

DOGS ONLY

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ANTERIOR CRUCIATE LIGAMENT RUPTURE

Joints allow movement between bones. Movement is controlled by ligaments and tendons which are made of very tough tissue which attaches to the bones. The knee joint is particularly susceptible to damage from strained or torn ligament. The Anterior Cruciate Ligament attaches the femur to the tibia (shinbone) preventing excessive motion between these two bones and keeping the joint stable. Over-extension of the knee joint may tear this ligament allowing the two bones to slide back and forth causing variable pain, lameness, and instability to the knee joint.

Excessive movement over a period of time leads to arthritis and pain. Large breed, active dogs and overweight dogs are most susceptible to this injury, although any dog can rupture their cruciate ligament. Trying conservative medical therapy initially using anti-inflammatory drugs may allow healing if the ligaments are merely stretched instead of being torn.

Without medical/surgical attention, this abnormal wear and tear on the knee joint will lead to arthritis and chronic discomfort in your pet.

Depending on the severity of the rupture, treatment may consist of rest and medication or surgical repair of the torn ligament. Your doctor will advise you concerning the treatment necessary for your pet.

ATOPIC ALLERGIC DERMATITIS (Atopy)

Simply put, it is a predisposition to become allergic to normally innocuous substances such as pollens (grasses, weeds and trees), molds, house dust mites and other environmental allergens. Symptoms vary, but may include:

- Itchiness (pruritis)
- Generalized dryness
- Recurrent superficial rash of the skin or hotspot
- Recurrent bacteria or yeast infection
- Recurrent ear infection (otitis)
- Not usually, but on occasion involves recurrent conjunctivitis of the eyes
- Many times it has a seasonal occurrence but will be year round if it involves an indoor allergen such as dust mites.
- 3-15% of the canine population have it
- Only occasionally occurs in cats

Most people don't realize their pet has atopy. They come to the veterinarian with recurrent skin problems and have no idea it is related to underlying allergies.

Can't you tell by examining my pet's skin that the cause *is* atopy?

Not necessarily. Because the symptoms vary so much from pet to pet and because many pets get routine skin problems such as ear infections and rashes from other common causes, many times they cannot be distinguished visually from other causes which would have different treatments. Sometimes, a routine skin scraping can determine a rash to be of a different cause, such as mange or fungal infections.

What is the method for determining my pet to have atopy or a rash of another cause? It is very easy to determine atopy from other causes by taking a small amount of blood from your pet and having it tested for the inhalant allergens in your local region plus additional indoor inhalant allergens such as dust mites. It is a routine panel that is performed by a laboratory and takes less than a week to receive the results.

CANINE DIABETES MELLITIS

Simply put, diabetes mellitus is a failure of the body to regulate its blood glucose. The pancreas is the organ responsible for producing the hormone insulin. Insulin helps glucose get into the cells of our body where it is vital to our body's daily energy needs.

When this process no longer happens, the glucose in the bloodstream has nowhere to go, and the levels in the blood stream get persistently higher.

Eventually, it can get so high that glucose begins to leak into the urine, where it doesn't belong. Many dogs diagnosed with diabetes have glucose in their urine, and sometimes a history from their family of excessive drinking, urination, or possibly signs of a urinary tract infection. The presence of glucose in the urine attracts water by an osmotic process and thus more water is excreted out in the urine. Dogs try to compensate by drinking more water, making the urination even further increased.

Some long term signs include weight loss and muscle wasting, because the body starts to break down its own fats and proteins to provide energy to glucose deprived cells. As a consequence,

many dogs eat more to compensate for this, unsuccessfully. The glucose floats around in the blood stream with no place to go because it needs insulin to take it to the cells for energy. Diabetes is a somewhat common middle aged to older age disease in dogs. Many dogs do not have any obvious risk factors for diabetes and yet they develop the disease later in life. There are many treatment options for diabetes and we can discuss these with you once your pet is diagnosed and involved the use of diet changes, medications, supplements and sometimes fluid therapy.

CONJUNCTIVITIS

Conjunctivitis is the medical term for the inflammation of the tissue lining the eyelids. When inflammation occurs, excessive tear production makes excellent breeding ground for bacteria worsening the condition. Causes of conjunctivitis include injuries, bacterial infections, viral infections, irritations, allergies, or foreign material (such as dirt, grass seeds, etc.) embedded in the eyelids.

Dogs and cats have three eyelids. These include an upper eyelid, lower eyelid, and the “third” eyelid, which is attached to the eye at the side closest to the nose, and then blinks out across the eye toward the ear. Many times, a foreign body, such as a grass seed, will get underneath that eyelid and cause the irritation.

Sedation is often necessary to allow adequate visual inspection under all three of the eyelids to help determine the cause of the problem. We must thoroughly examine the eye to determine the underlying root cause of the inflammation or the problem will recur. Eye stains are used on the eye itself to confirm the presence or absence of any injury to the outer layer of the eye (cornea) itself.

CANINE DISTEMPER

Canine Distemper is a very prevalent, highly contagious disease of dogs caused by a virus. The virus may be spread by contact with mucous and watery secretions discharged from the eyes and noses of infected dogs. Infection may also occur from exposure to urine, fecal material, and through the air. Better than 50% of adult dogs that contract the disease will die. Among puppies, the death rate often reaches 80%.

Many dogs that do survive the initial disease will suffer permanent damage to the nervous system (brain and spinal cord). Partial or total paralysis may often result. Seizures often occur which become more frequent and severe as the disease progresses. Most dogs that develop these signs must be euthanized. Cats are not susceptible to Canine Distemper. The so-called “Cat Distemper” is a different disease caused by a different virus.

Signs of Distemper include squinting, congestion of the eyes, and eye discharges. Weight loss, vomiting, nasal discharges, poor appetite, and diarrhea sometimes occur. Most infected dogs have a fever and “stuffed up” head. Bronchitis and Pneumonia often occur. In some cases, no signs are observed until seizures begin. Occasionally the virus affects the footpads resulting in “hard pads.”

Prevention is easily accomplished by proper vaccination beginning when the pup is 6-8 weeks of age.

CANINE TRACHEOBRONCHITIS

You may have heard it referred to as “Kennel Cough”. It can be caused by bacteria, viruses and irritation to the upper respiratory tract. It can be highly transmissible from one dog to another. It does not affect cats or humans.

Your pet may show no signs of illness except a harsh, deep cough. It can come on suddenly or be the result of other respiratory infections. Some dogs develop accompanying conjunctivitis of the eyes and occasionally a discharge from the nostrils or sneezing. Some people even mistake the characteristic hacking, dry cough for choking.

CHRONIC KIDNEY DISEASE IN THE DOG

Did you know that if your dog lost 3/4 of their kidney function they would not show any signs of kidney disease? They would act and behave pretty much as normal. Once greater than 75% of kidney function ceases, we see elevations on bloodwork. Many dogs show signs such as drinking more water than usual over a period of months and seem to urinate more often as well. In addition, many dogs have signs of vomiting intermittently. Some dogs may appear emaciated, lethargic or dehydrated as their skin loses elasticity and it may appear to be “stuck” to their body. Some family members do not report any noticeable clinical signs of kidney disease in their dog until the disease is well advanced, making them somewhat unsuccessful candidates for treatment. Some signs of advanced kidney disease may include a very unusual odor or bad breath from the mouth or a visible mouth ulcer.

The cause for chronic renal disease is usually age related irreversible changes to the kidneys and is one of the most common older age diseases of cats. But it can be caused by other factors that may have treatment options. Getting a kidney xray and biopsy in addition to routine tests will be very valuable in determining what type is occurring in your dog.

How do you diagnose kidney disease?

Initially, a routine blood chemistry panel may demonstrate elevations of Blood Urea Nitrogen (BUN) along with elevated creatinine and phosphorous. Some dogs may have other elevations in addition to those mentioned on their chemistry panel such as electrolyte disturbances of potassium, sodium or chloride. A complete blood count (CBC) may reveal abnormalities such as anemia or white blood cell abnormalities. Sometimes the CBC abnormalities are present due to the affects of long term diseases can have on the immune system and the resulting anemia is often termed “anemia of chronic disease”. Complete urinalysis would focus on abnormalities such as protein in the urine, blood, bacteria levels, sediment, low specific gravity and some other factors. Radiograph (xray) may be important in determining evidence of anatomic abnormalities, calcifications or space occupying masses. Blood pressures are sometimes elevated in patients due to renal hypertension.

DEMODECTIC MANGE

Also called “Red Mange,” is a non-contagious skin disease that has been around as long as there have been dogs and veterinarians. It still is one of the most difficult medical conditions to manage successfully in some cases. It is caused by a tiny parasite, which lives in the hair follicles and skin glands of the dog. Puppies are infected with mites from contact with the skin of their mother while nursing. The mites are present in the skin of many healthy dogs and do not cause disease. It is thought that pets diagnosed with demodectic mange are “immunodeficient”, unable to fight off the mites as a healthy dog would do. This allows large numbers of the mites to appear.

Demodex occurs almost exclusively in young dogs (3 months to 1 year of age). When the disease is seen in older animals, they usually have been afflicted since their youth.

EHRlichiosis

Ehrlichiosis is an infectious disease of dogs first observed in military dogs returning from Vietnam during the 1970's. Another name for this disease is "Tropical Pancytopenia." The organism causing this disease is classified as a "rickettsia," an organism similar to bacteria.

Transmission of this disease is through the bite of an infected tick. The brown dog tick is the main reservoir of infection.

STAGES of the disease include acute (early disease), sub clinical (no outward signs of disease), and chronic (long-standing infection). The acute phase will last 2-4 weeks with signs that may include fever, swollen lymph nodes, respiratory distress, bleeding disorders, weight loss, and nervous system problems. At the conclusion of this stage, the sub clinical stage begins. No clinical signs of disease are present during this time. During this stage, the dog may continue to shed the organism, totally eliminate the organism from its body, or progress on to the chronic stage. The chronic stage results in anemia, blood clotting problems, lameness, eye problems, swollen limbs, and nervous system problems.

DIAGNOSIS can be difficult in the early stages. A blood test is available for diagnosis, but the test will not result in a positive reaction until 2-3 weeks after the organism has infected the pet. A repeat test in 3-4 weeks is often required to get a positive diagnosis.

TREATMENT begins with correcting severe anemia or bleeding problems. Specific antibiotics, especially doxycycline or enrofloxin are most often prescribed for treatment. Treatment usually is required for 30 days. New research suggests that treatment for 2-4 months may be required.

FOOD ALLERGY IN DOGS.

Food reactions in pets (food allergy) produce itchy, non-seasonal skin reactions associated with ingestion of one or more substances in their food.

Systems Affected

- The Skin. Rash or eruption of the skin in any location on the body, including ear infections. The skin eruptions are usually itchy (pruritic). There may be pustules, redness, crusts, scale, hair loss, self damage from scratching or increased pigment on the skin.
- Gastrointestinal Signs. Vomiting, diarrhea or more frequent bowel movements.
- Nervous System. It's very rare but seizures can occur with food hypersensitivity

How common is it?

- It is estimated that 5% of all skin disease and 10-15% of all allergic skin disease in dogs and cats is caused by food hypersensitivity. It is the third most common pruritic skin disease in the dog, second most common in the cat.

What are some other skin conditions that can be confused with food allergy?

- Flea bite hypersensitivity, which is usually confined to the lower half of the body and often seasonal.
 - Atopy (inhalant allergies), which sometimes tends to affect the face, belly, and feet most and is often seasonal, except for indoor inhalant allergens such as dust mites.
 - Drug reactions and scabies. The history of drug administration prior to the development of signs and improvement upon withdrawal from the suspect drug help to confirm or deny a drug reaction. Scabies is very specific in the location of the pruritus (ears, elbows and hocks). Finding mites in skin scrapings and the response to specific therapy confirms the diagnosis.
- There is no “test” like bloodwork for allergy testing or skin scraping that diagnoses food allergy at this time.
 - The definitive diagnostic test for food hypersensitivity is commonly referred to as a food elimination diet. This diet must be tailored to each individual patient. The ingredients in this diet must be restricted to one protein and one carbohydrate to which the animal has had limited or no previous exposure. The duration of this test diet may take up to 13 weeks for maximum improvement of the clinical signs. If an animal is sensitive to a food ingredient or ingredients, it will begin to show some noticeable improvement by the 4th week of the diet trial.

GASTRIC DILATION AND VOLVULUS

Gastric dilation and volvulus (canine bloat) is a fatal condition in which a dog’s stomach distends with gas, food or fluid—and then possibly rotates or “twists.” This twisting blocks both the entrances to the stomach from the esophagus and the exit into the intestines. It also shuts off the blood supply to the stomach and other internal organs. Distention and twisting may occur separately or together. If your dog has bloated and twisted, they are nearly 100% likely to die at home within a 12-24 hour period without treatment.

Who is affected? The deep-chested breeds such as Great Danes, Irish Setters, Saint Bernard’s, German Shepherds and others have the highest incidence, but it happens in dachshunds, basset hounds and many mixed breed dogs of any size. The deep, narrow chest provides a greater opportunity for the ligaments that support the stomach to stretch, especially when the stomach is full and twist on itself.

SIGNS

If a dog with this condition could talk, he would complain of abdominal pain, nausea, and weakness. But our canine friends can’t verbalize this information, and therefore owners have to look for clinical signs. If your dog exhibits one or more of the following conditions or behaviors—especially within a few hours of eating, call your veterinarian without delay. The longer your dogs goes without treatment, the worse it will be for his chance of survival. Look for:

- Abdominal swelling and tenderness
- Unsuccessful attempts to vomit (retching)
- Excessive drooling
- Restlessness or frequent change of position, often accompanied by whining
- Panting or labored breathing
- Staring at the abdomen, sometimes with a look of confusion or distress

CAUSES OF CONCERN.

- Shock resulting from the distended stomach putting pressure on the large veins of the abdomen obstructing proper return of blood to the heart. This decreases heart output and results in poor blood and oxygen supply.
- Stomach wall does not get proper blood circulation due to shock and pressure on the stomach wall blood vessels from the distention. If adequate blood flow is not returned quickly to the stomach wall, the stomach wall begins to die and may even rupture.
- Spleen blood supply is interrupted if the stomach twists causing a rotation of the spleen and its vessels.
- Digestion stops when bloat occurs. That may allow the buildup of toxins in the intestines active-ating chemicals called endotoxins that enter the blood stream causing shock or possibly death.

HEARTWORM DISEASE

Heartworm Disease is becoming increasingly more common in this area. Several cases are diagnosed each week. The heartworm lives primarily in the right side of the heart, and in the nearby large blood vessels. The female worms produce large numbers of immature heartworms which circulate in the blood.

The important thing for dog owners to remember is that a great deal of damage can occur before any obvious signs are noticed. Delayed treatment may result in heart failure and/or permanent damage to the liver, lungs, and kidneys with eventual death. The signs of heartworm disease which you are most likely to notice include coughing, sluggishness, rapid tiring, and labored breathing.

Diagnosis is made by a simple test for Heartworm Antigen. Microfilaria can also be visualized by cytology on a blood smear, but adult heartworms are not always shedding this in the bloodstream so this can be an inconsistent finding. Xray of the chest and possibly an EKG are also used to evaluate the heart and lungs for abnormalities caused by heartworm disease. An ultrasound of the heart isn't a necessary diagnostic tool, but is sometimes useful to characterize irreversible heart disease if it has already occurred in your pet due to heartworm disease.

HIP DYSPLASIA

A major problem in the large breeds of dogs. It is the result of birth defects and growing deformities of the pelvis and hip joints. It is inherited. The "ball and socket" of the hip joint fit poorly causing abnormal movement of the involved legs and pain. Early signs include lameness in one or both of the rear legs, reluctance or difficulty in getting up after lying down, reluctance to run and/or jump, and sometimes a swaying appearance to the rear legs when viewed from behind. Signs vary considerably. The dog may show no signs, even though severe hip lesions are present, or it can be totally crippled and disabled by the condition. Signs usually are not detected in the newborn puppy, but often appear during the period of rapid growth before one year of age.

Diagnosis is made by x-ray examination. Sedation is usually necessary to restrain the dog for proper film exposure. A dog cannot be confirmed to have hip dysplasia until between the ages of 9 and 18 months of age, due to the changes that may occur in the pelvis during any stage of the growth process. Unfortunately there is no way to predict how it will develop in each dog or how severe the signs will be. Since the disease is hereditary, affected dogs should NOT be used for breeding.

HYPOTHYROIDISM

A condition caused by too little circulating thyroid hormone in the blood stream. This is usually caused by the thyroid gland ceasing to function properly and often due to a benign or malignant growth of the thyroid gland.

A common sign of hypothyroidism is a loss of hair, often on the tail, hindquarters or flank that is not the result of scratching. It may range from a very thin hair coat to complete baldness. Other signs include dry scaly skin, dry brittle hair, bleaching of the hair coat, possibly oily skin, increased pigmentation of the skin, thickening of the skin, increased susceptibility to skin and ear infections, and high blood cholesterol. Lethargy and unexplained weight gain may also occur. The pet may not want to exercise, may seek out warm places, and may have cold clammy skin. Hypothyroidism may predispose the pet to a condition called "dry eye" due to thickened tears.

LYMES DISEASE

WHAT IS IT?

Lyme Disease is a disease caused by a spiral-shaped bacterium, *Borrelia burgdorferi*. This disease in pets will often show arthritic signs, fatigue and reluctance to eat. However, many people do not report any noticeable signs in their pet at the time of diagnosis.

HOW IS IT TRANSMITTED?

The disease is transmitted by the bite of a tick. Some biting insects have been found carrying the organism, but they are not considered as major transmitters of the disease. There is no evidence that you can get the disease from your pet, but your pet could bring infected ticks into your yard or house. Most of the signs of Lyme Disease are reported in the spring to fall, when tick populations are the highest.

WHERE DOES IT OCCUR?

Lyme Disease appears to have a worldwide distribution. Cases have been reported in at least 30 of the United States, but 86% of these cases originated in only 7 states. The areas with highest activity are the northeastern seaboard, Wisconsin, Minnesota, and northern California. If you reside in or travel to these areas, your pet could have an increased chance of exposure to this disease.

WHAT DOES A POSITIVE TEST MEAN?

Our 3DX test is a very reliable in hospital test for lymes disease and a positive test is considered a clinically active case of lymes disease, not just exposure to the disease. Even though your pet is not showing signs of lymes disease, they may indeed have some joint pain or lethargy that they have been living with because they can't talk about these signs to anyone. In addition, it may be earlier on in the disease process when they are diagnosed and they may not have reached the stage of exhibiting more advanced signs of pain lethargy that are apparent to you.

PANOSTEITIS

A disease of the long bones in the legs and is most often seen in young dogs of the larger breeds. These dogs usually show signs of lameness which often is seen in different legs at different times. Usually referred to as a “limb shifting lameness”. The cause of this disease is unknown. Xray findings are used to diagnose this condition, however laboratory tests are sometimes necessary to rule out other causes of lameness. The primary signs seen on the X-rays include inflammation of the bones of the legs.

Dogs usually show a sudden onset of lameness beginning in the front legs. It most often is seen at 5-12 months of age but may occur in dogs from 6 months of age up to approximately 5 years of age. The disease often persists for 2-6 months, but can last up to 10 months. Lameness is often intermittent and sporadic. Lameness may switch from one leg to another. The degree of pain and discomfort will vary. Full recovery usually occurs within 6 months with no permanent after-effects.

CANINE PARVOVIRUS

Canine Parvovirus is a viral disease of dogs that was first reported in early 1978. Parvovirus is capable of causing two different sets of clinical problems. The first to be recognized, and most common, is the “intestinal” form which is manifested by diarrhea; often bloody vomiting, loss of appetite, depression, fever, and sometimes death. The second syndrome, the “cardiac” form, occurs in very young pups and is manifested by an acute inflammation of the heart muscle. Any age, breed or sex of dog could be affected by Parvovirus. However, infection with Parvovirus does not automatically mean illness. Several factors such as age, environment, stress, parasites and general health status of each individual dog infected could affect the severity of illness. The degree of illness could range from very mild to unapparent to very severe, often resulting in death. The disease is usually more severe in young dogs (less than 6 months of age) or old dogs.

THIRD EYELID GLAND PROTRUSION

Dogs and cats have 3 eyelids: upper lid, lower lid, and one that is attached inside the other lids at the inside corner of the eye socket. This third eyelid serves to protect the eye from injury by closing over the eye to give a second covering of the eye. On the inside of this third eyelid, there is a small lymph node and small gland that produces tears. The tears produced aid in lubrication of the eye.

A condition exists where this small gland becomes inflamed and swollen. Once swollen, the tissue of this gland then protrudes out over the free edge of the third eyelid. This condition is sometimes called “**cherry eye**,” because the reddened, swollen tissue resembles a cherry. CAUSE of this condition is not known. An infection or allergic reactions may sometimes cause the condition. There is a tendency for the condition to occur in the other eye at some future date.

TRACHEAL COLLAPSE

Collapse of the trachea is a condition where the windpipe is flattened instead of being rounded. It occurs most commonly in small and toy breed dogs. The trachea is composed of cartilage rings in the shape of a “C.” The open part of the “C” is located on top of the trachea and is composed of muscles and ligaments that hold the “tube” together. In cases of tracheal collapse, the windpipe

collapses much like a soda straw does when sucked with excessive pressure. This decreases the size of the airway limiting movement of air within the windpipe thereby causing breathing difficulty and a cough or “honking” sound. If the collapse occurs in the part of the windpipe located in the lower neck before reaching the chest, then the collapse occurs upon inspiration. If the segment of the trachea involved is located within the chest, then the collapse occurs when the pet exhales the air. If both segments are involved, then the collapse is constant, but clinical signs are usually worse on expiration.

CAUSE of this condition is unknown. It is hereditary in small and toy breed dogs. Sometimes, obesity is associated with tracheal collapse and can worsen the condition in any pet. Once in a while the cause may be the result of a weakening of the tissue from bouts of bronchitis or other respiratory infections from the past.

VON WILLEBRAND SYNDROME

Von Willebrand’s Syndrome is a bleeding disorder of both animals and man. CAUSE of the condition is a deficiency in the amount of a certain protein required to help platelets (blood cells used for clotting blood) seal broken blood vessels. Although many breeds can be affected, the Doberman is the breed most commonly observed with the condition. Many pets may be carriers of the condition even though not affected themselves. Other breeds showing a high incidence are Chesapeake Bay Retrievers, Scotties, and Shelties.

SIGNS OF THE DISEASE VARY. Many dogs having the condition never show clinical signs. Others may hemorrhage from the nose, bladder, vagina, or mucous membranes. Prolonged bleeding after surgery or injury is common. If uncontrolled hemorrhage continues, it can result in death. The time of life when initial signs are seen also varies. The condition may not be evident until 4 years of age in the Doberman.