

Common Illnesses & Injuries in Dogs and Cats

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INTRODUCTION

Understanding how the body functions is important for anyone working in the veterinary field. Understanding basic anatomy and physiology allows all staff to communicate in a more effective and knowledgeable manner with clients.

THE BASIC PLAN

There are three groups of systems within the body, each of them having a specific task. These are the structural, coordinating and visceral groups. All systems are made up of individual specific cells and millions of these cells combine together to carry out a number of functions for that system.

The structural group is comprised of the skeletal, muscular, integument and cardiovascular systems. These combine to provide the "framework" or the structure of the body. The structure of the body can walk and move because of this group.

The coordinating group is comprised of the nervous and endocrine systems. This group helps to carry and control information around the body. It helps to coordinate and control the mechanisms of the body.

Lastly the visceral group includes the digestive, respiratory, urinary and reproductive systems. These include all the basic functional systems of the three body cavities: thoracic, abdominal and pelvic.

STRUCTURAL GROUP

Skeletal System: This consists of the bones and joints linking together to form the rigid framework of the body. It consists mainly of bone and cartilage. Bone is made of a type of cell called an osteocyte. The main bones of the front leg are the scapula, humerus, radius and ulna. The main bones of the back legs are the pelvic bones, femur, tibia and fibula. The most common diseases that can affect the skeletal system are cancer and hypertrophic osteodystrophy in large breed puppies. Pets may also experience lameness or broken bones due to injury.

Cell multiplication is a normal process that occurs to most body cells. Cell multiplication occurs due to injury of the cells or the normal life cycle of the cell. Ultimately a mutation in the DNA causes uncontrolled multiplication of cells to occur which leads to the formation of either a benign or malignant tumor (cancer). Benign tumors do not spread to other parts of the body or invade other tissues, and they are rarely a threat to life. Malignant tumors do not remain localized and often spread to other locations or infiltrate and area to cause the area of infiltration to fail. An osteosarcoma is one of the most common types of bone cancers seen typically in dogs and attacks the osteocytes causing the bone to appear moth-eaten on radiograph.

Hypertrophic osteodystrophy occurs usually in 3-6 month old large breed puppies and the cause is unknown. Puppies present with moderate painful swelling of the growth plates in the leg bones. They are typically lame, have a fever and lethargic. The symptoms may resolve by themselves. If the fever is very high for long periods or the bony involvement severe, the puppy may suffer permanent structural damage or even die.

Muscular System: Consisting of the skeletal muscles, tendons and ligaments. Together they work to bring movement to the limbs and body in conjunction with the coordinating group. The most common problems with the muscular system are usually related to trauma or injury. Bite wounds or ligament tears are common in veterinary medicine. Typically owners will describe an inciting incident (jumped off bed, attacked by another dog, hit by a car) and then describe signs suggestive of muscle trauma such as limping, non weight bearing or visible wounds.

Integument System: This system is the largest organ of the body and forms the outer covering of the body (i.e. skin). The system is comprised of skin, hair, claws, nose and whiskers and, while they seem vastly different from each other, they actually are all similar in tissue design. In areas that need more protection (paws) the tissue is just thicker and harder than the other areas where it is softer. The purpose of this system is to protect the body and aid in thermoregulation.

Many times the health of the integument system is an indicator of the overall health of the pet. Dull, dry or dandruffy hair coat will often indicate an underlying health problem. The most common problems with the integument system are primary skin disease (fungal, bacterial) or trauma (bite wounds, burns). Secondary skin problems can occur from underlying disease (Cushing's, hypothyroidism). Excessive dandruff, dry skin, lesions, redness or patchy hair loss are all indication of skin disease. It is common for older dogs to develop lipomas (fatty benign tumor). While they can be numerous and quite large in size it is important that owners have each tumor checked by a veterinarian to ensure it is not malignant.

Cardiovascular System: This system is found throughout the entire body and delivers nutrients to all cells and tissues needed to survival. This system is comprised of four parts: blood, heart, circulatory and lymphatic systems.

Blood is bright red in color and gets its color from oxygen. In pets that are having breathing problems the blood may not be as bright red because the pet is suffering from a lack of oxygen. Blood consists of four main parts: red blood cells, white blood cells, platelets and plasma. Blood contains a pH of 7.35-7.45 and it's imperative that the pH stay within that range. Certain diseases or injuries can cause the pH to go high (basic) or low (acidic) causing the body to become out of balance which results in the pet feeling sick or having worsening symptoms. The red blood cells (erythrocytes) are filled with hemoglobin and are responsible for carrying oxygen around the body. White blood cells (leukocytes) are responsible for fighting off infection and are larger than red blood cells. Platelets (thrombocytes) are essential in the clotting process. Plasma is a liquid that is 90% water and makes up 55-70% of the blood. It is responsible for transporting the cells around the body.

There are many diseases that can affect blood, but the most common are those that are infectious (hemobartonellosis, babesia) or immune-mediated. Immune mediate hemolytic anemia (IMHA) is common in the dog. Immune mediate thrombocytopenia can also occur, but is less common. The body starts to attack itself and destroys its own blood cells. Typically when a disease process affects the blood cells the pet may present in an anemic state: collapsed, dyspnic, white mucous membranes or in shock.

The heart is a muscular organ and is the most important organ in the body. It is comprised of 4 chambers: right/left atria and right/left ventricles. Between the upper (atrium) and lower (ventricles) are valves which help to control the path of blood in the correct direction. The endocardium is the continuous thin layer of epithelial cells that lines the inside of the heart. The myocardium is the thick cardiac muscle layer which helps to produce the rhythmic contraction of

the heart in conjunction with the coordinating system. Lastly the pericardium is the outer double layer. Between the two layers is the pericardial sac.

Primary heart disease can occur through a failure of a part of the heart (valve, conduction system, pericardial sac). Secondary heart failure can occur from a disease process (hypoxia, trauma). Pets that experience heart failure typically will show signs of collapse, fatigue, lethargy and dyspnea.

The circulatory system is comprised of the blood vessels. The blood vessel system is continuous. Arteries carry oxygenated blood away from the heart and veins return deoxygenated blood to the heart. Arterioles are the smallest which lead into capillaries. Venules are small blood vessels that combine together to form veins. One of the most common ailments of the circulatory system are clots which can occur from disease or trauma. A clot will cause a disruption in the system and may be large enough to stop blood flow to an entire area of the body. That is the case with some cats that experience aortic thromboembolism. These cats usually experience acute pain, fall or stagger and may drag the limb(s) that do not have circulation to them. Owners often call stating their cat has suffered a stroke or broken its legs. Usually cats have a history of heart disease or a heart murmur.

If a pet experiences any type of shock the circulatory system may become compromised causing blood pressure to decrease. Ultimately blood pressure is directly related to the heart's ability to pump, the circulatory system's ability to produce blood flow, the volume of actual blood and the thickness of the blood (viscosity). A change in any one of these can cause a pet's blood pressure to increase (hypertension) or decrease (hypotension).

Lastly the lymphatic system helps to drain excessive lymph and return it to circulation. Lymph is excessive tissue fluid that leaks out of capillaries to fill spaces and is similar in composition to plasma. The lymph fluid will pass by lymph nodes where any foreign material is detected. The lymph nodes are responsible for releasing antibodies (help to destroy foreign antigens) and play an integral role in the immune system. Lymph nodes can become enlarged at times if illness or disease because they are responding to a challenge on the body. In the case of lymphoma malignant cells often originate in lymph nodes and result in an enlargement of the node. Owners may notice their pet not wanting to eat or being lethargic. On presentation at the veterinary clinic the lymph nodes may be easily palpated.

COORDINATING GROUP

Nervous System: The nervous system is one of the systems that still remains much of a mystery simply because there is much that cannot be seen despite the best microscopes in the world. The nervous system consists of a central nervous system (brain and spinal cord), receptors and a connecting system of nerve fibers. The nervous system is responsible for receiving information from the environment, analyzing it and bringing an appropriate response.

A neuron is the functional unit of the nervous system. From this cell all other more complex structures of the nervous system are created. The brain has three areas: forebrain (largest part), midbrain and hindbrain. The forebrain contains roughly 90% of all the neurons in the entire nervous system. The thalamus and hypothalamus are both located in the forebrain. The thalamus processes information from the sense organs. The hypothalamus is responsible for maintaining the body's hemostasis, body temperature, fluid balance and controls hunger and thirst. The midbrain helps to connect the forebrain and hindbrain. The hindbrain contains the cerebellum (responsible for balance and coordination), pons (responsible for breathing) and

medulla oblongata (responsible for breathing and blood pressure). Ultimately the brain is filled with and is surrounded in cerebrospinal fluid (CSF).

The spinal cord is a complex structure that is entirely protected by bony structures known as vertebrae. Each segment corresponds to a vertebrae and gives off a pair of spinal nerves which travel to and from the central nervous system. Ultimately there are millions of nerves each with a specific purpose. There are nerves designed just to help the animal hear sounds and nerves to help the animal see.

There are many diseases and injuries that can affect the nervous system. Some of the most common are seizures and trauma. Pets can develop seizures for a variety of reasons, but certain breeds of dogs (labs, beagles) are more prone to developing idiopathic epilepsy. This will cause the neurons to become hyper-excitabile and over-fire. This causes the pet to twitch and shake in a convulsive state. There are other diseases or injuries that may cause the pet to have seizures as well (hypoglycemia, hit by car). Certain breeds (dachshunds) are more prone to back injuries. They may end up with a slipped disk which pinches or severs part of the spinal cord leading to a disruption in the nervous pathway. This causes the pet not to be able to use its hind legs. Any injury or disease of the nervous system is life threatening and needs emergency treatment immediately. Signs often include: not wanting to walk, dragging a leg, crying in pain or hunched back.

Endocrine System: This is the second largest system in the body involved in the regulation of its functions (first is nervous). The endocrine system plays a key role in hemostasis. Hemostasis is being able to keep the internal body in a state of equilibrium despite outside events (temperature, injury). The endocrine system does this by helping to regulate temperature, respiration, fluid levels in the body and excretion of fluids. It does this by using a series of endocrine glands which secrete hormones. Hormones are specific to one organ or area of the body. The endocrine glands are: pituitary, thyroid (regulates metabolism), parathyroid (affects calcium levels), pancreas, adrenal, ovary and testis.

The pituitary gland is also referred to as the "master" gland because it controls many actions of the other glands and links with the nervous system. There is an anterior and posterior pituitary gland. The anterior is responsible for secreting such hormones as: growth hormone, thyroid-stimulating hormone, adrenocorticotrophic (for adrenal glands) hormone and follicle-stimulating hormone (for ovulation). The posterior pituitary gland secretes oxytocin (for pregnancy) and antidiuretic (regulates fluid balance) hormones.

The pancreas is actually an endocrine gland. It completes the job of breaking down protein, carbohydrates, and fats, secretes hormones that affect the level of sugar in the blood and produces chemicals that neutralize stomach acids that pass from the stomach into the small intestine.

The adrenals are responsible for releasing hormones in response to stress through the synthesis of corticosteroids such as cortisol and catecholamines such as epinephrine (adrenaline) and norepinephrine.

There are numerous diseases that can effect the endocrine system. Some of the most common are hyperthyroidism in cats (metabolism speeds up causing increases in heart rate and weight loss), Cushing's or Addison's disease (affects the adrenals), pancreatitis and diabetes.

Pancreatitis can occur in dogs or cats and is a the inflammation of the pancreas. This can occur for a variety of reasons, but once it becomes inflamed the condition can progress to swelling of the gland and surrounding blood vessels. This can lead to bleeding, infection, and

damage to the pancreas. If this damage persists, the pancreas may not be able to carry out normal functions. Pets may be present with vomiting, diarrhea, abdominal pain, anorexia and lethargy. Symptoms may be mild or severe (shock, death).

Diabetes is the body's inability to produce enough insulin in the pancreas to handle the demands of the food and sugars that enter the body. This causes the blood sugar to rise. Pets will typically experience signs of excessive drinking, excessive urination, hunger, accidents in the house, vomiting and lethargy.

VISCERAL GROUP

Digestive System: The function of this system is to ingest (in the oral cavity), chew/swallow (past the pharynx, into the esophagus and into the stomach), digest (in the stomach), absorb nutrients (stomach, small and large intestines) and metabolize the components for energy. Both dogs and cats are carnivores and their stomachs are single chambered (mono-gastric). Attached to the digestive system are the pancreas, liver and gall bladder.

Within the mouth, dental disease is the most common disease process. The teeth can become so decayed that bacteria filters into the blood stream resulting in kidney and other organ failure. Deciduous teeth are the "baby" teeth of the dog or cat. They may be retained and the pet may have an adult tooth with a deciduous tooth next to it. These must be removed as they only lead to tooth problems in the future.

The food will enter the stomach from the esophagus through the cardiac sphincter. It then digests the food. The digested remaining food will exit the stomach via the pyloric sphincter. Most commonly pets can experience gastric foreign bodies, gastritis or gastric dilatation volvulus (GDV). GDV is life threatening in dogs and signs include non productive retching, "vomiting" white foam (the dog cannot actually vomit, but it looks like vomit) distended abdomen and restlessness. In the case of gastritis or foreign bodies, pets will vomit, not want to eat, be lethargic, have abdominal pain or diarrhea. Liquids generally take about 30 minutes to digest, while solid food can take up to 3 hours. Knowing when the pet ingested a foreign substance plays a role in deciding whether to induce vomiting. Not all substances that are swallowed should vomited up (sticks, batteries, bones) due to fear of lacerating the esophagus or causing it to become lodged on the way back up.

The small intestine leads into the large intestine. Both are very long constantly moving parts. At the end of the small intestines is the cecum, which has little to no function in the carnivore. The most common problems are foreign bodies and inflammatory bowel disease (vomiting, diarrhea). Ultimately at the end of the large intestines lies the anus which contains two anal sacs which sit at 4:00 and 8:00. They can become impacted and consequently infected. Owners typically note excessive scooting on the floor, biting at the rectal area or a reluctance to sit.

The liver is the largest gland in the body (secretes bile) and has the gall bladder attached to it (the warehouse for excessive bile). It is responsible for carbohydrate, protein and fat metabolism, formation of bile, destruction of red blood cells, storage of iron, detoxification and production of heat. It contains it's own blood supply system known as the hepatic portal system. When the liver is damaged or diseased the pet may become icteric (jaundice). This is because of an increase in bile which is stained yellow from the bilirubin pigment.

The liver is the most common organ to be damaged when a pet has been hit by a car, but it has amazing regenerative properties and often times heals itself after a couple of weeks. Cats that are not eating can experience hepatic lipidosis (fatty liver syndrome) where excessive fats

build up in the liver causing it to fail. Owners will often describe a cat that doesn't want to eat, has been vomiting, drinking more, and is lethargic. Other more common diseases that can affect the liver are leptosporosis (zoonotic) or liver shunts (small dogs present with low blood sugar or seizing). Almost all toxic substances have the ability to affect the liver (naproxen, ibuprofen, NSAIDs).

Respiratory System: This system is responsible for the exchange of gases between the air and the pet. The air is breathed into the nose, down past the pharynx and larynx and into the trachea which is a rigid tube consisting of rings of cartilage. The trachea feeds into the right and left bronchi (the main airway branches in the lungs) which filter into smaller bronchioles. At the end of the bronchioles are the alveoli, tiny air sacs where the exchange of oxygen and carbon dioxide take place. The lungs are spongy and expand as the alveoli are filled with air and deflate as the air is exhaled from the alveoli.

All disease and injuries that affect the lungs will result in signs of respiratory distress to the pet. This could be a direct injury (popped lung from trauma) or secondary disease (cancer or respiratory fatigue). Signs of respiratory distress include: lethargy, dyspnea, coughing and cyanosis.

Urinary System: The parts of the urinary system are: the kidneys, the ureters, bladder and urethra. As a system these parts help to regulate the chemical composition and volume of body fluids, remove waste and excess water from the body and secrete erythropoietin (hormone that stimulates the production of red blood cells).

A pair of bean-shaped kidneys receive blood from the renal artery. The working unit of the kidney is the nephron (about one million of them). Ultimately the kidneys filter waste products and help to keep a balance with the body's fluids. If the pet is dehydrated, less water will be filtered out. If they are over-hydrated more fluid will be removed.

Kidney failure is the number one disease and killer of older cats. It is the failure of the nephrons that ultimately cause the kidney not to be able to function properly. As the nephrons fail two kidney enzymes rise: blood urea nitrogen (BUN) and creatinine. Owners can be informed of their pets BUN and creatinine values so they can understand how their pet is responding to or not responding to fluid therapy. There are numerous reasons the kidneys fail, but most commonly it is due to chronic tubulointerstitial nephritis (a chronic aging of the kidneys) or glomerulonephritis (inflammation of part of the nephron). Other causes include toxins (NSAIDs, lilies), disease (leptosporosis, cancer, FIP) or injury (trauma). No matter the cause owners will describe the same signs in their pets: excessive drinking, excessive urination, anorexia, lethargy, foul breath, weight loss and vomiting.

The fluid that is filtered from the kidney is filtered into a ureter and then eventually the bladder. The bladder stores the urine before it is then passed into the urethra to be urinated out of the body. The most common problem of these parts is a blockage. In male cats this is a very common problem. It is unknown why male cats experience urethra blockages. All urinary blockages are life-threatening emergencies. Signs of any type of urinary blockage include: crying in pain when trying to urinate, straining to urinate, vomiting, lethargy, excessive licking at the urethra area and abdominal pain. Certainly pets may experience bladder tumors, inflammation or injuries to the bladder which may result in the pet producing bloody urine, straining to urinate and pain on urination.

Reproductive System: The male reproductive system lives vastly outside the body and consists of the testicles, penis, prostate gland, epididymis, os penis (bone in the dog only) and bulbourethral gland (male cat only). The female reproductive system is all internal and consists of the ovaries, cervix, uterus, vagina and vulva. Both the male and female reproductive systems will produce the necessary hormones (testosterone, estrogen, progesterone) which help to develop the pet into sexual maturity.

Both injury and disease can affect the reproductive system of pets. The risk of most of them are eliminated if the pet is neutered (spay in female, castration in males). In developing male dogs, one of the most common complications is a retained testicle. If the purpose of the male was to be a breeding pet it is not ideal to have a retained testicle because it can become diseased or have a torsion. Ideally the male would be castrated and the retained testicle would be removed from the abdomen. Because the male genitalia is located on the outside of the body it can be injured (laceration, abrasions). The dog's os penis can be fractured during traumatic breeding or from other trauma (hit by car).

The prostate gland's function is to secrete a milky white fluid that constitutes about 20–30% of the volume of the semen. The prostate gland can become inflamed, infected or have cancer in males, but more commonly in intact males. This will cause them to present with bloody urine, straining to urinate, abdominal pain and vomiting.

Intact females are at a higher risk for developing mammary carcinoma. More commonly intact females will experience pyometra (uterine infection). Unless the pyometra is open (where the infection leaks out via the vulva) and the female is also used for breeding, the female should be spayed if a pyometra develops.

Please note: It is ALWAYS safer to have the pet be seen by a veterinarian if the owner is concerned at all.

Vomiting/Diarrhea: If your pet is vomiting, do not allow it to eat or drink anything for 8-12 hours. Many pets will “tank up” on water and end up vomiting more. If the vomiting or diarrhea is frequent, seek medical attention. After 10-12 hours you can offer your pet a small amount of water (1/4 cup). If your pet is able to hold that down you can offer 2tbsp of a bland diet (boiled chicken, white rice, low fat yogurt, low fat cottage cheese). After an hour you can offer another 2tbsp and a little more water. If at any point your pet continues to vomit (even before you offer food), seek medical attention. You should feed a bland diet for about 2 days (or until there are normal stools) and then SLOWLY mix back in the regular food over 2 days. Small dogs, kittens or puppies can become dehydrated quickly. Diabetics or geriatrics with other conditions are also a concern. *Any blood in the diarrhea or vomit is an EMERGENCY.*

Hit By A Car: ALWAYS an EMERGENCY. Even if your pet looks “fine”, there can be trauma to the chest or abdomen that you cannot see. Because of your pet’s adrenaline rush you may not see signs for several hours and, by then, it’s an emergency. Take your pet IMMEDIATELY to a veterinarian.

Steps if Your Pet is HBC:

- 1) Do not get bitten by your own pet
- 2) Use safety measures if getting your pet out of the road
- 3) Have someone sit with the pet if possible to minimize motion, but do not add stress to the pet (don’t bear hug pet if they won’t tolerate it)

- 4) Use large blankets as gurney if needed
- 5) Call veterinary clinic and let them know you are on your way
- 6) Drive safely to veterinary clinic

Bite Wounds: ALWAYS an EMERGENCY. No matter how little the wound looks, until the hair is clipped away and a veterinarian is able to look at it, you cannot really tell. Bite wounds become infected very quickly, particularly when made by a cat. If nothing else they are painful and the pet should be prescribed pain medications and antibiotics. Be sure to place a bandage over any bite wounds that are excessively bleeding and bring your pet in immediately. Bite wounds of particular concern are those over the chest, neck, under-belly and near any joint. Because of state laws, please bring your pet's rabies certificate (not just the tag) with you to the clinic.

Broken Bones: ALWAYS an EMERGENCY. When a pet breaks a leg it's not fair to keep the pet home and have it suffer until your regular veterinarian is available. If your pet is limping on the leg, it is likely not broken. Most pets with broken legs will not use the limb. However, while limping is not an emergency it can be very painful. Making your pet wait 12-24 hours for medical treatment may not be fair. If the pelvis is broken they will wobble/stagger when they try to walk, if they try to walk at all. It's always safer to bring the pet in if they are limping or holding up a leg. Do not give any human pain medications (Tylenol, aspirin) to your pet.

Poisons/Toxins: CALL ASPCA POISON CONTROL IMMEDIATELY: 888-426-4435 or another animal poison control center. There is a \$65 fee. Most veterinarians will end up having to call the poison center and charge you the fee anyways, so call ahead of time. The ASPCA will be able to tell you if what your pet ingested is toxic, how to make your pet vomit and whether you need to see a veterinarian or not.

Bloat/Gastric Dilatation Volvulus: Occurs in large/deep chested dog. The stomach twists and starts to "bloat". Signs include: trying to vomit, gagging up white foam, restless, won't lie down, panting, pacing, groaning in pain, distended abdomen. This is an EMERGENCY and they need to bring in their pet ASAP!

Urethral Obstruction: Occurs mainly in male cats where the urethra becomes obstructed with crystals or other debris. The male cat is unable to urinate. Urethral obstructions can occur in other animals as well, so it's important to always watch your pets when they eliminate. Signs include: Vomiting, frequent squatting in an attempt to urinate, crying in pain (yowling in cats), tense/painful abdomen, refusal to eat. Owners often mistake urinary obstruction as constipation. This is an EMERGENCY and they need to bring in their pet ASAP!

Thrombus Cat (clot cat): Occurs mostly in cats, usually those with a history of heart disease or heart murmurs. A blood clot becomes formed and lodges in various parts of the body (typically cutting off blood supply to the lower limbs). Signs include: inability to walk, crying/screaming in pain, "floppy" legs, cold feet, breathing difficulties. This is an EMERGENCY.

Near Drowning: Occurs in both dogs and cat usually around pools. If you witness an animal that ends up submerged, even for a short time, it is important you take the pet to a veterinarian IMMEDIATELY. Signs may not be seen for several hours and the concern is that the animal could have swallowed water into their lungs. Signs include: coughing, nasal discharge, vomiting, breathing difficulties.

Heat Stroke/Hypothermia: Heat stroke mainly occurs in dogs, but can be seen cats also. Hypothermia can occur in both animals. Both are an EMERGENCY. Attempt to cool down (spray the animal down with cool water), or warm up (blankets/towels) until you're able to get to an emergency clinic. Do not use ice or very cold water. Bringing down the pet's temperature too quickly can cause worse effects than being overheated.

Seizures: Seizures can be a scary thing to see for the first time. If it is your pet's first seizure you should always bring them into a veterinary clinic immediately. It is imperative you protect yourself. Some pets may become highly aggressive during or after the seizure. They may not know who you are. Be sure to toss a blanket over your pet's head before picking them up to transport them. This will help protect you from being bitten. Most seizures last a short time...under one minute. If your pet is actively seizing for more than 2 minutes there becomes concern that your pet may suffer brain damage by overheating itself. Be sure your pet is in a safe location when it seizes. Move it off of furniture or away from stairs. Do not worry about it swallowing its tongue as this does not occur in pets. Seizures can happen for a variety of reasons. Most commonly it is from either idiopathic epilepsy, toxins or a neurological issues (brain tumor). Cats rarely have seizures. Middle age dogs, between 2-6 years of age, are prone to epilepsy particularly certain breeds like beagle and labs.

Ocular Injuries: Eyes are important. While it may just be a minor eye infection unless you have the ability to diagnose such an infection it is always better to be safe than sorry and get your pet in to see a veterinarian right away. Pets do not understand that scratching at their eye can cause worse problems, like a scratch to the cornea. Even a mild eye infection may cause the pet discomfort which may result in self mutilation. Eye problems can quickly spiral out of control, so any problem with the eyes should be addressed immediately.

Vestibular Disease (old dog vestibular/rolling dog): The vestibular system lies within the inner ear. Anything from a tumor, ear infection or an idiopathic syndrome (meaning no known cause) can cause it to become unbalanced. Usually older dogs are affected. Signs are usually described as a head tilt, staggering to walk or a complete collapse. When the owners look at the eyes they generally notice the eyes bouncing quickly from side to side. This is called nystagmus. Owners often describe that it looks like their dog suffered a stroke. While not all the causes are emergencies per se, it is very difficult for the average owner to determine if it is truly a vestibular issues versus a more serious neurological issue. It is always best to have your pet seen right away.

Ear Infections: Rarely are ear infections an emergency, but they certainly are uncomfortable. In 'worse case scenarios' the ear drum can rupture leaving the pet deaf. This is why it is important to look inside your pet's ear a once a week to ensure that no discharge or foul odor is present. Some owners describe their dog as keeping them up in the middle of the night shaking his head.

While it is perhaps not an emergency, it is obviously uncomfortable and should be addressed that evening (ideally), but no later than the morning. Sometimes pets can shake their heads so violently that they break the blood vessels that live in the flap of the ear. The ear flap itself will fill up with blood and become swollen and painful. To avoid this from occurring to the pet it is always best to have even the most minor ear infection dealt with immediately.

Anal Sac Infections: Both dogs and cats have anal sacs. The anal sacs are two tiny sacs that live just inside the rectum at 4:00 and 8:00. When the pet defecates the anal sacs are expressed. Sometimes, for unknown reasons, they are not always expressed during defecation. Pets will try to scoot across the carpet in an effort to release them. If they remain unexpressed the anal sacs can become impacted and infected. This causes great discomfort to the pet. Generally they may cry at their rectum, cry when trying to defecate and sit down a lot. If left to go on for too long the anal sacs will form infectious material and eventually rupture causing severe pain and infection to the pet. If you notice any redness or swelling around the rectum it is always best to have it looked at immediately before it gets to be a massive infection and/or ruptured anal sac. If your pet is scooting excessively but no redness or swelling is noted you can get them seen generally within 24 hours for a manual expression (a groomer or veterinarian can do this for you). If you are not sure it is best to have your pet seen right away.

Dental Disease/Mouth Tumors: Dogs and cats of any age can have dental disease, broken teeth or tumors (both cancerous and benign) of the mouth. While most of these are not emergencies they can be uncomfortable. It is important to check your pet's mouth ideally once a month and look at the teeth and the gums. If you notice a lot of tarter, a protruding mass or broken teeth it's best to get them in to see a veterinarian sooner than later. Certainly any excessive drooling or not wanting to eat should be addressed sooner.

Allergic Reactions: Any pet can suffer an allergic reaction to a variety of chemicals, insects, dust, etc. Most animals will start off by appearing very itchy. The pets face may start to swell and hives may be noted on the body and legs of the pet. The pet may pant, rub their face on the ground, appear agitated, not settle down or vomit. Facial swelling can get so bad the pet may not be able to see. While some veterinarians will just have the owner try giving diphenhydramine, that is not always the safest thing to do. There are a handful of pets who will become agitated on diphenhydramine. While most allergic reactions can be handled with diphenhydramine, there is a small percent that will develop life threatening anaphylaxis reactions. Signs of anaphylaxis reactions include changes in heart rate, respiratory rate, breathing problems, shock, seizure, coma, death. This is why it is recommended that all allergic reactions be seen by a veterinarian immediately. While not all allergic reactions are life threatening, they certainly are uncomfortable. A veterinarian is able to provide faster treatment with other types of medications than just home treatment alone.

Failure of the Organs: There are a myriad of diseases that can cause the organs to fail within the body. Most commonly we see organ failure in older pets and most commonly we see heart failure (dogs and cats), kidney failure (more common in cats) and liver failure (dogs and cats). As your pet gets older it is important to really ensure that they are eating the same amount, not drinking too much, not urinating too much and that their bowel movements are normal. Any

change in your pet's behavior may indicate a problem. When we think about organ failure the most common signs are as follows:

HEART FAILURE: Increase respiratory effort, coughing, lethargy, not wanting to eat

KIDNEY FAILURE: Increase in drinking water and urinating more, not wanting to eat, vomiting, lethargy

LIVER FAILURE: Not wanting to eating, jaundice, vomiting, lethargy

While not all of these are emergencies they should be addressed in a timely manner particularly if your pet is older. Certainly any acute onsets of collapse, massive vomiting or breathing issues are considered emergencies.

Cancer: Cancer is the number one killer of dogs, but also affects cats in high numbers as well. Most cancers are not emergencies. They are usually slow growing tumors that cause the pet to slow down until some subtle signs are noticed (lethargy, not wanting to eat as much, vomiting, diarrhea, coughing). As your pet gets older it is important to address any changes in behavior or any signs of illness in a timely fashion. Older pets can get benign tumors that grow on the skin (more common in dogs than in cats. It is important that these tumors are looked at by a veterinarian to ensure they are not cancerous. While it is a shock to find out your pet has cancer there are many options for treatment of cancer in pets today. There are some types of cancer that can cause life-threatening emergencies (hemangiosarcoma most commonly). A cancer emergency would usually present in the form of acute collapse, bleeding from the nose/mouth or respiratory problems.