

1: Anatomy of the Dog: An Illustrated Text, Fifth Edition - CRC Press Book

*Dog Anatomy * Notice that the kidneys are not labeled on this picture. The kidneys are tucked up close to the liver toward the spine. Image modified from Hill's Pet Nutrition, Atlas of Veterinary Clinical Anatomy.*

Physical characteristics[edit] Dog knee This section needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. June Learn how and when to remove this template message Like most predatory mammals, the dog has powerful muscles, a cardiovascular system that supports both sprinting and endurance and teeth for catching, holding, and tearing. Their legs can propel them forward rapidly, leaping as necessary to chase and overcome prey. They have small, tight feet, walking on their toes thus having a digitigrade stance and locomotion. Their rear legs are fairly rigid and sturdy. The front legs are loose and flexible with only muscle attaching them to the torso. The sizes of the muzzle have different names. Dogs with medium muzzles, such as the German Shepherd Dog, are called mesocephalic and dogs with a pushed in muzzle, such as the Pug, are called brachycephalic. All dogs and all living Canidae have a ligament connecting the spinous process of their first thoracic or chest vertebra to the back of the axis bone second cervical or neck bone , which supports the weight of the head without active muscle exertion, thus saving energy. They walk on four toes, front and back, and have vestigial dewclaws on their front legs and on their rear legs. When a dog has extra dewclaws in addition to the usual one in the rear, the dog is said to be "double dewclawed. Dogs are highly variable in height and weight. The smallest known adult dog was a Yorkshire Terrier that stood only 6. The largest known adult dog was an English Mastiff which weighed The study found a regulatory sequence next to the gene Insulin-like growth factor 1 IGF1 and together with the gene and regulatory sequence "is a major contributor to body size in all small dogs. Coat dog Montage showing the coat variation of the dog. Domestic dogs often display the remnants of countershading, a common natural camouflage pattern. The general theory of countershading is that an animal that is lit from above will appear lighter on its upper half and darker on its lower half where it will usually be in its own shade. A counter shaded animal will have dark coloring on its upper surfaces and light coloring below. One reminder of this pattern is that many breeds will have the occasional "blaze", stripe, or "star" of white fur on their chest or undersides. One version produces yellow dogs and a mutation produces black. All dog coat colors are modifications of black or yellow. Modern dog breeds exhibit a diverse array of fur coats, including dogs without fur, such as the Mexican Hairless Dog. Dog coats vary in texture, color, and markings, and a specialized vocabulary has evolved to describe each characteristic. In some breeds, the tail is traditionally docked to avoid injuries especially for hunting dogs. Footpad[edit] Dogs can stand, walk and run on snow and ice for long periods of time. It brings blood from the skin surface and retains warm blood in the pad surface. However, in many dogs, the dewclaws never make contact with the ground. The dewclaws are not dead appendages. They can be used to lightly grip bones and other items that dogs hold with their paws. However, in some dogs, these claws may not appear to be connected to the leg at all except by a flap of skin. In such dogs, the claws do not have a use for gripping as the claw can easily fold or turn. Others say the pain of removing a dewclaw is far greater than any other risk. For this reason, removal of dewclaws is illegal in many countries. There is, perhaps, an exception for hunting dogs who can sometimes tear the dewclaw while running in overgrown vegetation. The surgery is fairly straightforward and may even be done with only local anesthetics if the digit is not well connected to the leg. Vision[edit] Frequency sensitivity compared with humans. Like most mammals, dogs have only two types of cone photoreceptor, making them dichromats. When a human perceives an object as "red," this object appears as "yellow" to the dog and the human perception of "green" appears as "white," a shade of gray. For dogs, wavelengths longer than the neutral point cannot be distinguished from each other and all appear as yellow. Dogs have been shown to be able to discriminate between humans e. Humans, by comparison, require a change of between 10 and 20 diopters to detect movement. They have very large pupils, a high density of rods in the fovea , an increased flicker rate, and a tapetum lucidum. There is also a relationship between body size and overall diameter of the eye. A range of 9. Short-nosed breeds, on the other hand, have an "area centralis":

Some broad-headed breeds with short noses have a field of vision similar to that of humans. Dogs also show attraction to static visual images such as the silhouette of a dog on a screen, their own reflections, or videos of dogs; however, their interest declines sharply once they are unable to make social contact with the image. For dogs that assist people with hearing difficulties, see Hearing dog. Anatomy of the ear. While the human brain is dominated by a large visual cortex, the dog brain is dominated by a large olfactory cortex. The dog has mobile nostrils that help it determine the direction of the scent. Unlike humans, the dog does not need to fill up his lungs as he continuously brings the odor into his nose in bursts of sniffs. The air above this shelf is not washed out when the dog breathes normally, so the scent molecules accumulate in the nasal chambers and the scent builds with intensity, allowing the dog to detect the faintest of odors. Cold receptors in the skin are sensitive to the cooling of the skin by evaporation of the moisture by air currents. The sweet taste buds in dogs respond to a chemical called furaneol which is found in many fruits and in tomatoes. It appears that dogs do like this flavor and it probably evolved because in a natural environment dogs frequently supplement their diet of small animals with whatever fruits happen to be available. Dogs also have taste buds that are tuned for water, which is something they share with other carnivores but is not found in humans. This area responds to water at all times but when the dog has eaten salty or sugary foods the sensitivity to the taste of water increases. It is proposed that this ability to taste water evolved as a way for the body to keep internal fluids in balance after the animal has eaten things that will either result in more urine being passed or will require more water to adequately process. It certainly appears that when these special water taste buds are active, dogs seem to get an extra pleasure out of drinking water, and will drink copious amounts of it. The main difference between human and dog touch is the presence of specialized whiskers known as vibrissae. They are sophisticated sensing organs. Vibrissae are more rigid and embedded much more deeply in the skin than other hairs and have a greater number of receptor cells at their base. They can detect air currents, subtle vibrations, and objects in the dark. They provide an early warning system for objects that might strike the face or eyes, and probably help direct food and objects towards the mouth. Primarily, dogs regulate their body temperature through panting [48] and sweating via their paws. Panting moves cooling air over the moist surfaces of the tongue and lungs, transferring heat to the atmosphere. Dogs and other canids also possess a very well-developed set of nasal turbinates, an elaborate set of bones and associated soft-tissue structures including arteries and veins in the nasal cavities. These turbinates allow for heat exchange between small arteries and veins on their maxilloturbinate surfaces the surfaces of turbinates positioned on maxilla bone in a counter-current heat-exchange system. Dogs are capable of prolonged chases, in contrast to the ambush predation of cats, and these complex turbinates play an important role in enabling this cats only possess a much smaller and less-developed set of nasal turbinates. The water conservation and thermoregulatory capabilities of these well-developed turbinates in dogs may have been crucial adaptations that allowed dogs including both domestic dogs and their wild prehistoric ancestors to survive in the harsh Arctic environment and other cold areas of northern Eurasia and North America, which are both very dry and very cold.

2: Dog anatomy - Wikipedia

Dog anatomy comprises the anatomical studies of the visible parts of the body of a canine. Details of structures vary tremendously from breed to breed, more than in any other animal species, wild or domesticated, [1] as dogs are highly variable in height and weight.

The Irish Wolfhound is the largest dog standing 28 – 32 inches and weighing between 90 – pounds. Irish Wolfhounds make excellent companions, however, their life expectancy is somewhat shorter than most dogs and is between 6 – 8 years. The Great Dane is the tallest dog standing 30 – 34 inches and weighing – pounds. These too have a short life expectancy and the average age is under 10 years although some can live 12 – 13 years. The Great Dane originates from Germany. The Chihuahua is the smallest dog standing at only 5 inches tall and weighing 2 – 6 pounds. Chihuahuas can live until they are 15 years old. Bernard is the heaviest dog. They are very strong, muscular dogs with powerful heads, however, they are extremely gentle and friendly dogs and very tolerant of children. They stand around 26 – 28 inches and can weigh between – pounds. The worlds oldest dog was an Australian cattle-dog named Bluey who lived to the age of 29 years and 5 months. Other breeds range in different sizes and weights between the above. Below is a diagram of a dogs anatomy: The coat of a dog varies in colours ranging from all black, brown, beige and white to others being of a mix with light or dark markings and colourations on different parts of their bodies and faces. Their fur ranges from short, smooth fur to long shaggy fur to soft and fluffy to hard and coarse. The shape of a dog is determined by three structures, head, body and legs. Short smooth fur Long fluffy fur Shaggy fur Short soft fur The shape of these structures vary greatly in the same way as their colours and hair characteristics. The two most common head shapes for a dog are a narrow skull with a long face, such as a German Shepherd and a short skull with a short face, such as a pug dog There are many variations to these shapes in between. Dogs have 42 teeth. The other teeth are premolars and molars. The incisors and the canines are very important because the dog bites and tears at its food with these teeth. Dogs have fairly thin tongues which are used mainly for guiding food to the throat, for licking the coat clean, and for perspiration. When a dog is overheated, it cools off by hanging its tongue out and panting. As it pants, the evaporation of perspiration from its tongue cools the animal. The dog also sweats through the pads on its paws and very slightly through its skin. Dogs ears either stick up or hang down. Dogs have extremely sensitive hearing and can hear far more high frequencies than human ears. This is why they respond to silent whistles. A dog has three eyelids on each eye, the main upper and lower lids and a third lid hidden between them in the inner corner of the eye. The third eyelid can sweep across the transparent cornea of the eye and clean it like a windshield wiper. The body of a dog contains most of its vital organs. The heart, lungs, stomach, and intestines are located there. So too are its genitals, kidneys and bladder. A dog has 13 ribs in its chest which wrap around the heart and lungs. Since these organs influence the animals speed and stamina, chest size can be an indication of these traits. All dogs have 27 bones from the skull to the point where the tail begins. The number of tailbones, however and therefore the length of the tail, varies from breed to breed. The paw has cushiony pads for each toe and 2 larger pads further up the paw. Dogs perspire sweat through their pads. A dogs heart beats between 70 and times per minute, compared to a humans 70 – 80 beats per minute. Dogs take between 10 and 30 breathes every minute. Dogs have a visual range of degrees compared to the human range of degrees. A dogs temperature is between The average lifespan of a dog ranges from 12 – 14 years. Each one dog year is equivalent to 7 human years.

3: Real 3D Anatomy Home

Virtual Canine Anatomy. Virtual Canine Anatomy is an innovative anatomy program that has received outstanding accolades from members of the American Association of Veterinary Anatomists, students, and instructors both in the United States and internationally.

The kidneys are tucked up close to the liver toward the spine. The organ systems include: The cardiovascular system cat dog includes the heart and blood vessels. The cardiovascular system performs the function of pumping and carrying blood to the rest of the body. The blood contains nutrients and oxygen to provide energy to allow the cells of the body to perform work. The lymphatic system includes the lymph nodes and lymph vessels. The lymphatic system is part of the immune system that helps the body fight off disease. The lymphatic system also works with the cardiovascular system to return fluids that escape from the blood vessels back into the blood stream. The digestive system cat dog includes the mouth, teeth, salivary glands, esophagus, stomach, intestine, pancreas, liver and gall bladder. The digestive system absorbs and digests food and eliminates solid wastes from the body. The skin protects the underlying organs. The fur helps insulate against heat loss. Dogs and cats do not sweat through their skin. They only sweat from their footpads and nose. They lose water by panting rather than sweating. The musculoskeletal system includes all the muscles, bones and joints. The respiratory system cat dog includes the mouth, nose, trachea, lungs and smaller airways bronchi and bronchioles. The respiratory system is responsible for taking in oxygen and eliminating waste gases like carbon dioxide. Because dogs and cats do not sweat through the skin, the respiratory system also plays an important role in regulation of temperature. The urogenital system cat dog includes the kidneys, ureters, urinary bladder, urethra and the genital organs of box sexes. The urinary system is responsible for removing waste products from blood and eliminating them as urine. The genital organs are involved in reproduction. The nervous system includes the brain, spinal cord and all the nerves that communicate between tissues and the brain and spinal cord. The endocrine system includes several glands that produce hormones. Hormones are substances that travel through the blood stream and affect other organs. Endocrine organs include the thyroid glands, parathyroid glands, adrenal glands and part of the pancreas. The organs of special senses cat dog allow the animal to interact with its environment; sight, taste, smell and hearing. The hematopoietic system includes the bone marrow which is located inside the bones. Three types of blood cells are made in the bone marrow: Washington State University assumes no liability for injury to you or your pet incurred by following these descriptions or procedures.

4: Veterinary Educational Tools

This module of vet-Anatomy provides a basic foundation in animal anatomy for students of veterinary medicine. This veterinary anatomical atlas includes selected labeling structures to help student to understand and discover animal anatomy (skeleton, bones, muscles, joints, viscera, respiratory system, cardiovascular system).

Surface of the Body and Axial Skeleton 1. Division of the animal body 2. Skin common integument 3. Cutaneous glands, modifications of the skin, digital end-organs 4. Vertebral column and thorax 5. Articulations of the vertebral column and of the thorax; atlanto-occipital joint and atlanto-axial joints A. Cutaneous muscles and cutaneous nerves of the neck and thoracic wall 2. Dorsal extrinsic limb muscles 3. Ventral extrinsic limb muscles 4. Nerves, vessels, and visceral organs of the neck Chapter 3: The skeleton of the thoracic limb 2. Medial veins of the thoracic limb; medial shoulder and arm muscles and their nerve supply 3. Lateral veins of the thoracic limb; lateral shoulder and arm muscles and their nerve supply 4. Antebrachial forearm muscles and their nerve supply 5. Vessels and nerves of the thoracic limb 6. Synovial structures of the thoracic limb A. Thoracic and Abdominal Wall 1. Muscles of the vertebral column, nuchal ligament and lumbar cutaneous nerves 2. Body wall, prepuce, and mammary glands Mammae 4. Abdominal muscles, rectus sheath, prepubic tendon 5. Inguinal region, inguinal space inguinal canal, neuromuscular and vascular lacunae Chapter 5: Lungs, tracheal bifurcation and bronchi 2. Blood vessels, nerves, and lymphatic system of the lungs; aortic arch; lymph nodes of the thoracic cavity, thymus 3. Thoracic cavity, pleura, and veins of the thoracic cavity 4. Heart, surface of the heart, heart wall and relationships in the interior of the heart 5. Heart, coronary vessels, heart valves, cardiac conduction system 6. Autonomic nervous system 1. Topography of the abdominal organs and relationships of the peritoneum 2. Peritoneal cavity, lymph nodes of stomach and intestine, cisterna chyli and spleen 3. Stomach and small intestine, pancreas 4. Large intestine, blood vessels of stomach and intestine 5. Liver and gall bladder H. Autonomic nervous system, abdominal aorta, caudal vena cava, sublumbar muscles and the lumbar plexus Chapter 7: Urinary and Genital Organs, Pelvis 1. Urinary bladder and peritoneal relationships of the genital organs 3. Female genital organs 4. Male genital organs, lymphatic system of the lumbar and pelvic regions 5. Arteries, veins and nerves of the pelvic cavity, adrenal glands 6. Pelvic diaphragm, ischiorectal fossa; associated arteries, veins and nerves 7. Smooth muscle of the pelvic diaphragm and the bony pelvic girdle Chapter 8: The skeleton of the pelvic limb 2. Muscles of the hip joint and their nerve supply 3. The medial saphenous vein, obturator nerve, femoral nerve, medial thigh muscles, femoral space femoral canal 4. The lateral saphenous vein, common peroneal nerve and tibial nerve; crural leg muscles and popliteus muscle 5. Arteries and accompanying vessels and nerves of the pelvic limb 6. Synovial structures of the pelvic limb S. Skull, including the hyoid apparatus 2. Skull, paranasal sinuses 3. Lymphatic system, superficial veins of the head, facial nerve VII 4. Facial muscles and mandibular muscles 5. Internal deep muscles of mastication, trigeminal nerve V, mandibular nerve V3, maxillary nerve V2 6. Lacrimal apparatus, optic nerve II, ophthalmic nerve V1, nerves and muscles of the eye, and external nose 7. Nose, larynx, oral cavity and pharynx 8. Pharyngeal muscles, cranial nerves of the vagus group IX, X, XI, autonomic nervous system of the head, arteries of the head, external acoustic meatus 9. Tongue, lingual muscles, hypoglossal nerve XII, salivary glands, and dentition Joints of the head S. Central Nervous System 1. Spinal cord and meninges 2. Brain Encephalon and its meningeal coverings 3. Cerebrum Telencephalon, brain stem and limbic system 4. Rhinencephalon, sites of egression of the cranial nerves, arterial supply of the brain 5. Cerebral veins, sinuses of the dura mater, cerebral ventricles and choroid plexuses Chapter Olfactory and gustatory chemical senses; superficial, deep, and visceral sensibility Tables, Special Anatomy.

5: Anatomy of a Dog's Paw with a Labeled Diagram

Color Atlas of Veterinary Anatomy, Volume 3, The Dog and Cat May 4, by Stanley H. Done BA BVetMed PhD DECPHM DECVF FRCVS FRCPath and Peter C. Goody BSc MSc(Ed) PhD.

They are relatively easy to train and enjoy a playful game of fetch. These intelligent dogs learn quickly, and pick up new tricks and behaviors easily. Characteristics include slightly rounded skulls, with a one-finger-wide dome and a black nose that is two finger widths long. The body is compact with the length equaling the height. The drop ears with long hair and very dark eyes, surrounded by darker skin pigmentation that is called a "halo", gives Maltese their expressive look. Their noses can fade and become pink or light brown in color. This is often referred to as a "winter nose" and many times will become black again with increased exposure to the sun. The coat is long and silky and lacks an undercoat. The color is pure white and although cream or light lemon ears are permissible, they are not desirable. Some individuals may have curly or woolly hair, but this is outside the standard. The Maltese while growing may get curly fur. They are very cute. Adult Maltese range from roughly 1. There are variations depending on which standard is being used; many, like the American Kennel Club, call for a weight that is ideally less than 7 lb with between 4 and 6 lb preferred. For all their diminutive size, Maltese seem to be without fear. They are always happy, cheerful, smart and do not like to get into trouble. This is because they were bred to be companion dogs and thrive on love and attention. Maltese are very good with children and infants. Maltese can sometimes be snappy and mean. Maltese do not require much physical exercise, although they should be walked daily to reduce problem behavior. They enjoy running and are more inclined to play games of chase, rather than play with toys. Maltese can be snappy with littler children and should always be supervised when playing. Socializing at a young age will reduce this habit. They can be very demanding and, true to their nature as "lap dogs", love to cuddle and often seek this sort of attention. The Maltese is very active in the house, and, preferring enclosed spaces, does very well with small yards. For this reason the breed also does well with apartments and townhouses, and is a prized pet of urban dwellers. They are incredibly friendly dogs to people they know. With strangers they will make a high pitched bark but will quiet down if the person means no harm. Dog lesson Thanks to YouTube for allowing us to watch this video.

6: A Visual Guide to Understanding Dog Anatomy With Labeled Diagrams

Anatomy of the Dog: An Illustrated Text, Fifth Edition Table of Contents. References Introduction to Anatomy Topographical Anatomy Chapter 1: Surface of the Body and Axial Skeleton 1. Division of the animal body 2. Skin (common integument) 3. Cutaneous glands, modifications of the skin, digital end-organs 4. Vertebral column and thorax 5.

Check new design of our homepage! Their sweat glands are mostly located in their paws. Paw Pads of a Jack Russell Terrier Dogs are a digitigrade species, which means that they walk on their toes, unlike plantigrade animals that walk on the entire sole of their feet. The main function of their limbs is locomotion. Besides locomotion, their paws also help them scratch. In some breeds, the paws also help in digging. Paw Pads of a Labrador Pup The structure of their paws or the clawed foot could vary, depending on their environment. For instance, Field Spaniels, Portuguese water dogs, or Chesapeake Bay retrievers have webbed feet that allow them to swim. On the other hand, working breeds have thicker toe pads that provide traction. Though both cats and dogs have paws, dogs cannot hold their prey with their paws like cats. They cannot move their toes independently. However, breeds like Keeshonds, Akitas, and Doberman Pinschers have rounder, compact feet, which allows them to easily lift their paws. Some dogs have hare feet, which means that the two toes at the center are longer than the outer toes. Greyhounds and Whippets have hare feet, which makes them more agile. The front two limbs are called forelimbs, whereas the other two at the back are called hind limbs. The front limb assembly can be likened to the human arm with shoulder, upper arm, and forearm. Right under the shoulder is the forelimb, which comprises the humerus. Located just under the chest on the back of the forelimb is the elbow. Right after the elbow is the forearm, which comprises the ulna and radius bones. At the lower extremity lies the foot or the paw. Made up of a protein called keratin, a toenail is the horny, beak-shaped covering of the distal phalanx. Nails grow on the unguis process located on the distal phalanx. These help dogs get a good grip on a surface. These also help the dogs scratch the ground. The toenails have a blood supply that feeds the cuticle, but the end of the nails is dead tissue. The claws grow at a rapid rate, which is why these should be clipped. Clipping them at regular intervals can help avoid an injury. Dewclaw Many dogs have a fifth nail and a pad on the inner side of the pastern, which is the region between the fetlock and the hoof. Referred to as the dewclaw, this claw is considered to be a vestigial structure. In most breeds, dewclaws are present on the inside of the front legs, but some breeds might have dewclaws on their hind legs. Since these are vestigial, some dog owners have them removed surgically when their dog is young. Surgical removal is especially considered in breeds where the dewclaw never comes in contact with the ground. Digital Pads Located closest to the toenails or claws are four load-bearing digital pads. The support the weight placed on the phalanges. While the thick layer of subcutaneous adipose tissue on the paw pads helps absorb shock and acts as a protective cushion, the surface of the paw pads is protected by conical papillae extensions of the stratum corneum of the epidermis, which is the outermost layer of the skin. In severe cases, when the dog has been walking on very hard or rough surfaces, these papillae can wear down. Under such circumstances, the dog is likely to experience pain. Like the other paw pads, metacarpal pad provides shock absorption, as well as traction. Traction refers to the friction between the body and the surface. Thicker pads are more effective at absorbing shock. On the other hand, dogs with rough pads are well equipped to take quick turns or sprint, due to improved traction. Carpal Pad The carpal pads are located on the front paws at the back of the foot. Unlike the digital pads and the metacarpal pad that bear the load, and act as shock absorbers when the dog walks or runs, the carpal pad helps the dog maintain balance on a steep surface or a slippery slope. On a concluding note, the paws perform a vital function in dogs. If you have a pet dog, make sure that the claws are clipped as and when needed, and that they look healthy. If your dog has been licking its paws every now and then, check them for cracks, cuts, abrasions, bleeding, or swelling. Allergies, dryness, boredom, anxiety, parasitic infections, bacterial infections, injuries, hormonal imbalances, pain, or conditions related to the joints or nails could be contributing factors for licking.

7: Anatomy of the Dog: An Illustrated Text Fifth Edition | Free Veterinary eBooks

Miller's Anatomy of the Dog would serve as a fantastic reference book for clinicians, veterinary students, anatomists, technicians, nurses and would be a valuable addition to any veterinary clinic library."

Surface of the Body and Axial Skeleton 1. Division of the animal body 2. Skin common integument 3. Cutaneous glands, modifications of the skin, digital end-organs 4. Vertebral column and thorax 5. Articulations of the vertebral column and of the thorax; atlanto-occipital joint and atlanto-axial joints A. Cutaneous muscles and cutaneous nerves of the neck and thoracic wall 2. Dorsal extrinsic limb muscles 3. Ventral extrinsic limb muscles 4. Nerves, vessels, and visceral organs of the neck Chapter 3: The skeleton of the thoracic limb 2. Medial veins of the thoracic limb; medial shoulder and arm muscles and their nerve supply 3. Lateral veins of the thoracic limb; lateral shoulder and arm muscles and their nerve supply 4. Antebrachial forearm muscles and their nerve supply 5. Vessels and nerves of the thoracic limb 6. Synovial structures of the thoracic limb A. Thoracic and Abdominal Wall 1. Muscles of the vertebral column, nuchal ligament and lumbar cutaneous nerves 2. Abdominal muscles, rectus sheath, prepubic tendon 5. Inguinal region, inguinal space inguinal canal , neuromuscular and vascular lacunae Chapter 5: Lungs, tracheal bifurcation and bronchi 2. Blood vessels, nerves, and lymphatic system of the lungs; aortic arch; lymph nodes of the thoracic cavity, thymus 3. Thoracic cavity, pleura, and veins of the thoracic cavity 4. Heart, surface of the heart, heart wall and relationships in the interior of the heart 5. Heart, coronary vessels, heart valves, cardiac conduction system 6. Autonomic nervous system 1. Topography of the abdominal organs and relationships of the peritoneum 2. Stomach and small intestine, pancreas 4. Large intestine, blood vessels of stomach and intestine 5. Liver and gall bladder H. Autonomic nervous system, abdominal aorta, caudal vena cava, sublumbar muscles and the lumbar plexus Chapter 7: Urinary and Genital Organs, Pelvis 1. Urinary bladder and peritoneal relationships of the genital organs 3. Female genital organs 4. Male genital organs, lymphatic system of the lumbar and pelvic regions 5. Arteries, veins and nerves of the pelvic cavity, adrenal glands 6. Pelvic diaphragm, ischioanal fossa; associated arteries, veins and nerves 7. Smooth muscle of the pelvic diaphragm and the bony pelvic girdle Chapter 8: The skeleton of the pelvic limb 2. Muscles of the hip joint and their nerve supply 3. The medial saphenous vein, obturator nerve, femoral nerve, medial thigh muscles, femoral space femoral canal 4. The lateral saphenous vein, common peroneal nerve and tibial nerve; crural leg muscles and popliteus muscle 5. Arteries and accompanying vessels and nerves of the pelvic limb 6. Synovial structures of the pelvic limb S. Skull, including the hyoid apparatus 2. Skull, paranasal sinuses 3. Lymphatic system, superficial veins of the head, facial nerve VII 4. Facial muscles and mandibular muscles 5. Internal deep muscles of mastication, trigeminal nerve V , mandibular nerve V3 , maxillary nerve V2 6. Lacrimal apparatus, optic nerve II , ophthalmic nerve V1 , nerves and muscles of the eye, and external nose 7. Nose, larynx, oral cavity and pharynx 8. Pharyngeal muscles, cranial nerves of the vagus group IX, X, XI , autonomic nervous system of the head, arteries of the head, external acoustic meatus 9. Tongue, lingual muscles, hypoglossal nerve XII , salivary glands, and dentition Joints of the head S. Central Nervous System 1. Spinal cord and meninges 2. Rhinencephalon, sites of egression of the cranial nerves, arterial supply of the brain 5. Cerebral veins, sinuses of the dura mater, cerebral ventricles and choroid plexuses Chapter Olfactory and gustatory chemical senses; superficial, deep, and visceral sensibility Tables, Special Anatomy.

8: Digestive System of the Dog

A dog's anatomy is not very different from any other mammal's. When the pups are born, they have all the bones, muscles, and tendons that an adult dog has. As they grow bigger in size, the number of these bones, muscles, or tendons does not increase; only the tissue's size does.

Blood contains nutrients and oxygen providing energy that allows the cells of the body to perform work. Part of the immune system that helps the body fight-off disease. Works with the cardiovascular system to return fluids from the blood vessels. The fur helps insulate against heat loss. Dogs and cats do not sweat through their skin. They only sweat from their footpads and nose. They lose water by panting rather than sweating. Genital organs determine sex and reproduction. Hormones are substances that travel through the blood stream and affect other organs. Endocrine organs include the thyroid glands, parathyroid glands, adrenal glands and part of the pancreas. Three types of blood cells are made in the bone marrow: Digestion begins in the mouth where food is mixed with saliva to lubricate the food as it passes down the esophagus. Go here to Canine Dental Anatomy. Swallowed food passes down the esophagus to the stomach. The stomach of a canine is very acidic with a pH as low as 1. Food is well mixed and broken down before contents leave the stomach as chyme. Chyme is fluid that passes easily into the the small intestine, where the pancrease provides additional digestive enzymes. These enzymes continue protein digestion and also provide carbohydrate and fat digestion. Most of the nutrients have been digested and absorbed by the time any food reaches the large intestine. It is were water is absorbed and bacteria can break down undigested fibre.

9: Canine Anatomy | Veterian Key

The nape of the neck is where the neck joins the base of the skull in the back of the head.. The throat is beneath the jaws.. The crest starts at the nape and ends at the withers (see the last item in this list).

Check new design of our homepage! A Visual Guide to Understanding Dog Anatomy With Labeled Diagrams

Dog anatomy is not very difficult to understand if a labeled diagram is present to provide a graphic illustration of the same. That is exactly what you will find in this DogAppy article. DogAppy Staff Last Updated: Mar 19,

After mating, dogs experience something called a copulatory tie, wherein they remain in the coital position. The male dog dismounts the female at this time. The dogs can remain in this position from a few minutes to an hour, and it is recommended not to try and separate them as it can cause injury to their organs. When the pups are born, they have all the bones, muscles, and tendons that an adult dog has. The anatomy of a dog includes its skeletal structure, reproductive system, the internal organs, and its external appearance. The following paragraphs explain all these aspects in brief, along with diagrams, which will help you understand them better.

External Anatomy Dogs, like all mammals, have eyes, a nose, a forehead, and ears. The only difference is that their noses are cold and wet, and their ears can be either dropped, erect, or cropped, depending on the breed. They also have a throat, a frown, the upper lip, chest, fore and hind legs, back, stomach, buttocks, and a tail. Some dogs have a fifth toe called the dewclaw. It is seemingly useless, but some dogs use it to strengthen their grip on whatever that they are holding between their legs. In some breeds, the dewclaw touches the ground when the dogs walk, but in most cases, it is not of much use. The external anatomy of a dog is quite simple to understand. The following diagram and paragraph attempt to explain it in brief.

The muzzle is of varying lengths, depending on the breed. Whiskers, present on the muzzle, are of some sensory use. It is quite prominent in some breeds, but barely visible in others. Dogs have dichromatic vision, and they cannot see the colors green and red. They have a very sharp sense of hearing and smell. They can hear sounds that are undetectable to the human ear. As compared to the 2 to 3 million scent glands that humans possess, dogs have between 100 million to 1 billion. The tail set is from where the tail begins. Some dogs have high-set tails, while some have low-set tails. Like the elbow on the foreleg, there is a hock present on the hind leg. It is a joint which juts in an outward direction.

Internal Anatomy

Spinal Column - It consists of all the vertebrae and forms a part of the nervous system.

Trachea - The trachea is actually a tube that transports inhaled air to the lungs.

Esophagus - It is the tube that connects the throat to the stomach, thus, aiding in transporting food for digestion.

Heart - As in humans, this organ performs the function of pumping blood throughout the body.

Lungs - They perform the function of exchange of gases, helping the dog in the process of respiration.

Liver - It performs the function of producing bile and aiding in the process of digestion.

Kidney - The kidney filters the blood and purifies it of all the toxins that are harmful for the dog.

Stomach - The stomach is located between the esophagus and the intestine. It is the organ which breaks down the food and mixes it with the digestive juices.

Intestine - It aids in the process of digestion. It consists of the small and large intestine. The small intestine breaks the food down, whereas the large intestine stores the stool.

Spleen - It produces red blood cells, filters and removes old cells, stores the red cells, and forms an integral part of the immune system.

Bladder - It stores the urine until it is eliminated.

Rectum - It is an organ located at the end of the large intestine, which expels stool.

Reproductive Anatomy

Female Dog The female dog goes through a heat cycle every 6 months to one year. There is a great variation in the time between each cycle, depending on the breed and the individual dog. It is only during the second stage that the female dog allows copulation. The first stage is called proestrus, which is the beginning of the heat cycle. This stage can last between 5 to 9 days. The second stage is the estrus, wherein the reproduction process takes place. The ovaries are the organs that are responsible for the production of unfertilized eggs in the female. They also play a very important role in sustaining the pregnancy. The unfertilized eggs then pass to the oviduct. The oviducts are thin tubes in which the process of fertilization of the eggs by the sperm takes place. The fertilized eggs, known as zygotes, are then transported to the uterus, where their placentas stick to its walls. The zygotes mature, become embryos, and then become fetuses. The uterus is also made up of the three parts: The uterine horns are the place where the Fallopian tubes and the

uterus attach. If the dog is pregnant, then she goes into gestation the time between conception and birth. The gestation period of dogs is between 60 to 65 days, after which the pups are born. However, as the hormonal changes during the diestrus period are the same whether the dog is pregnant or not, she can also have a pseudo-pregnancy, wherein she goes through all the physical changes related to a pregnancy, like enlarged mammary glands, milk production, weight gain, and nesting tendencies.

Male Dog Unlike the estrous cycle in female dogs, male dogs do not go through any cycle for the purpose of reproduction. The organs that are crucial to the process of reproduction in male dogs are the testicles, the prostate gland, the penis, and the vas deferens. The vas deferens is a muscular tube that starts from the back of the testicles and goes into the pelvic cavity. Its job is to transport sperm to the urethra. The prostate gland is located under the bladder. It performs to allow mixing of prostatic fluid with the sperm. The sperm originates, or is prepared, in the testicles. When the dog ejaculates, the sperm goes through the vas deferens, into the prostate gland, where it combines with the prostatic fluid. The penis contains two sections: The os penis is actually a bone inside the penis, which helps the dog achieve successful intercourse, whereas the glans penis helps the dog sustain the intercourse. It does so by filling up with blood and increasing in size, thus preventing the penis from exiting the vulva. This raises the chances of a successful fertilization. As with all living beings, the bones surround and protect the internal organs of the body from injury. They are hard, rigid, and are made up of calcium and phosphorous.

The following diagram and paragraphs explain the skeletal anatomy of a dog. It is a long bone structure that encases the brain, and contains a cavity called the orbit, where the eye is located. It is elongated and extends to the end of the muzzle. Next comes the vertebra or spine. It is divided into five parts: It has 30 vertebrae, of which 7 are cervical, 13 are dorsal, 7 are lumbar, and 3 are sacral. The cervical vertebrae are those of the neck, which follow the skull. The dorsal, lumbar, and sacrum vertebrae follow, respectively. The caudal vertebrae are the bones of the tail. The rib cage is located under the vertebra. The lower side of the muzzle is called the lower maxillary. At the base of the cervical vertebrae and just before the rib cage is the shoulder bone, which is called the scapula. This further extends to the humerus, which is the upper half of the foreleg. It further extends down to a pair of bones, known as the ulna and the radius, which form a part of the lower half. Then comes the wrist bone, called the carpus, the paw bone which joins the wrist and the toes, known as metacarpus, and then the toe bone, known as the phalange. The rear legs of the dog begin with the femur bone, which extends to a pair of bones known as the tibia and the fibula. These further extend to the heel bone, known as tarsus, the paw bone, known as metatarsus, and the toe bone, phalange.

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