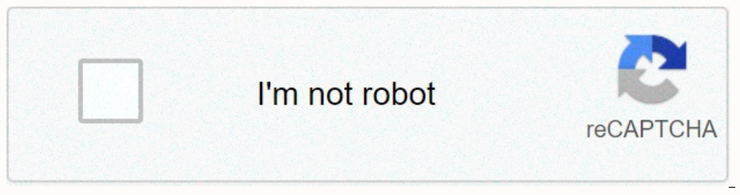

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Crab internal anatomy

Garrett Miller lives in San Francisco and works at Slack, taking care of the company's small but growing menagery of rare and unusual animals. He is also the creator of Loudgif. The inner iliac vein and its branches are part of several venous plexuses, which are interconnected networks of veins. These include rectal, vesical, prostatic (in males), vaginal (in females), and uterus (in females) venous plexuses. In a male, this vein will be in the region of the prostate gland. In a female it will be in the uterus and vaginal areas. The inner oblique is an abdominal muscle located under the outer abdomen obliquely. This muscle originates from the lumbar fascia (a connective tissue covering the lower back), the outer part of the inguinal ligament (a ligament located on the lower extremity of the pelvis), and the back of the iliac (the upper-outside part of the pelvis). The inner abdominal oblique muscle ends at the bottom edge of the chest, the rectus skin (fibrous tissue covering the abdominal muscles), and the pubic crest (an area of the lower-front of the pelvis). The inner abdominal oblique muscle is closer to the skin than the transverse abdominal muscle. This muscle supports the abdominal wall, helps with forced breathing, aids in raising pressure in the abdominal area, and rotates and turns the trunk with help from other muscles. The inner abdominal oblique muscle is an opposite force to the diaphragm, reducing upper thoracic cavity volume during reaneping. As the diaphragm contracts, the chest cavity is pulled down to increase lung size. The contraction of this muscle also rotates the trunk and bends it sideways by pulling the midline and chest toward the lower back and hip. Internal abdominal oblique muscles are called the same side rotators. The right inner oblique works with the left outer oblique, and vice versa, when bending and rotating the trunk. The internal pudendal artery serves oxygenated blood to the external genitalia of both males and females. It branches from the inner iliac artery. This artery tends to be smaller in women and some of the branches of the artery are specific to each sex. In males, branches of the inner pudendal include dorsal and deep artery of the penis, while females have dorsal and deep clitoris arteries. Women have posterior labial branches, while men have scrotal branches. There are additional other vessels specific to the genitals. The inferior rectal capsules and perineal arteries branching outside the internal pudendal are the same in both sexes. Part of being a responsible bird owner is doing everything within your ability to ensure your pet's good health. The first step in doing your part to keep your bird in top condition is to learn about how your pet's body works. Birds are physiologically different from any other creature on of the earth. While they need to eat, drink and breathe in the same way as we do, the parts of their bodies that perform these functions differ drastically from our own. Starting with a bird's outer anatomy, we explore the unique parts that make up your feathered friend. Beak: A bird's beak serves many purposes – such as eating, grooming, and of course, singing! The beak is an extension of the bird's jawbone and is covered in keratin, the same substance that makes up our nails. The upper part of the beak is called cere and is where the bird's nostrils, or nares, are located. Eye: Anyone who came up with the phrase eagle eye was not joking - birds have an extraordinarily correct vision. The eye holds scores of receptor cells, known as rods and cones, that translate what the bird sees in the image it sees. To give an idea of how sharp their vision is, people usually have about 200,000 of these cells per millimeter inside of their eyes. Some birds, especially birds of prey, have five times as many. Wings: A bird's wings are constructed from a series of small thin legs that resemble miniature versions of the legs of human arms. Externally, the wings are home to several different kinds of feathers: The primary flight feathers, the other anarchists, the main and smaller quilts, tertials, and Alula.Foot: The feet and legs of birds vary greatly depending on the species. Generally, legs, feet and claws are structured allowing a bird to take off, land, climb and grip with them. Since birds spend most of their lives perching, feet and legs are covered with tougher skin than the skin of the rest of the bird's body. Tail: In flight, a bird's tail works much like the tail of an airplane - it is used as a rudder to help the bird steer. The muscles of the tail also support helping the bird expand the lungs to take in extra air when needed. Anus: Anus is the outer opening through which the bird passes its waste. Birds are as different from us on the inside as they are on the outside. Read on to learn about the different parts that keep your pet running. Brain: Being called a bird's brain isn't necessarily a bad thing – in fact, some might take it as a compliment! Birds are extremely intelligent creatures, and as all bird owners know, they never fail to surprise us with their learning skills. Spine: Like all vertebrates, birds have a spine that runs the length of their bodies, and encloses the delicate spinal cord. The spinal cord is part of the central nervous system and essentially acts as the messenger of the brain., When the bird decides that he wants to move, the spinal cord relays the message from the brain to the muscles corresponding to the desired body part, causing movement. Trachea: The trachea is a long tube that goes from the bird's throat to the lungs, and transports fresh air for the bird to The bird's esophagus is a narrow tube that transports food from the mouth to the crop, where it will be stored until melted. Lung: Much like human lungs, bird lungs serve to diffuse air throughout the bird's bloodstream. They are unique, however, in the fact that they have small air sacs that allow air to flow through the lung in only one direction, ensuring a constant supply of fresh oxygen. Crop: In the same way that a chipmunk stores food in its cheeks, birds store food in their crops. The crop consists of layers of muscle tissue and holds and softens the food until it is ready to be passed on to the muscle. Gizzard: A gizzard is a structure consisting of tough muscle tissue that contains forage used to grind the bird's food to a pulp. When the food is sufficiently ground, it is passed into the bird's gut. Kidney: Fluids such as the bird are inexperienced in the kidneys, which filter out all waste to be expelled from the bird later. Heart: Much like our human hearts, a bird's heart is divided into four chambers and serves to pump oxygen-rich blood throughout the body. Because birds are so high energy animals, their hearts beat much faster than mammals. Some bird species have a resting heart rate of over 500 beats per minute. Liver: A bird's liver acts much like a large filter, freeing the bird from any toxins in its body. Ureter: Ureter is a tube that extends from the kidney to the sewer, allowing liquid waste to be expelled from the bird's body. Intestines: A bird's intestines work to digest the food that is pumped into them from muscle bores, absorbing the nutrients that the bird needs to function. After the food is melted, the waste is pushed into the rectum. Rectum: Rectum allows waste to be expelled from the bird's body. While birds possess many body parts similar to our own, they also have parts that are extraordinarily different. By learning the function of these parts, we can be prepared, informed bird owners – a very good thing to be in the event of an emergency. Congratulations on taking the first step towards a long and happy life with your pet. You never know when a little knowledge can save the day. The Spruce/Thomas Reich Aquarium fish share with humans and other mammals the possession of a spine, or spine. Fish are based on the same basic plan, using the same basic system of bones and organs as mammals. Even more surprisingly, in many cases, some species of fish exhibit parental behavior, express a sense of family, show signs of recognition to specific people and even exhibit signs of emotion. There is much we have yet to learn about aquarium fish, but they are not just decoration, they are pets that deserve our respect and care. Fish breathe oxygen, but it is usually absorbed only from the solution in the water of the gills that are leaf-like organs, four on each side of the neck in a bag covered by the operculum, or bony gill cover. (An exception is the maze fish, such as gourami or Bettas that actually breathes air using a special organ called labyrinth). The gills are richly provided with blood vessels, and water is swallowed from the mouth and forced over the gills, leaving off a slit between the operculum and the body. The degree of breathing movements of the fish is determined in part by the need for oxygen and its concentration in the surrounding water. Of course, the aquarium must have an abundant supply of oxygen in the water, not only on the water surface. Bubbles that go through the water are of no use to the fish, the gills can only absorb oxygen if there is a chemical in the water. A large branch of the common carotid artery of the cervical (upper) spine, the internal carotid artery is one of a pair running along each side of the neck and accessing the inside of the skull through an opening called foramen lacerum. Once inside, this artery is closely associated with a number of important nerves and brain regions before breaking into the anterior and middle cerebral arteries. This makes it an important source of blood for the brain and parts of the head. Because it serves such an important function of the body, medical conditions or trauma to the internal carotid artery can be very dangerous. Among the major health risks due to disorders here are stroke, accumulation of plaque in the artery, as well as trauma due to skull fracture. One of a pair found on each side of the neck, the inner carotid artery branches off from the common carotid artery and works its way up the skull. Its path places it right on the side of brain regions associated with visual and sensory processing and at the end, it splits into the two cerebral arteries. This vessel can be divided into seven sections: Cervical segments: The artery usually occurs between the third and fourth vertebrae of the neck (C3 and C4). Along with other large structures such as the common carotid artery, internal jugular vein, vagus nerve, deep cervical lymph nodes, and sympathetic nerve fibers, it crosses transverse processes (bone protrusions) of the upper vertebrae before reaching the carotid canal at the tinning bone at the base of the skull. Petrous segment: Inside the carotid canal, the artery turns anteromedially (up to the front and center), before advancing superomedially (above and toward the midline) toward the foramen lacerum. Lacerum segment: This short segment travels across cartilage covering the foramen lacerum, ending at the petrolingual ligament there. Cavernous segment: Crossing into the skull, the inner carotid artery travels just above the posterior part of the sphenoid bone (a large bone in the middle of the skull), making its way through the roof the cavernous sinus, which is basically a gap extending out to the eye. Here it is in the vicinity of abducens, oculomotor, trochlear and ophthalmic nerves, as well as parts of trigeminal nerves, all of which are involved in the control of the eyes as well as sensory perception. Clinoid segment: After exit cavernous sinus, the internal carotid artery crosses from proximal to the distal dural ring. The latter of these rings is an anatomical marker indicating divisions in the internal carotid artery. Ophthalmic segment: After passing through the distal hamburger ring, the artery travels below but parallel to the optic nerve (the nerve that delivers visual information to the brain for processing). Communicating segment: The last segment of the artery, the communicating segment gives rise to the posterior communicating and anterior coroidal arteries before splitting into the anterior and middle cerebral arteries. The most common variation seen in the internal carotid artery is asymmetry of the origin of the left and right arteries. In addition, while it usually originates between the third and fifth neck vertebrae, it sometimes begins higher or lower. A couple of other abnormalities have also been observed: Congenital absence: A very rare anomaly present at birth in less than 0.1% of people, this is when the artery never develops. While other artery systems are able to compensate for this absence—and most cases are asymptomatic—this condition may be associated with certain types of brain aneurysm and may affect surgical decision-making. Aberrant internal carotid artery: This variation is characterized by an abnormally small radius of the artery at its point of origin in the neck. To compensate, other portions may be larger than normal. If not enough blood reaches parts of the ear as a result, patients may experience tinnitus (a ringing in the ears). Kissing carotid artery: This is when the right and left carotid arteries touch the center line and are elongated. Lateralized artery: An abnormality at the petrous segment of the artery, lateralized artery affects the appropriate artery and can also lead to tinnitus. Persistent carotid artery-vertebrobasilar anastomosis: A congenital condition in which there are irregularities in the connections between the anterior and more posterior arteries. The primary role of the internal carotid artery is to deliver blood to the forebrain: the anterior part of the brain that houses the hemispheres of the brain (which are involved in higher-level cognition, language, as well as visual processing), thalamus (associated with visual, sensory, and auditory processing, sleep and consciousness), and the hypothalamus (regulate the metabolism and release of hormones, among other functions). Through its branches, this artery also supplies blood to the eyes and their structures, the forehead, as well as the nose. Disturbance or damage to the internal carotid artery can cause insufficient blood flow to key brain regions. This can then lead to infarction-cell and tissue death due to lack of nutrients and oxygen. When occurs in the brain, this leads to stroke. As with any part of the circulatory system, this artery can also be subject to a build-up of atherosclerotic plaques. This causes narrowing of the artery (stenosis), significantly increasing the risk of infarction. A specific type of surgery, called carotid endarterectomy, is needed to correct this issue. Finally, due to its location, the internal carotid artery can be damaged in cases of skull fracture. If the artery wears as a result of such a trauma, the roads can be severely damaged, leading to a case called arteriovenous fistula in the cavernous sinus. Basically, this is a disruption of healthy circulation. Patients may experience the protrusion of an eye, or chemosis, when the conjunctive cavity of the inner eye becomes engorged with blood. Thank you for your feedback! What are your worries? Verywell Health uses only high-quality sources, including peer-reviewed studies, to support the facts in our articles. Read our editorial process to learn more about how we fact-check and keep our content accurate, reliable and credible. Cleveland Clinic. 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