is coarse and thinning and the skin may be thickened and pigmented.

Increased body weight often is seen due to the decreased metabolic rate. Mental activity may be decreased or more sluggish. Once a diagnosis of acquired primary hypothyroidism has been made, the animal is given thyroid hormone medication for the rest of its life.

Excessive parathyroid hormone (PTH) occurs in primary disease of the parathyroid glands, accompanying longstanding kidney failure, and due to nutritional imbalances of calcium and phosphorus or not enough vitamin D₃.

Excessive PTH can be found in both dogs and cats. When due to kidney failure there is decreased blood calcium and decreased intestinal absorption of calcium. When due to nutrition it often is the result of feeding all meat diets high in phosphorus and low in calcium. Clinical signs with both forms of excess PTH are related to excessive loss of calcium from the bones. Animals may be lame, paralyzed, or have rubbery jaws. Calcium is supplemented in the diet for both forms.

**Eclampsia** (*Puerperal Tetany*) is due to reduced calcium in the blood of dogs or cats which recently have had litters. It results from an inability of the body to immediately compensate for the loss of calcium in the milk.

Most frequently eclampsia is seen in small breeds of dogs and only occasionally in the cat. Usually the syndrome appears 1 to 3 weeks after birth of the litter when milk production is at its peak.

Clinical signs associated with eclampsia include nervousness, trembling, staggering, muscle tremors, and seizures. Intravenous injection of a calcium solution results in rapid improvement of the animal.

**Diabetes mellitus** is most often due to decreased insulin output by the pancreas. Insulin is the hormone responsible for the utilization of sugar in the body. A deficiency of insulin results in increased blood glucose concentrations.

This endocrine disorder affects both dogs and cats. Affected animals lose high amounts of sugar in the urine, which carries excessive
amounts of water with it. An increase in the loss of water is accompanied by increased water consumption. Because of the high loss of sugar calories in the urine, animals often eat more but nevertheless lose weight. Further complications may result in vomiting, dehydration, and coma.

Insulin is injected daily to treat animals, just as it is for human diabetics.

Autoimmune Ills
The body has an immune system which defends it against foreign substances such as bacteria and viruses. An important factor in the immune response is the production of antibodies against these foreign substances.

Usually antibodies are formed only against foreign substances and not against cells normally found in body tissues. However, on rare occasions an individual produces antibodies against cells in its own body (that is, autoantibodies). This is an immune response against oneself or an autoimmune response.

Autoimmune responses occur in various species of animals and in humans for a variety of reasons which are not totally understood. A few of the most common autoimmune diseases in the dog and cat will be discussed.

Autoantibodies are formed against red blood cells in the body during autoimmune hemolytic anemia (AIHA). Although both dogs and cats can be affected, AIHA is more common in dogs. The disease most frequently is diagnosed in middle aged female dogs, 2 to 8 years old.

The clumping of autoantibodies with red blood cells results in anemia. The anemia may arise very suddenly or over a longer period of time. Although hemolysis (destruction of red blood cells) sometimes occurs, usually the altered red blood cells are removed by the spleen. AIHA may occur by itself or in association with other autoimmune diseases.

Autoantibodies are formed against blood platelets during immune mediated thrombocytopenia (IMT). Although the disease occurs in both dogs and cats, IMT is more common in dogs. It is most frequently diagnosed in female dogs.

Platelets play an important role in blood clotting. Alteration of the platelets in IMT results in hemorrhage. The bleeding can be massive over a short time or fairly minimal over an extended
time. The massive hemorrhages often occur from the nose or in the urine or feces.

Autoantibodies against many components of the blood may be formed during systemic lupus erythematosus (SLE). Although the disease is found in both dogs and cats, SLE most frequently occurs in female dogs. The disease affects many of the body's systems. Autoantibodies from lupus may produce the two autoimmune diseases (AIHA and IMT) previously discussed.

Autoantibodies against complex chemicals of the blood are deposited in the kidney, joints, or skin.

Dogs with SLE may show lameness, fever, anemia, hemorrhage, skin problems, or kidney problems. Usually not all of the clinical signs are found in any one animal.

**Skin Diseases.** A number of autoimmune skin diseases occur in both dogs and cats, although the dog is most commonly affected. The most frequent are pemphigus vulgaris and pemphigus foliaceus. Pemphigus diseases arise from autoantibodies against substances in the skin. This undermines the outside layer of skin. The skin separations resemble blisters.

**Pemphigus vulgaris** in dogs shows no breed, sex, or age predilection. Affected dogs have ulcerations at the borders of the mouth, eye, or nose; or in the mouth, ear, or nail beds of the feet. Usually the dogs do not feel or eat well. Response to therapy generally is poor.

**Pemphigus foliaceus** does not involve the junctions of the skin and mucous membranes as does *pemphigus vulgaris*. Often *pemphigus foliaceus* starts on the head and ears and may spread over the entire body. Affected dogs have scaly skin and don't feel or eat well. Response to therapy is often favorable, however.

Numerous other autoimmune diseases have been diagnosed in the dog and cat. These include thyroid and kidney diseases, myasthenia gravis, and rheumatoid arthritis. Other autoimmune disease syndromes will probably be found as immunological techniques are improved.

**Poisonings**
The incidence of dog and cat poisonings (toxicoses) has increased with the greater abundance of drugs and chemicals in our environment. Dog poisonings are reported and diagnosed much more frequently than cat poisonings.
Cats do not seem to ingest poisons as readily as dogs. However, cats are more sensitive than dogs to certain types of chemicals because of a deficiency of a particular enzyme in their bodies and other possible inherent differences.

The various types of drugs and chemicals which produce most of the poisonings in dogs and cats can be put into a few classes. These classes include insecticides, plants, household products, rodenticides, herbicides, human and veterinary medications, metals, and miscellaneous compounds.

Selected chemicals in each class which produce most of the dog and cat poisonings will be discussed. Many toxic compounds will not be included, since poisonings produced by them are seen less frequently.

**Insecticides.** Organophosphate and carbamate insecticides act similarly in animals, and as a group produce most of the insecticide poisonings in dogs and cats. Chlorinated hydrocarbon insecticides (for example, DDT) have to a great extent been discontinued due to their persistence in the environment, and thus produce fewer insecticide poisonings than the organophosphate/carbamate insecticide group.

Cats can be easily poisoned by careless use of insecticides.

Boric acid used in roach baits and arsenic used in ant traps produce a significant number of poisonings in both dogs and cats.

**Plants.** Both cats and dogs are fond of chewing on plants. Many of the plants which are eaten are listed as nontoxic. But even "nontoxic" plants can produce intestinal upsets in animals.

A large proportion of plant poisonings in cats and dogs involve plants containing insoluble calcium oxalate crystals (for example, philodendron, dieffenbachia, pothos, and caladium). These plants can produce severe irritation of the mouth and intestinal tract.

Poinsettia plants are frequently ingested by dogs and cats, but usually cause only mild intestinal upsets. Other toxic plants ingested include aloe vera, mistletoe, mushrooms, Japanese yew bushes, rhododendrons, azaleas, oleanders, lily of the valley, castor beans, and flower bulbs (iris, tulip, and daffodil).

Several groups of chemicals fall under the category of household products. Poisonings in dogs and cats from detergents and cleaners are
most common in the household products classification. Cleaners which produce poisonings include those with bleach, ammonia, borates, hydroxides, pine oil, and phenol. Cats seem especially sensitive to pine oil and phenol type cleaners.

**Rodenticides.** Dogs and cats are often poisoned by baits designed to kill rats and mice. Strychnine is a rodenticide which sometimes is used maliciously by people to kill dogs. Strychnine poisonings in cats are much less common than in dogs.

Another major group of rodenticides which produces more poisonings in dogs than in cats is the anticoagulant group (for example, warfarin, brodifacoum, and diphacinone). These rodenticides cause bleeding in animals usually more than 2 days after ingestion.

Dogs and cats are not exposed to herbicides as often as large animals. However, herbicide poisonings do occur in small animals, especially dogs. Dogs are unusually sensitive to the herbicide 2, 4-D, used to kill broadleaf weeds in lawns. Other herbicides which cause poisonings in dogs and cats include glyphosate, paraquat, and arsenic-based herbicides.

**Medications.** Both dogs and cats have been known to ingest the contents of prescription bottles when the owner isn’t watching. The result depends on the type and amount of medication ingested.

Poisonings also can result when owners give animals medications not prescribed by veterinarians. This type of poisoning is most common in cats given aspirin or acetaminophen pain killers. One acetaminophen tablet can kill an adult cat.

The most common metal poisoning in small animals is lead poisoning. It is much more common in dogs than in cats. Common sources of lead include old paint chips, fishing and drapery weights, roofing shingles, and used motor oil. **Antifreeze** used in car radiators is a common source of poisoning for both cats and dogs. It has a sugary taste and is ingested readily. Animals may appear drunk, depressed, and die fairly rapidly—or several days later—due to kidney failure.

Another common poisoning in small animals, especially dogs, is food or garbage poisoning. Garbage poisoning may be very mild or in some cases lethal.