

Dogs are descendants of wolves

Canis lupus familiaris is the scientific name for dogs and they are found in the animalia scientific kingdom.

Dogs are classified in 7 main breed groups; herding, hound, non-sporting, sporting, terrier, toy and working

Herding Group: The herding group has breeds that share an instinctual ability to control the movement of other animals. These breeds were developed to gather, herd, and protect livestock. Some breeds that are classified in the herding group are; Australian Cattle dog, Australian Shepherd, Border Collie, German Shepherd, Collie

Hound Group: Most of the breeds that are in the hound group share the ancestral trait of being used for hunting. Hounds use their acute scenting powers to follow trails while others use their stamina to run down quarry. The hound group is one of the more diverse groups. Some breeds that are classified in the hound group are; Beagle, Bloodhound, Dachshund, Greyhound, Rhodesian Ridgeback

Non-Sporting Group: The non-sporting group is made up a diverse group of breeds that vary in size, coats, personalities, and overall appearance. It is hard to generalize this group of breeds because of their wide variety of backgrounds. Some breeds that are classified in the non-sporting group are; Bulldog, American Eskimo Dog, Poodle, Chinese Shar-Pei, Boston Terrier

Sporting Group: The breeds that are in the sporting group are naturally active and alert. They were first developed to work closely with hunters to locate/retrieve quarry. There are four basic type of sporting dogs; spaniels, pointers, retrievers and setters. Many of these breeds enjoy hunting and other field activities. Many of them, especially the water-retrieving breeds, have well-insulated water repellant coats, which are quite resilient to the elements. Some breeds that are classified in the sporting group are; Brittany, Golden Retriever, German Shorthaired Pointer, Labrador Retriever, Nova Scotia Duck Tolling Retriever

Terrier Group: Feisty and energetic are two traits that terriers have. These dogs were bred to hunt, kill vermin and to guard their family's home or barn. Terrier sizes range and are known to be stubborn and very high energy. Some breeds that are classified in the terrier group are; Rat Terrier, Staffordshire Bull Terrier, Scottish Terrier, Norwich Terrier, West Highland White Terrier

Toy Group: Toy breeds might be small in size but not in personality. They are often full of energy and have strong protective instincts. Toy breeds adjust well to a variety of living environments. Some breeds that are classified in the toy group are; Chihuahua, Chinese Crested, Italian Greyhound, Pug, Papillon

Working Group: The working group breeds are quick to learn, intelligent, strong, watchful, and alert. Bred to assist man, they excel at jobs such as guarding property, pulling sleds and performing water rescues. Some breeds that are classified in the working group are; Doberman Pinscher, Great Dane, Rottweiler, Saint Bernard, Siberian Husky

There are currently 193 breeds recognized by the American Kennel Club (AKC).

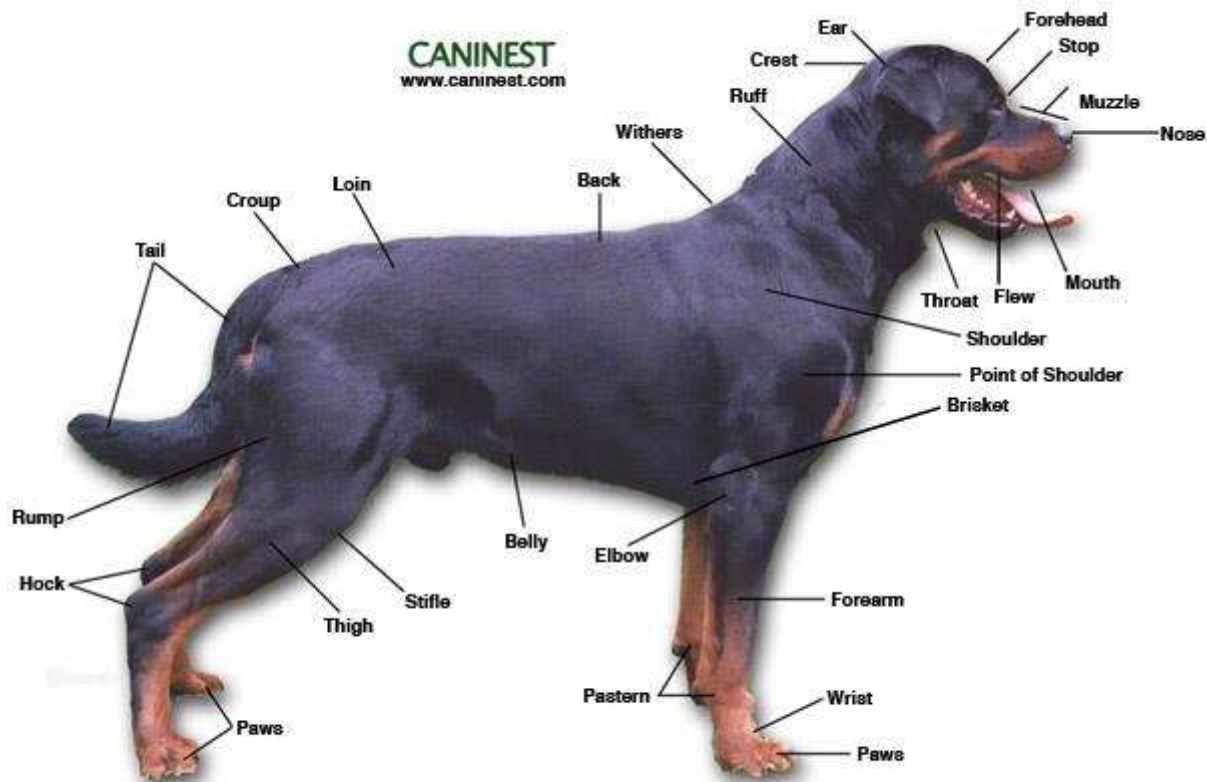
There are many dog clubs including the American Kennel Club (AKC) and United Kennel Club (UKC)

Body Language: How can you tell if your dog is happy? Some of the signs of a happy dog are; a raised head, relaxed ears and body, wagging tail, open mouth

Some of the signs of an aggressive dog are; stiff body with a raised tail, ears alert, hackles raised (hackles are the hairs that run along the dog's spine), teeth showing

Some signs of a frightened dog are; ears back, lowered body, tail down, looking away

Basic Dog Anatomy:



Some breeds have dewclaws which are a toenail on the inside of the front leg. Some breeds, like the Beauceron, have dewclaws on their hind legs as well.

Why should you brush your dog's teeth? Not only will your dog have fresher breath it will help prevent decay and disease as well as red, inflamed, bleeding gums and brown/yellow stained enamel.

Intermediate, Senior

Parasites		
Internal	Intestinal	External
<ul style="list-style-type: none"> Heartworms 	<ul style="list-style-type: none"> Hookworms Ringworms Roundworms Tapeworms Whipworms Coccidia, Giardia and Spirochetes (non-worm parasites) 	<ul style="list-style-type: none"> Fleas Ticks Lice Mites

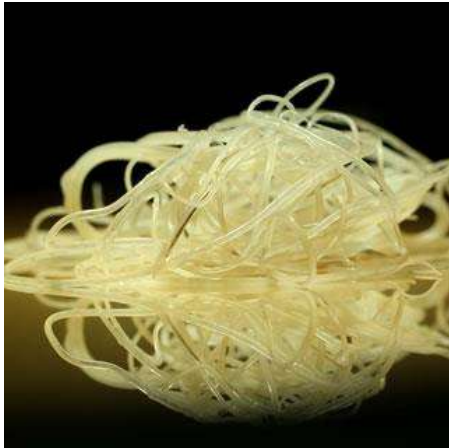
Heartworms: Heartworms are foot-long worms that live in the heart, lungs, and associated blood vessels, causing severe lung disease, heart failure and damage to other organs. Dogs are natural hosts for heartworms, meaning that heartworms can live inside a dog, mature into adults, mate and produce offspring. If untreated, their numbers can increase; dogs have been known to harbor several hundred worms in their bodies.

How heartworms are transmitted: Mosquitos play an essential role in the transmission of heartworms. Adult female heartworms that live in an infected animal produce microscopic baby worms that circulate in the bloodstream. When a mosquito bites and extracts blood from the infected animal, it picks up the baby worms which develop and mature into larvae over a period of 10-14 days. When the infected mosquito bites another animal the infective larvae are deposited onto the surface of the animal's skin and enter the new host through the mosquito's bite wound. Once inside the new host, it takes approximately 6 months for the larvae to mature into adult heartworms. Mature heartworms can live for 5-7 years in dogs.

Symptoms of Heartworms: Fatigue, weight loss, decreased appetite, persistent cough, lethargy, difficulty breathing and bulging ribs.

Treatment for Heartworms: There are treatment options that can be offered depending on the severity of the heartworms.

*Collies and certain herding breeds can have sensitivity to heartworm prevention that is genetically based



(Heartworms)

Hookworms: Hookworms are intestinal parasites that hook themselves into the lining of a dog's intestines. They use their hook-like mouthpieces to attach themselves to the intestinal wall and feed off of the tiny blood vessels in the intestinal lining. Despite their small size (3 millimeters) they can lead to severe anemia.

Causes of Hookworms: There are four ways your dog can get hookworms; oral ingestion, direct contact with the skin, in utero, through mother's milk. Dogs ingest larvae by sniffing or eating contaminated soil or feces. They can also ingest larvae by grooming their paws or by drinking contaminated water. Larvae can burrow into the skin if the dog lies on contaminated soil. Mothers can pass hookworms to their puppies either in the uterus or milk.

Symptoms of Hookworms:

- Anemia
- Pale gums
- Weakness
- Weight loss
- Bloody diarrhea
- Itchy paws
- Poor growth (puppies)

Treatment for Hookworms: Hookworms are commonly treated with dewormers.



(Hookworms)

Ringworms: Ringworm is a fungus that is named for the round, raised, red ring appearance usually seen in human ringworm infections. The fungus grows and lives in the outermost layer of skin and in the hair follicles and occasionally in the nails of infected dogs.

How ringworm is spread: Ringworm is spread through direct contact with the fungus. This can happen when a dog comes in direct contact with an infected animal or person or touches a contaminated object like a couch, bedding, food bowl or carpet. The fungal spores can remain viable for 18 months and typically spread through the shedding or breaking of infected hairs.

Symptoms of Ringworm: In dogs, ringworm usually presents as circular areas of hair loss throughout the body. These lesions may start to heal in the center as they enlarge, creating a patchy appearance, and may become inflamed or scabbed. Ringworm usually does not itch. The affected hair follicles are brittle and break easily, which helps spread the disease throughout your home. In some cases the fungus infects the claws, making them brittle and rough. Ringworm is highly contagious not only to other pets but to humans as well.

Treatment for Ringworms: Ringworms can be treated by topical medication, oral medications or environmental decontamination.



(Ringworm)

Roundworms: Roundworms are extremely common; almost all dogs have had roundworms at some point in their life-most often in puppyhood. There are two main species of roundworm including one that can be transmitted to humans. Roundworms live in the dog's intestinal tract, where they feed on partially digested food.

How dogs get roundworms: It is very common for puppies to be born with roundworms as the larvae are often transmitted from the mother just before birth or through nursing. Dogs can also contract roundworms from infected soil, plants, and other animals that carry roundworm eggs (rodents, earthworms, birds, and some insects).

Symptoms of Roundworms:

- **Malnourishment.** Roundworms live in the intestines, depriving the puppy or dog of nutrients from his food, thus symptoms of a heavy roundworm infection can include signs of malnutrition such as weakness, weight loss and stunted growth.
- **Potbellied appearance.** When roundworms are untreated the parasites can multiply quickly in the intestines and grow to the point where the presence of numerous adult worms gives the puppy a potbellied appearance.
- **Coughing.** Roundworm larvae can migrate to the lungs and cause coughing and other respiratory symptoms, sometimes even serious conditions such as pneumonia.
- **Vomiting or diarrhea.** Roundworms can cause digestive upsets such as vomiting and diarrhea. Diarrhea can range from mild to severe.
- **Worms vomited up or visible in stools**

Treatment for Roundworms: Roundworms can be treated with a dewormer.



(Roundworms)

Tapeworms: Tapeworms are an intestinal parasite. Along with roundworm, hookworm and whipworm they can be found in dogs, humans and other species.

How dogs get Tapeworms: First, the dog will ingest a host that is harboring tapeworm eggs, most often an adult flea. There are a few ways a dog might ingest a flea, such as self-grooming, or grooming a canine or feline housemate. Other animals that are potential transmitters of eggs include birds, rabbits, or rodents, which even a well-fed dog, might scavenge for.

Once digested, the tapeworm eggs settle into your dog's small intestine. There it will develop into an adult.

The adult tapeworm is made up of lots of small segments, each about the size of a grain of rice, called proglottids. Adult tapeworms usually measure anywhere from four to 28 inches in length.

As the tapeworm matures inside the dog's gut, these segments break off and end up in the dog's stool. Since these segments contain tapeworm eggs, the cycle will begin again, with a new host and most likely a new recipient.

Symptoms of Tapeworms: The Centers for Disease Control and Prevention (CDC) says the proglottid segments can sometimes be seen crawling near the anus or on the surface of fresh waste. These eggs are released into the environment when the proglottid dries out. The dried proglottids can sometimes be seen stuck to your dog's fur. Another symptom of worm infestation is if your dog scoots his anus across the ground, on a rug, or another rough surface. This is due to the irritation the segments are causing his skin. You may see your dog licking or biting at the area. Occasionally, a portion of the tapeworm will be released when your dog vomits.

Treatment of Tapeworms: Oral medications can treat tapeworms.



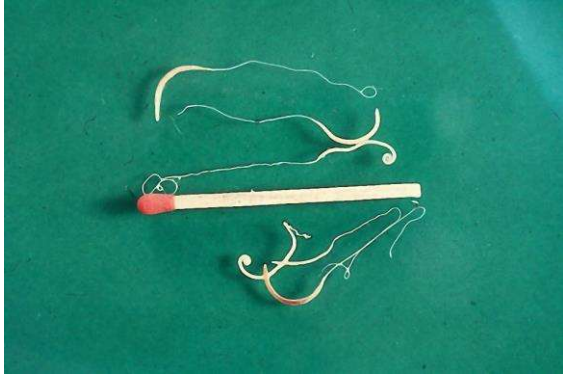
(Tapeworm)

Whipworms: Whipworms are another common intestinal parasite. Whipworms are one quarter inch long worms that live in the cecum (a pouch connected to the junction of the small and large intestines) and colon (large intestine), where they attach to the mucosal lining. Whipworms get their name from their shape. They have a thick anterior end and a long, thin, posterior end that resembles a whip. The thicker end embeds itself in the intestinal wall as the worms mature, causing irritation and discomfort.

How Whipworms are contracted: Whipworms are contracted by the consumption of whipworm eggs, which are found in feces of infected animals and contaminated soil.

Symptoms of Whipworms: Weight loss, diarrhea, bloody stools and anemia

Treatment of Whipworms: Anti-worm medication



(Whipworms)

Coccidia: Coccidia is an intestinal tract infection. There are four different genera of Coccidia. These microscopic parasites spend part of their life cycle in the lining cells of the intestine.

How Coccidia is spread: Coccidia is contracted when your dog swallows immature coccidia that are found in feces and contaminated soil.

Symptoms of Coccidia: The most common symptom is diarrhea but most dogs that are infected do not have any symptoms. In puppies and older dogs Coccidia may cause severe watery diarrhea, dehydration, abdominal distress and vomiting.

Treatment of Coccidia: Antibiotics are used to treat Coccidia.

Giardia: Giardia is a protozoan parasite that inhabits the intestines of mammals, birds and amphibians.

How Giardia is spread: Giardia has to be ingested in order for your dog to get the parasite. Giardia can be ingested by drinking water that has been contaminated by feces, eating something that has been contaminated by feces (grass, sticks, etc.) or drinking from a puddle.

Symptoms of Giardia: Diarrhea, weight loss, failure to gain weight, vomiting, dehydration, poor coat appearance

Treatment of Giardia: Dewormers such as fenbendazole and metronidazole

Fleas: Fleas are external parasites that feed off of blood. Fleas can consume up to 15 times their body weight in blood per day. They are able to jump up to about 6 inches, making it easy for them to spread.



(Flea)

Ticks: Ticks are an external parasite that feed on blood. Ticks are commonly thought of as insects but they are actually arachnids similar to spiders, scorpions and mites, since they have eight legs and no antennae. There are two groups of ticks, hard and soft. Hard ticks, like the American dog tick, have a hard shield just behind the mouth parts, unfed hard ticks are shaped like flat seeds. Soft ticks do not have the hard shield and they are shaped like a raisin. Soft ticks prefer to feed on birds or bats and rarely found on dogs or cats. There are at least 15 species of ticks in North America but only a few species are likely to be encountered by your dog. They include American dog tick, lone star tick, deer or black-legged tick and brown dog tick.

Species	Larva	Nymph	Male	Female	Partially Fed Female	Fully Fed Female
Deer Tick <i>Ixodes scapularis</i>						
Dog Tick <i>Dermacentor variabilis</i>						
Lone Star Tick <i>Amblyomma americanum</i>						
Brown Dog Tick <i>Rhipicephalus sanguineus</i>						

(Ticks)

Lice: Dog lice are small, flat, wingless, six-legged insects that live in the hair and feathers of mammals and birds. Strong hook-like claws at the end of each leg allow them to hang on to the hair shafts. Lice are species-specific, meaning you cannot get lice from your dog or your dog can't get lice from you. The claws are tailored to the specific size on the host's hair shaft or feather which is why lice are species specific. There are two types of lice; chewing lice that survive by eating skin debris and surface secretions and sucking lice that need blood to survive. Unlike chewing lice, sucking lice have a sharp pointed mouthpiece.



(Lice)

Mites: There are several types of mange (skin mites) including canine scabies, ear mites, walking dandruff and trombiculosis. Demodicosis is not considered mange but it is caused by mites. All forms are highly contagious.



(Ear Mite)

Senior

Temperature: A normal range for a dog's body temperature is 101-102.5 °F

Dogs pant in order to regulate their body temperature. Since dogs can't sweat like us they pant to circulate cool air through their bodies and to evaporate water from the mouth and upper respiratory tract.

CPR in dogs: You can perform Cardiopulmonary resuscitation (CPR) for dogs, which involves chest compressions. It is normally used when you cannot feel or hear the dog's heartbeat and the dog is no longer breathing, this can occur because of trauma, choking or illness. Just like human CPR it can potentially be hazardous and can cause physical complications if performed incorrectly.

Fertility: Female dogs become fertile around 6 months old or when they come into heat. Male dogs become fertile around 6 months of age. Healthy male dogs remain fertile until old age.

The gestation period for dogs is around 63 days or 9 weeks

Gastric Dilation-Torsion: Gastric dilation-torsion is known as twisted stomach or bloat. This condition is commonly associated with large meals and causes the stomach to dilate, because of food and gas, and may get to a point where neither may be expelled. As the stomach begins to dilate and expand, the pressure in the stomach begins to increase. The increased pressure and size of the stomach may have several severe consequences; prevention of adequate blood return to the heart from the abdomen, loss of blood flow to the lining of the stomach, rupture of the stomach wall, pressure on the diaphragm preventing the lungs from adequately expanding leading to decreased ability to maintain normal breathing.

Types of Injections:

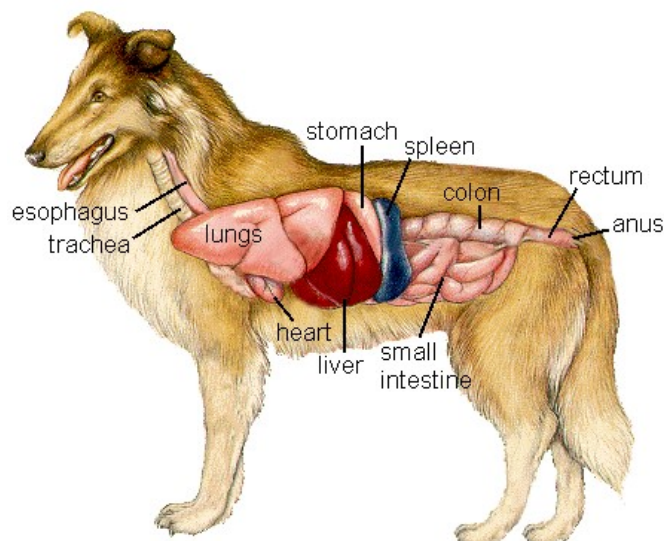
- Muscle (intramuscular injection-IM)
- Tissue under the skin (subcutaneous injection-SubQ)
- Veins (intravenous injection-IV)
- Skin (intra-dermal injection-ID)
- Body cavities, in abdominal cavity (known as intraperitoneal injection-IP) or thoracic cavity (known as intrapleural injection)
- Bone (intraosseous injection-IO)

The most commonly used injections are subcutaneous, intramuscular, intravenous injections.

Vaccines:

DISEASE	DESCRIPTION	VACCINATION
Canine Distemper	A usually fatal viral disease that causes respiratory, gastrointestinal and nervous system problems.	Every 3 weeks until 12-14 weeks (6,9,12 weeks or 8, 11, 14 weeks), followed by an annual booster
Canine Hepatitis	A viral disease of the liver.	Included with distemper vaccine
Parainfluenza	A virus that is part of the group of viruses and bacteria known to cause kennel cough, the canine equivalent of our cold.	As above
Viral Diarrhoea Canine Parvo virus Canine Corona virus	A dangerous and sometimes deadly (especially in puppies) intestinal disease	As above, but some vets vaccinate for Parvo until 5 months of age against corona at 8-9 weeks of age.
Leptospirosis	A bacterial disease that affects the liver and kidneys.	As above, but many veterinarians do not include until 9 weeks of age
Kennel cough	A group of viruses such as CAV2, CAV 1, Parainfluenza and bacteria such as Bordetella bronchiseptica are known to cause kennel cough	First at 8-9 weeks and booster after 4 weeks and annual vaccination
Rabies	A deadly viral disease of the nervous system that affects all mammals, including humans. May be difficult to detect.	First vaccine at 3 months, booster 9-12 months later and then every 1-3 years, depending on vaccine.

*Animals who have rabies secrete large amounts of virus in their saliva; the disease is primarily passed to dogs through a bite from an infected animal. It can also be transmitted through a scratch or when infected saliva makes contact with mucous membranes or an open, fresh wound.



Resources:

<https://www.akc.org/dog-breeds/herding/>

<https://www.akc.org/dog-breeds/hound/>

<https://www.akc.org/dog-breeds/non-sporting/>

<https://www.akc.org/dog-breeds/sporting/>

<https://www.akc.org/dog-breeds/terrier/>

<https://www.akc.org/dog-breeds/toy/>

<https://www.akc.org/dog-breeds/working/>

<http://www.caninest.com/dog-anatomy/>

<https://www.akc.org/expert-advice/health/why-you-need-to-brush-your-dogs-teeth/>

<https://www.heartwormsociety.org/heartworms-in-dogs>

<https://www.akc.org/expert-advice/health/understanding-hookworms-in-dogs/>

<https://www.akc.org/expert-advice/health/parasites/ringworm-in-dogs/>

<https://www.akc.org/expert-advice/health/roundworms-in-dogs-symptoms-treatment-and-prevention/>

<https://www.akc.org/expert-advice/health/tapeworms-in-dogs-symptoms-treatment-and-prevention/>

<https://www.akc.org/expert-advice/health/whipworms-dogs-symptoms-treatment-prevention/>

<https://vcahospitals.com/know-your-pet/coccidiosis-in-dogs>

<https://www.akc.org/expert-advice/health/the-facts-you-need-to-know-about-giardia-in-dogs/>

<https://entomology.ca.uky.edu/ef602>

<https://vcahospitals.com/know-your-pet/ticks-in-dogs>

<https://www.akc.org/expert-advice/health/can-dogs-get-lice/>

<https://falconbridgeanimal.com/dog-skin-mites/>

https://www.petmd.com/dog/emergency/common-emergencies/e_dg_cardiopulmonary_resuscitation

<https://www.acvs.org/small-animal/gastric-dilatation-volvulus>

<http://www.iatevad.com/images/InjectionsInfusions/Injection-types-technique.pdf>

<https://www.petsworld.in/blog/dog-vaccinations-101-guide-and-why-it-is-an-essential-procedure.html>