DOWNLOAD PDF SURFACE ANATOMY OF THE THORAX

Chapter 1 : Surface anatomy - Wikipedia

Clinical anatomy students learn to use imaginary lines and bony landmarks on the front and back of the thorax to describe locations of the anatomical structures. The lines cover the front, side, and back of the thorax.

The lower border of the Pectoralis major at its attachment corresponds to the fifth rib; the uppermost visible digitation of Serratus anterior indicates the sixth rib. The influence of the obliquity of the ribs on horizontal levels in the thorax is well shown by the following line. On the front of the thorax the most important vertical lines are the midsternal, the middle line of the sternum; and the mammary, or, better midclavicular, which runs vertically downward from a point midway between the center of the jugular notch and the tip of the acromion. This latter line, if prolonged, is practically continuous with the lateral line on the front of the abdomen. Other vertical lines on the front of the thorax are the lateral sternal along the sternal margin, and the parasternal midway between the lateral sternal and the mammary. On either side of the thorax the anterior and posterior axillary lines are drawn vertically from the corresponding axillary folds; the midaxillary line runs downward from the apex of the axilla. On the posterior surface of the thorax the scapular line is drawn vertically through the inferior angle of the scapula. On the right side the line begins at the sternoclavicular articulation and runs downward and medialward to the midpoint of the junction between the manubrium and body of the sternum. It then follows the midsternal line to the lower end of the body of the sternum or on to the xiphoid process, where it turns lateralward and downward across the seventh sternocostal articulation. It crosses the eighth costochondral junction in the mammary line, the tenth rib in the midaxillary line, and is prolonged thence to the spinous process of the twelfth thoracic vertebra. On the left side, beginning at the sternoclavicular articulation, it reaches the midpoint of the junction between the manubrium and body of the sternum and extends down the midsternal line in contact with that of the opposite side to the level of the fourth costal cartilage. It then diverges lateralward and is continued downward slightly lateral to the sternal border, as far as the sixth costal cartilage. Running downward and lateralward from this point it crosses the seventh costal cartilage, and from this onward it is similar to the line on the right side, but at a slightly lower level. The height to which it rises above the clavicle varies very considerably, but is generally about 2. It may, however, extend as high as 4 or 5 cm. From this point the two lines run downward, practically along the midsternal line, as far as the level of the fourth costal cartilages. The continuation of the anterior border of the right lung is marked by a prolongation of its line vertically downward to the level of the sixth costal cartilage, and then it turns lateralward and downward. The line on the left side curves lateralward and downward across the fourth sternocostal articulation to reach the parasternal line at the fifth costal cartilage, and then turns medialward and downward to the sixth sternocostal articulation. In the position of expiration the lower border of the lung may be marked by a slightly curved line with its convexity downward, from the sixth sternocostal junction to the tenth thoracic spinous process. This line crosses the mid-clavicular line at the sixth, and the midaxillary line at the eighth rib. The posterior borders of the lungs are indicated by lines drawn from the level of the spinous process of the seventh cervical vertebra, down either side of the vertebral column, across the costovertebral joints, as low as the spinous process of the tenth thoracic vertebra. The position of the oblique fissure in either lung can be shown by a line drawn from the spinous process of the second thoracic vertebra around the side of the thorax to the sixth rib in the mid-clavicular line; this line corresponds roughly to the line of the vertebral border of the scapula when the hand is placed on the top of the head. The horizontal fissure in the right lung is indicated by a line drawn from the midpoint of the preceding, or from the point where it cuts the midaxillary line, to the midsternal line at the level of the fourth costal cartilage. In front, the point of bifurcation corresponds to the sternal angle. The apex of the heart is first determined, either by its pulsation or as a point in the fifth interspace, 9 cm. The other three points are: The right and left borders are represented respectively by lines joining a to b and the apex to c ; both lines are convex lateralward, but the convexity is more marked on the right where its summit is 4 cm. A portion of the area of the heart thus mapped out is uncovered by lung, and therefore gives a dull note on percussion; the remainder being overlapped by lung gives a more or less resonant note. The former is known as the area of superficial cardiac dulness, the latter as the area of deep

cardiac dulness. The area of superficial cardiac dulness is somewhat triangular; from the apex of the heart two lines are drawn to the midsternal line, one to the level of the fourth costal cartilage, the other to the junction between the body and xiphoid process; the portion of the midsternal line between these points is the base of the triangle. Latham lays down the following rule as a sufficient practical guide for the definition of the area of superficial dulness. The position of the various orifices is as follows: The pulmonary orifice is situated in the upper angle of the third left sternocostal articulation; the aortic orifice is a little below and medial to this, close to the articulation. The left atrioventricular opening is opposite the fourth costal cartilage, and rather to the left of the midsternal line; the right atrioventricular opening is a little lower, opposite the fourth interspace of the right side. The lines indicating the atrioventricular openings are slightly below and parallel to the line of the coronary sulcus. The beginning of the aortic arch is indicated by a line from this latter point to the midsternal line about 2. The point on the midsternal line is opposite the summit of the arch, and a line from it to the right sternoclavicular articulation represents the site of the innominate artery, while another line from a point slightly to the left of it and passing through the left sternoclavicular articulation indicates the position of the left common carotid artery in the thorax. Anterior segment of tricuspid valve. Left common carotid artery. The internal mammary artery descends behind the first six costal cartilages about 1 cm. The junction of the two lines indicates the origin of the superior vena cava, the line of which is continued vertically down to the level of the third right costal cartilage. The end of the inferior vena cava is situated opposite the upper margin of the sixth right costal cartilage about 2 cm.

Chapter 2 : Thorax - Wikipedia

5. Surface Anatomy of the Thorax - Human Anatomy. FIG The left side of the thorax. Bones.â€"The skeleton of the thorax is to a very considerable extent covered by muscles, so that in the strongly developed muscular subject it is for the most part concealed.

Click here to scroll through the image stacks. This type of investigation can be used for detecting both acute and chronic changes in the lung parenchyma. Different types of diseases or conditions that affect the chest include pleurisy , flail chest , atelectasis , and the most common condition, chest pain. These conditions can be hereditary or caused by birth defects or trauma. Any condition that lowers the ability to either breathe deeply or to cough is considered a chest disease or condition. Sepsis due to leakage of alimentary tract contents, as in esophageal perforations, also must be considered. Blunt trauma commonly results in chest wall injuries e. The pain associated with these injuries can make breathing difficult, and this may compromise ventilation. Direct lung injuries, such as pulmonary contusions see the image below , are frequently associated with major chest trauma and may impair ventilation by a similar mechanism. Pain[edit] Chest pain can be the result of multiple issues including respiratory problems, digestive issues, musculoskeletal complications. The pain can trigger cardiac issues as well. Not all pain that is felt is associated with the heart, but it should not be taken lightly either. Symptoms can be different depending on the cause of the pain. Different people feel pains differently for the same condition. Only a patient truly knows if the symptoms are mild or serious. If this condition is present in the body, discomfort will be felt in the chest that is similar to a heavy weight placed on the body. Sweating, shortness of breath, lightheadedness , and irregular heartbeat may also be experienced. If heart attack occurs, the bulk of damage is caused during the first six hours, so getting the proper treatment quickly as possible is important. Some people, especially those who are elderly or have diabetes, may not have typical chest pain but may have many of the other symptoms of a heart attack. It is important that these patients and their care givers have a good understanding of heart attack symptoms. Non-cardiac causes of chest pain[edit] Just like with a heart attack, not all chest pain is suffered because of a condition involving the heart. Chest wall pain can be experienced after an increase in activity. Persons who add exercise to their daily routine generally feel this type of pain at the beginning. It is important to monitor the pain to ensure that it is not a sign of something more serious. Pain can also be experienced in persons who have an upper respiratory infection. This virus is also accompanied by fever and cough. Shingles is another viral infection that can give symptoms of chest or rib pain before a rash develops. Injuries to the rib cage or sternum is also a common cause of chest pain. It is generally felt when deep breaths are taken or during cough. Atelectasis[edit] Another non cardiac cause of chest pain is atelectasis. It is a condition that suffered when a portion of the lung collapses from being airless. When bronchial tubes are blocked, this condition develops and causes patients to feel shortness of breath. The most common cause of atelectasis is when a bronchi that extends from the windpipe is blocked and traps air. The blockage may be caused by something inside the bronchus , such as a plug of mucus, a tumour , or an inhaled foreign object such as a coin, piece of food, or a toy. Pneumothorax[edit] Pneumothorax is the condition where air or gas can build up in the pleural space. It can occur without a known cause or as the result of a lung disease or acute lung injury. If it is untreated, blood flow can be interrupted and cause a drop in blood pressure known as tension pneumothorax. It is possible for smaller cases to clear up on their own. Symptoms of this condition are often felt only on one side of the lung or as a shortness of breath. Other animals[edit] The trilobite body is divided into three major sections, a cephalon with eyes, mouthparts and sensory organs such as antennae, a thorax of multiple similar segments that in some species allowed them to roll up into a ball , and a pygidium, or tail section. In the worker ant, the abdomen consists of the propodeum fused to the thorax and the metasoma , itself divided into the narrow petiole and bulbous gaster. In tetrapods[edit] In mammals , the thorax is the region of the body formed by the sternum , the thoracic vertebrae , and the ribs. It extends from the neck to the diaphragm , and does not include the upper limbs. The heart and the lungs reside in the thoracic cavity , as well as many blood vessels. The inner organs are protected by the rib cage and the sternum. Thoracic vertebrae are also distinguished in birds , but not in

reptiles. It is the area where the wings and legs attach in insects, or an area of multiple articulating plates in trilobites. In most insects, the thorax itself is composed of three segments; the prothorax , the mesothorax , and the metathorax. In extant insects, the prothorax never has wings, though legs are always present in adults; wings when present are restricted to at least the mesothorax, and typically also the metathorax, though the wings may be reduced or modified on either or both segments. In the Apocritan Hymenoptera , the first abdominal segment is fused to the metathorax, where it forms a structure known as the propodeum. Accordingly, in these insects, the functional thorax is composed of four segments, and is therefore typically called the mesosoma to distinguish it from the "thorax" of other insects. Each thoracic segment in an insect is further subdivided into various parts, the most significant of which are the dorsal portion the notum , the lateral portion the pleuron ; one on each side , and the ventral portion the sternum. In some insects, each of these parts is composed of one to several independent exoskeletal plates with membrane between them called sclerites , though in many cases the sclerites are fused to various degrees. Additional Images[edit] Volume rendering of a high resolution computed tomography of the thorax. The anterior thoracic wall, the airways and the pulmonary vessels anterior to the root of the lung have been digitally removed in order to visualize the different levels of the pulmonary circulation.

Chapter 3 : Surface Markings of the Thorax - Human Anatomy

Surface anatomy (also called superficial anatomy and visual anatomy) is the study of the external features of the body of an animal. In birds this is termed topography. Surface anatomy deals with anatomical features that can be studied by sight, without dissection.

Human surface anatomy[edit] Surface anatomy of the thorax[edit] Front of thorax , showing surface relations of bones , lungs purple , pleura blue , and heart red outline. Heart valves are labeled with "B", "T", "A", and "P". Knowledge of the surface anatomy of the thorax chest is particularly important because it is one of the areas most frequently subjected to physical examination , like auscultation and percussion. The back as a general area is the dorsum or dorsal area, and the lower back as the limbus or lumbar region. The shoulderblades are the scapular area and the breastbone is the sternal region. The abdominal area is the region between the chest and the pelvis. The breast is called the mamma or mammary, the armpit as the axilla and axillary, and the navel as the umbilicus and umbilical. The pelvis is the lower torso, between the abdomen and the thighs. The groin , where the thigh joins the trunk, are the inguen and inguinal area. The entire arm is referred to as the brachium and brachial, the front of the elbow as the antecubitis and antecubital , the back of the elbow as the olecranon or olecranal, the forearm as the antebrachium and antebrachial, the wrist as the carpus and carpal area, the hand as the manus and manual, the palm as the palma and palmar, the thumb as the pollex, and the fingers as the digits, phalanges , and phalangeal. The buttocks are the gluteus or gluteal region and the pubic area is the pubis. Anatomists divide the lower limb into the thigh the part of the limb between the hip and the knee and the leg which refers only to the area of the limb between the knee and the ankle. The thigh is the femur and the femoral region. The kneecap is the patella and patellar while the back of the knee is the popliteus and popliteal area. The leg between the knee and the ankle is the crus and crural area, the lateral aspect of the leg is the peroneal area, and the calf is the sura and sural region. The ankle is the tarsus and tarsal, and the heel is the calcaneus or calcaneal. The foot is the pes and pedal region, and the sole of the foot the planta and plantar. As with the fingers, the toes are also called the digits, phalanges, and phalangeal area. The big toe is referred to as the hallux. List of features[edit] Following are lists of surface anatomical features in humans and other animals. Sorted roughly from head to tail, cranial to caudal. Homologues share a bullet point and are separated by commas. Class in which component occurs in italic.

Chapter 4 : Surface Anatomy of the Heart - TeachMeAnatomy

In this particular tutorial, we'll be focusing on the surface anatomy of the thorax, the upper limb, and the back. If you'd like to learn about the surface anatomy of other parts of the body, be sure to check out our other tutorials focusing on the head and neck as well as the abdomen and lower limb in more detail.

In the emaciated subject, however, the ribs, especially in the lower and lateral regions, stand out as prominent ridges with the sunken intercostal spaces between them. In the middle line, in front, the superficial surface of the sternum can be felt throughout its entire length at the bottom of a furrow, the sternal furrow, situated between the Pectorales majores. These muscles overlap the anterior surface somewhat, so that the whole width of the sternum is not subcutaneous, and this overlapping is greatest opposite the middle of the bone; the furrow, therefore, is wide at its upper and lower parts but narrow in the middle. At the upper border of the manubrium sterni is the jugular notch: Lower down on the subcutaneous surface is a well-defined transverse ridge, the sternal angle; it denotes the junction of the manubrium and body. From the middle of the sternum the sternal furrow spreads out and ends at the junction of the body with the xiphoid process. Immediately below this is the infrasternal notch; between the sternal ends of the seventh costal cartilages, and below the notch, is a triangular depression, the epigastric fossa, in which the xiphoid process can be felt. On either side of the sternum the costal cartilages and ribs on the front of the thorax are partly obscured by the Pectoralis major, through which, however, they can be felt as ridges with yielding intervals between them corresponding to the intercostal spaces. Of these spaces, that between the second and third ribs is the widest, the next two are somewhat narrower, and the remainder, with the exception of the last two, are comparatively narrow. Below the lower border of the Pectoralis major on the front of the chest, the broad flat outlines of the ribs as they descend, and the more rounded outlines of the costal cartilages, are often visible. The lower boundary of the front of the thorax, which is most plainly seen by bending the body backward, is formed by the xiphoid process, the cartilages of the seventh, eighth, ninth, and tenth ribs, and the ends of the cartilages of the eleventh and twelfth ribs. On either side of the thorax, from the axilla downward, the flattened external surfaces of the ribs may be defined. Although covered by muscles, all the ribs, with the exception of the first, can generally be followed without difficulty over the front and sides of the thorax. The first rib being almost completely covered by the clavicle can only be distinguished in a small portion of its extent. The line diverges somewhat as it descends, and lateral to it is a broad convex surface caused by the projection of the ribs beyond their angles. Over this surface, except where covered by the scapula, the individual ribs can be distinguished. There is, however, an area of practical importance bounded by these muscles. It is limited above by the lower border of Trapezius, below by the upper border of Latissimus dorsi, and laterally by the vertebral border of the scapula; the floor is partly formed by Rhomboideus major. If the scapula be drawn forward by folding the arms across the chest, and the trunk bent forward, parts of the sixth and seventh ribs and the interspace between them become subcutaneous and available for ausculation. The space is therefore known as the triangle of ausculation. In the adult nulliparous female, it extends vertically from the second to the sixth rib, and transversely from the side of the sternum to the midaxillary line. In the male and in the nulliparous female the mammary papilla is situated in the fourth interspace about 9 or 10 cm.

Chapter 5 : surface anatomy (thorax, abdomen, back) - racedaydvl.com

CHAPTER 53 Thorax: overview and surface anatomy. The thorax is the upper part of the trunk. It consists of an external musculoskeletal cage, the thoracic wall, and an internal cavity that contains the heart, lungs, oesophagus, trachea, thymus, the vagus and phrenic nerves and the right and left sympathetic trunks, the thoracic duct and major systemic and pulmonary blood vessels.

Day 20 From Cranial to Caudal end, the heart is composed of the following after fusion of the heart tubes: Will lead to six pairs of aortic arches later in development. Truncus Arteriosus itself eventually becomes the ascending Aorta. Eventually forms the right ventricle and Aortic Outflow tract. Eventually forms the adult left ventricle. Eventually becomes the auricular appendages of the adult atria. Will be enveloped by the septum transversum and hence become a part of the developing diaphragm. At birth, Right horn of the sinus venosus will merge with Right Atrium. This merging results in the smooth tissue called the Sinus Venarum. Demarcation point where the right horn was incorporated into the Right Atrium. The atrium becomes caudal to the ventricle by an inversion of the heart tube. The ventricle goes more posterior as growth continues. The atrium goes more superior as growth continues. An ingrowth of membrane called the endocardial cushion is at the bottom of the canal. First, the Septum Primum grows toward the endocardial cushion, forming two chambers. Then a hole in the new wall develops, called the foramen secundum. Then a second septal wall starts to form in future Right Atrium , called the Septum Secundum. This septum grows covering the first septal wall. The Septum Primum then degenerates, leaving enough tissue to leave a hole between the first and second septa. The Foramen Ovale Functions as a valve in the primitive embryo. The embryo does not have functional lungs, and the pulmonary circulation is thus bypassed. Partitioning of the Ventricles: The Interventricular Septum grows inward, similar to the growth of the Septum Secundum. Developmental error where the Pulmonary Trunk fails to develop fully, and instead the cells are allotted to the Aorta, resulting in an overriding Aorta. The result is that blood bypasses the Pulmonary Trunk and never gets oxygenated by the lungs. Left Ventricular Wall becomes enlarged as the Left Ventricle must work harder to accommodate a higher flow of blood. Hypoxia results from insufficient oxygenation of blood. The superior border of the heart, where the great vessels converge. On the anterior surface of the heart, near the Right Atrium. Apex of the Heart: The inferior border of the heart, at the anterior portion of the Left Ventricle. The outer membrane parietal membrane of the Pericardial Sac. Sternal Pericardial Ligaments connect the fibrous pericardium to the sternum. These ligaments help hold the heart in place. The Phrenic Nerve is embedded in the fibrous pericardium. The inner membrane visceral membrane of the Pericardial Sac. It secretes a fluid into the pericardium to lubricate the heart when it is beating. Membrane plus fluid becomes a whole surface layer called the Epicardium. Wherever there is a vessel, the Serous Membrane will reflect into the Fibrous Pericardium. Right Border of the Heart: Left Border of the Heart: Right Inferior Border of the Heart: Left Inferior Border Apex of the Heart: Fluid can accumulate there. The hole created by the four Pulmonary Veins, and fibrous pericardium, on the Posterior Surface of the heart near the Left Atrium. External Location of Heart Valves: This is not the best place to hear the valves, but simply where they are located. Location of Pulmonary Valve. Location of Aortic Valve. Location of Tricuspid Valve. The sounds are reflected to other places externally. The best place to hear each valve is as follows: Position of the right 2nd Costal Cartilage. Best heard at the Apex of the Heart: Best heard in the lower left quadrant of the sternum. Located on the anterior surface of the Superior Vena Cava. Innervated by both sympathetic and parasympathetic fibers. Nervous impulse originates at the SA Node. Located on the right side of the intra-atrial septal wall. Depressions on the anterior surface of the heart, used as demarcations for external anatomy. They may be hard to see if fat is present. The demarcation between the left and right ventricles. The Anterior Interventricular Artery is often embedded in this sulcus. Coronary Sulcus Aorticoventricular Sulcus: The border between the Right Atrium and Aorta. The Right Coronary Artery often travels along this sulcus. The Coronary Sinus is located deep to the great vein, on the posterior wall of the Right Atrium. Originate from the right and left sides of the Ascending Aorta. There are many variations, but common theme is below. Travels along the Atrioventricular

Sulcus Coronary Sulcus. Then it travels posteriorly around the heart and anastomoses joins with the left Coronary Artery on the posterior side. Is itself very short. It bifurcates into two more arteries: Goes posteriorly and joins with the Right Coronary Artery. Travels along the Interventricular Sulcus on the anterior side. Most Cardiac veins empty into the Coronary Sinus, but not all. It empties anteriorly into the Coronary Sinus. Travels with the posterior right interventricular coronary artery and empties into the Coronary Sinus posteriorly. It empties right into the wall of the Right Atrium. Small venous structures within the heart tissue. Only histological structures and not visible in lab. Vessels of the Heart: Anterior Aspect, from Right to Left: The primitive Right Atrium. The primitive Left Atrium. Blood Flow Right Atrium: Receive blood from Superior and Inferior Vena Cavae. Deliver through Tricuspid Valve. Deliver blood through the Pulmonary Trunk. Receive blood from the four Pulmonary Veins. Deliver through bicuspid valve. A rough area on the superior inner wall of the Right Atrium, left over from the embryonic heart. Ridge on superior anterior border, demarcating the embryonic heart auricle from the adult heart. It is at the border of the Right Auricle. Depression in the Septal wall, remaining from the embryonic Foramen Ovale. A membranous remnant of the embryonic heart, smaller than the Fossae Ovalis. It may not form, resulting in a "hole" in the septal wall of the heart. The ligaments that connect the tricuspid cusps to the Papillary muscles, allowing them to open when the papillary muscles are contracted. The muscles which control the cusps of the tricuspid valve.

Chapter 6 : Anatomy of the thorax (CT)

Henry Gray ().Anatomy of the Human Body. 5. Surface Anatomy of the Thorax: Bones.â€"The skeleton of the thorax is to a very considerable extent covered by muscles, so that in the strongly developed muscular subject it is for the most part concealed.

The diaphragm forms the base of the thorax whilst the thoracic inlet forms the superior aspect located between the first two ribs. The following 5 pairs of ribs are known as false ribs and attach to the sternum also via the costal cartilage but instead share the connection. Furthermore, the final two ribs of the five do not attach to the sternum and are referred to as floating ribs. The external intercostal muscle passes from the lower aspect of one rib to the superior border of the next caudal rib with the external intercostal membrane lying posterior to this. Beneath this, lies the intercostal neurovascular bundle NVB containing the intercostal vein, artery and nerve. Importantly, the vein lies superior to the subcostal groove whilst the artery and nerve are located inferior to the groove. The intercostal nerve innervates the intercostal muscles and the overlying skin. Deeper still, lies another muscle layer called the innermost intercostal muscle, anteriorly becoming the tansversus thoracis muscle see image below. Awareness of the location of the intercostals vessels is important in the clinical setting. For example, when inserting a chest drain care is taken to avoid the neurovascular bundle by inserting the needle just above the rib at either the 4th, 5th or 6th intercostals space. The diaphragm has a number of openings located at the central tendon for the inferior vena cava IVC , the muscle itself for the oesophagus and the aorta together with the thoracic duct and azygos vein between the left and right crus. Thoracic Outlet The thoracic outlet is defined as the superior opening of the thoracic cavity. Anatomically it is bounded by the first thoracic vertebra, first pair of ribs,costal cartilage and superior border of the manubrium. Key structures pass through this outlet including the trachea, oesophagus, blood vessels as well as lymph nodes and lymphatic vessels. Hence, on clinical examination, good chest expansion should be indicated by increased antero-posterior movement in the upper chest and lateral expansion of the lower chest. Essentially, during breathing in the diaphragm contracts increasing thoracic volume and lowering intra-thoracic pressure, drawing air into the lungs. When breathing out the diaphragm relaxes, lowering thoracic volume and increasing intra-thoracic pressure forcing air out of the lungs. This process is often assisted by the intercostal muscles in periods of increased demand. In order to identify any displacement, one must be able to work out where the apex beat normally lies, which is in the fifth intercostal space in the mid-clavicular line. The Posterior Chest Wall The midvertebral line is a theoretical line that runs down the middle of the back and in the thin patient the spinous processes may be visible. The 7th cervical vertebrae spinal process will most often be palpable. Another notable landmark is the scapula, consisting of the superior and inferior angle which is at the level of the 2nd and 7th thoracic vertebrae respectively. This has important clinical value since it corresponds with the level of the second rib. Anterior axillary line - A vertical line from the axillary folds, running between the middle of the clavicle and the lateral end of the clavicle. Posterior axillary line - Runs parallel with the anterior axillary line but instead along the posterior axillary fold. Midaxillary line - A vertical line from the apex of the axilla between the anterior and posterior axillary line. Midline sternotomy scar - Indicates previous coronary artery bypass grafting CABG , aortic valve replacement or transplantation. Left submammary scar - Indicates previous mitral valvotomy. Infraclavicular scar - Indicates previous pacemaker insertion. Importantly, auscultatory areas do not correspond with the surface markings of the heart valves. Instead the auscultatory areas are often where the sounds are heard best and transmitted. Achieved by inserting needle left of the xiphoid process. Achieved through left thoracotomy and excising the 5th costal cartilage. Anatomical Abnormalities and Clinical Implications There are a number of anatomical abnormalaties that can occur within the thorax. This has important implications to the cardiorespiratory system and clinical examination techniques. This includes the following: This can occur independantly or in association with other genetic disorders, including trisomy 18 or Pectus excavatum is another congenital condition that causes the sternum to form inward, creating a depression in the centre of the chest. Again, this condition may occur independantly or in association with other syndromes. This is often brought about by an extra cervical rib or

an abnormally tight fibrous band connecting the spinal vertebrae to the rib. The diagnosis can typically be made with a history and examination but may involve further tests. Ideally, initial management will involve physiotherapy. If this proves ineffective surgery can be opted for involving removing the extra cervial rib or bypass surgery to reroute the blood supply. This increases intrapericardial pressure restricting the hearts ability to function normally, referred to as cardiac tamponade. Common presenting symptoms include chest pain, breathlessness and decreased blood pressure. Most cases of SVC commonly caused by a cancerous tumour that is compressing the SVC including a bronchogenic carcinoma. Management includes medical therapy glucocorticoids or diuretics or surgery but this condition often has a poor prognosis. The mediastinum The mediastinum refers to the central mass of tissue that houses the heart, great vessels and the oesophagus and is divided into the superior and inferior mediastinum. The superior mediastinum lies above the transverse plane at the level of the 4th thoracic vertebrae posteriorly and manubriosternal joint anteriorly. This compartment contains the great vessels passing to and from the thoracic inlet. The inferior mediastinum lies below the level of the 4th thoracic vertebrae but above the diaphragm and is further subdivided into the anterior, middle and posterior compartments. The inferior vena cava IVC passes through the central tendon to enter the inferior aspect of the right atrium. The internal thoracic artery is also a branch of the subclavian artery and provides pairs of vessels level with each intercostal space.

Chapter 7 : The Thorax - TeachMeAnatomy

- Surface anatomy of the thorax. Running down behind the costal cartilages and crossing the intercostal spaces about a centimetre from the edge of the sternum is the internal mammary artery. When it reaches the sixth interspace it divides into the superior epigastric, which goes downward in the abdominal walls, and the musculophrenic, which.

Chapter 8 : Anatomy: The Thorax

Introduction. The thorax lies between the neck and abdomen and includes the mediastinum, pleural cavity and the racedaydvl.com thoracic cage is formed by the ribs originating from the vertebral column joining anteriorly at the sternum.

Chapter 9 : Thorax: overview and surface anatomy | Clinical Gate

â€¢ Trace the surface markings of the lung and pleura. â€¢ Trace the surface markings of the lung fissures and lobes. â€¢ Locate the position of the costodiaphragmatic and costomediastinal.