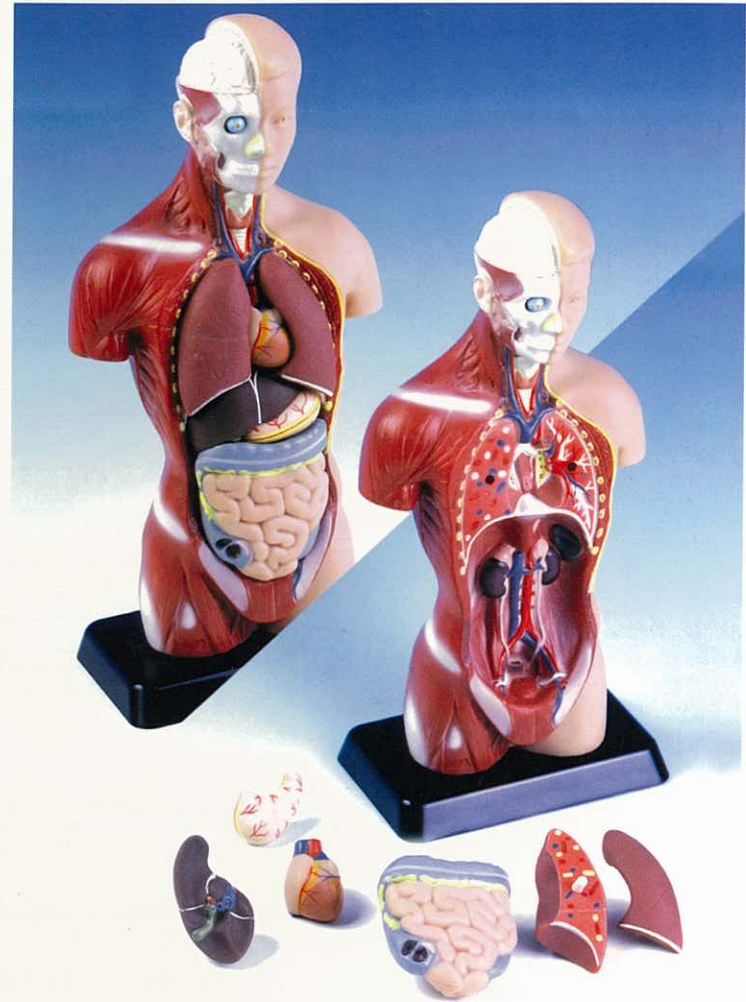


GB

HUMAN TORSO

ANATOMICALLY ACCURATE

MODEL KIT



GUIDE TO HUMAN ANATOMY

WARNING!

Product contains small parts which may pose a hazard for children under the age of three. Not recommended for children under 8 years of age.

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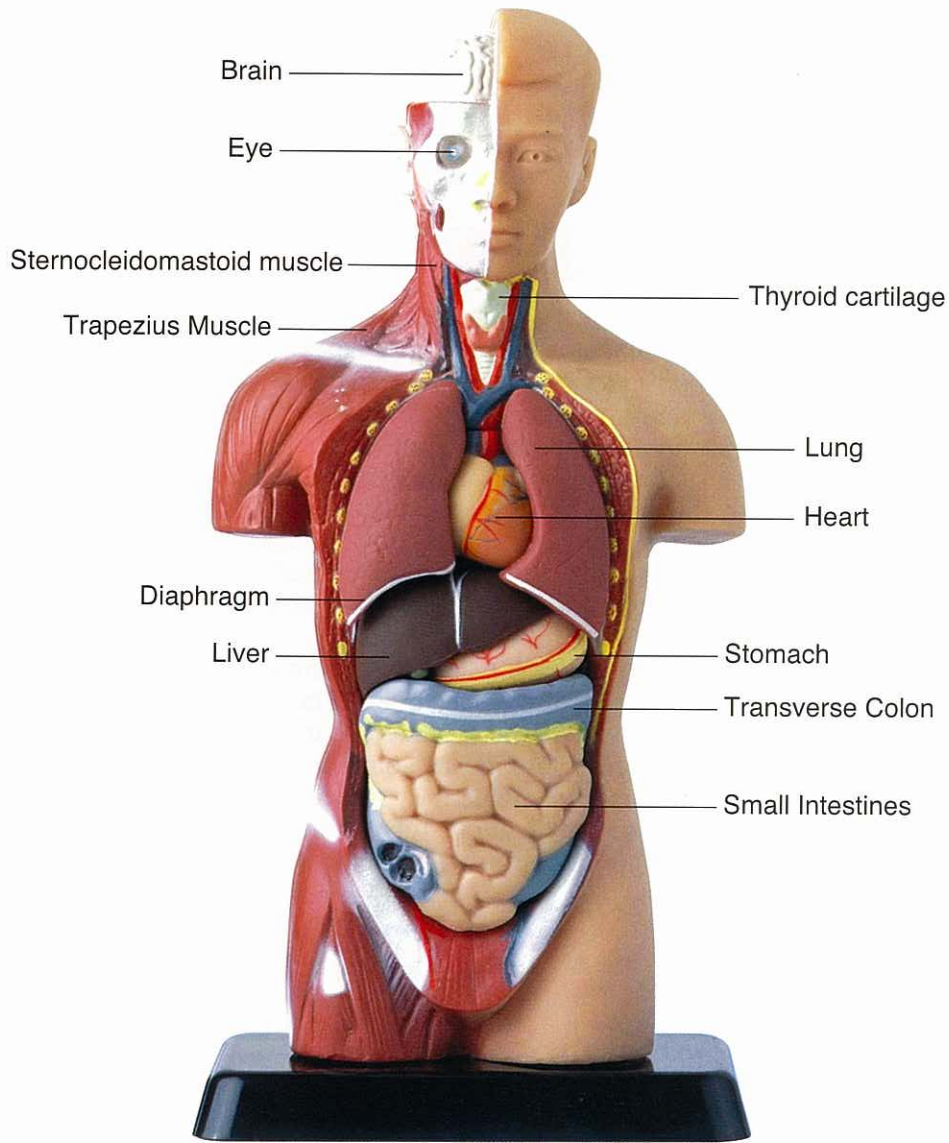
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YOUR HUMAN TORSO

Did you know that the human body is the best piece of machinery in the world? There is still no machine in the world capable of performing all the functions that your body can. Sounds amazing, doesn't it? If you think that humans are incredible, you are right. Every day millions of incredible things are happening inside our body. Remember the last time you were walking along the street and enjoying an ice-cream cone? You were not as relaxed as you thought. Your brain was actually busy giving orders to your eyes, your tongue, your fingers, etc., as well as giving you the feelings of relaxation and enjoyment. Your lungs were occupied with the functions of inhaling and exhaling air, while your stomach was getting ready for that icy vanilla scoop. Everything functions smoothly, and after several hours the undigested part of the ice-cream becomes human by-products and is excreted from your body. Nature is peculiar. The more you try to learn about nature, the more you will be excited by its unexpected surprises. Start learning about nature by looking at yourself today! Remember that this booklet serves only as an elementary guide, there are many more interesting facts to be discovered about this miraculous gift from nature. Now get ready and let's start to explore the human body!



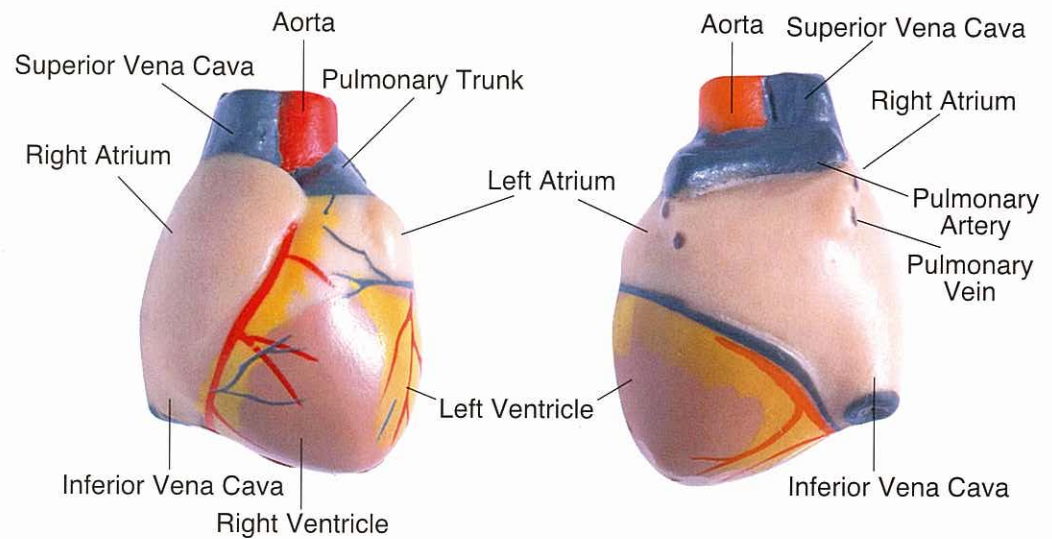
**Torso
(Anterior View)**

Eyes

The eyes receive information from light rays. The light rays are either absorbed or reflected. When you look at something, the light rays reflected from the object enter the eye. The light is refracted by the cornea and passes through the watery aqueous humor and pupil to the lens. The iris controls the amount of light entering the eye. Then the lens focus the light through the vitreous humor onto the retina, forming an image in reverse and upside-down. Light-sensitive cells in the retina transmit the image to the brain by electrical signals.

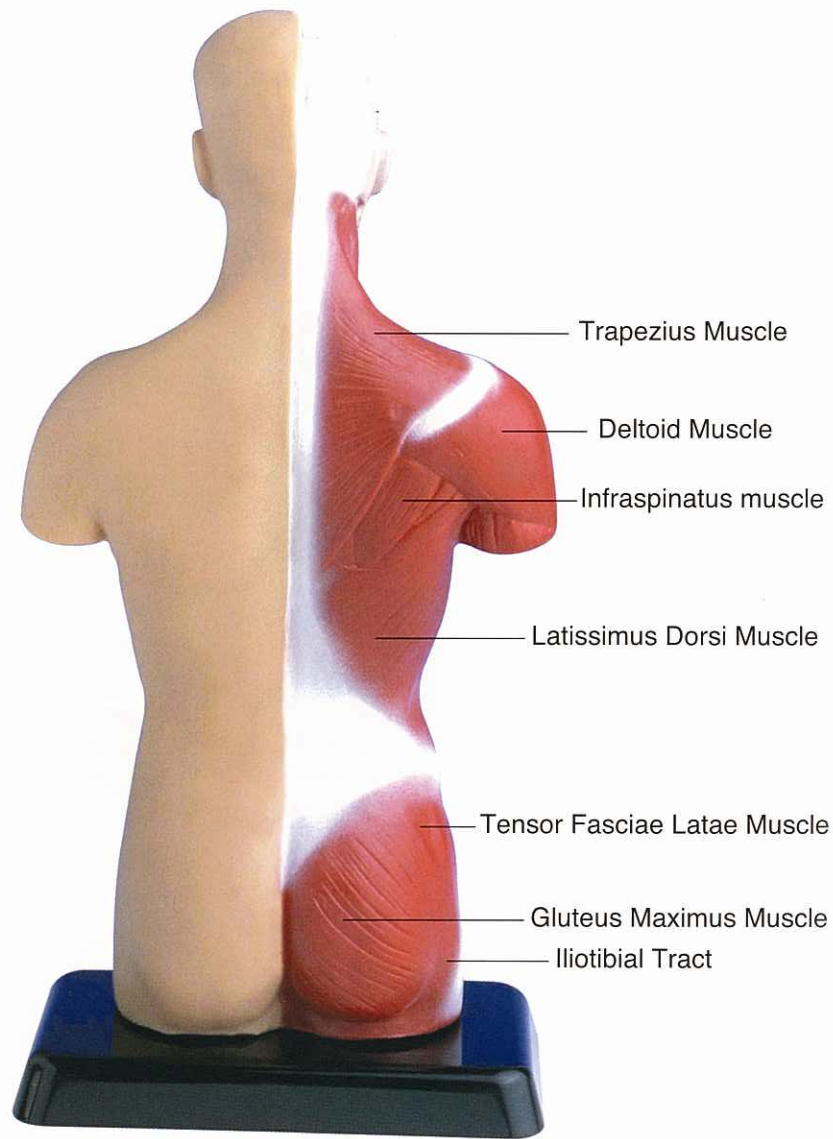
Heart

The heart is placed between the lungs in the middle of the chest, it pumps blood through the body, supplying cells with oxygen and nutrients. The apex (blunt point of the lower edge of the heart) lies on the diaphragm, pointing towards the left. The apex pulses with every beat of the heart. The adult human heart is approximately the size of a fist, it is about five inches long and three and a half inches across at its broadest part, and it weighs less than a pound.



**Heart
(Anterior View)**

**Heart
(Posterior View)**

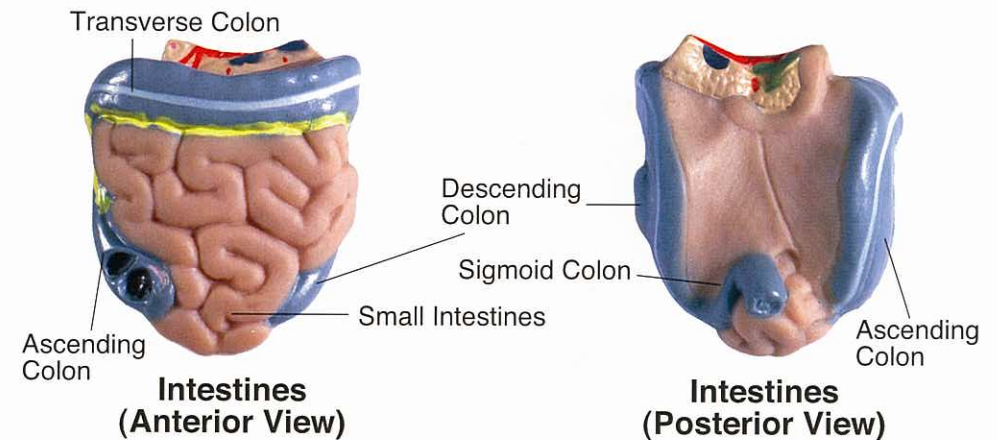


**Torso
(Posterior View)**

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Intestines

The small intestine is responsible for completing digestion and for absorbing the usable food products into the lymphatic system and bloodstream. The small intestine extends from the duodenum, where it accepts the chyme (predigested food), to the ileocecal orifice, where it passes semifluid food by-products to the large intestine. The large intestine accepts the by-products of digestion from the small intestine and passes it along to be excreted. Any unabsorbed food materials are stored in the large intestine until the body can partially reabsorb water from it, then passing the remains along to the anus for evacuation.

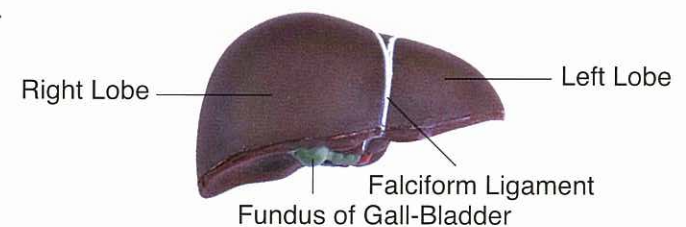


**Intestines
(Anterior View)**

**Intestines
(Posterior View)**

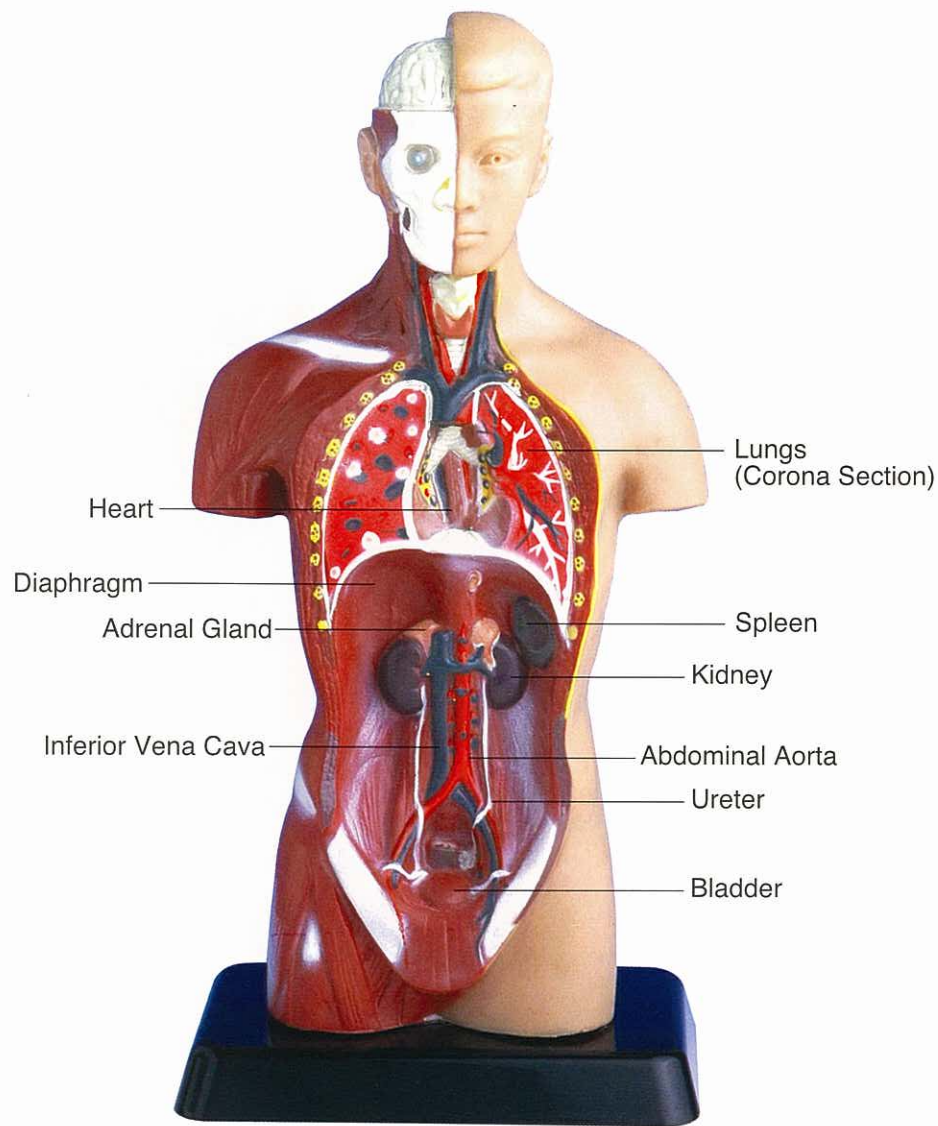
Liver

The liver is the largest of the body's glands, weighing about three pounds, the red-brown organ features a high degree of vascularity which is responsible for its dark colour. Located mostly on the right side of the abdominal cavity, just above the duodenum, the liver aids in the digestion of fats by secreting bile into the duodenum. The liver also destroys red blood cells, forms urea for the excretion of nitrogenous wastes, forms fibrinogen, used in blood coagulation, stores glycogen, helps in the metabolism and storage of vitamins, and produces protective and antitoxic substances.



Liver

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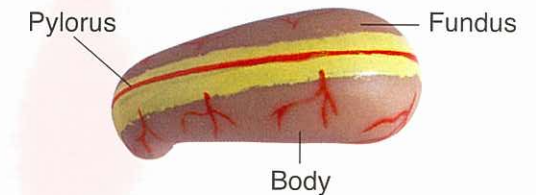
**Torso
(Anterior View with Organs Removed)**

Lungs

The respiratory system is responsible for supplying oxygen to the blood and expelling waste gases, of which carbon dioxide is the primary constituent, from the body. The larynx is located at the head of the trachea. The trachea extends down to the bronchi which branch off at the tracheal bifurcation to enter the hilus of the left or right lung. The lungs contain the narrower passageways, or bronchioles, which carry air to the functional unit of the lungs, the alveoli. There, in the thousands of tiny alveolar chambers, oxygen is transferred through the membrane of the alveolar walls to the blood cells. Carbon dioxide goes in the opposite direction, from the blood, through the membrane of the alveoli walls into the air in the alveoli, to be expelled upon exhalation.

Stomach

The stomach is one of the primary organs of the digestive system. It is located in the middle of the abdominal cavity and extends from the lower end of the oesophagus to the duodenum. The bolus of chewed food paste enters the stomach from the oesophagus, propelled by peristaltic waves. The cardiac gastric glands are located near the entrance to the stomach and lubricate the food as it comes in. The stomach secretes hydrochloric acid and the enzymes pepsin, rennin, and lipase which help digest the carbohydrates, proteins and fats in food. The stomach is lined with a durable mucous lining which protects it from the gastric juices so that the stomach itself is not digested.



Stomach

Gall-Bladder

The gall-bladder serves the function of concentrating and storing bile, produced in dilute form by the liver, and secreting the bile through the cystic duct into the duodenum where it can help in digestion. The gall-bladder itself is a blue-green organ, about three inches long, located on the underside of the liver. Bile is composed of cholesterol, bile salts, and bile pigment. The gall-bladder is not critical to the survival of the human, and may be removed without adverse effects. The crystallization of the bile salts in the gall-bladder gives rise to gallstones, which often requires surgical removal.

Kidney

The kidneys are responsible for filtering toxins, wastes, ingested water, and mineral salts out of the bloodstream. Kidneys are also responsible for regulating the acidity of the blood by excreting alkaline salts when necessary. The two, bean-shaped organs are located in the posterior part of the abdomen. At the top of each kidney is an adrenal gland. In a general sense, blood which passes into the kidney transmits soluble waste through the nephrons, and this liquid, called urine, is passed down the ureter and into the bladder to await discharge.

Adrenal Glands

The adrenal glands curve over the top of each kidney in the abdomen. The adrenal medulla is an agent of the sympathetic nervous system and is activated by nerve impulses. It secretes hormones which help the body reduce stress. When the nervous system reacts to intense emotions, large amounts of the hormone are released. This may cause the blood pressure to rise, the pupils widen, and blood is shunted to the most vital organs and to the skeletal muscles. The adrenal cortex secretes hormones which also help the body to reduce stress and are essential for life.

Diaphragm

The diaphragm is the primary muscle responsible for respiration. The thin diaphragm forms a domed structure, and when the diaphragm muscle contracts, it lowers to a more flattened arrangement. This flattening causes a vacuum in the thoracic cavity and pressure in the abdominal cavity. The vacuum is filled by the expanding lung tissue and inhaled air. When the diaphragm relaxes to its domed structure, the air is pushed out (exhaled) and the lungs contract. Though the intercostal and abdominal muscles are also used in respiration, during sleep, it is primarily due to contractions of the diaphragm.

Spleen

The spleen is closely associated to both the circulatory and the lymphatic systems. It is an abdominal organ which lies between the bottom of the stomach and the diaphragm. It plays a role in the maintenance of blood volume, production of some types of blood cells, and recovery of material from worn out red blood cells. It is also involved in the removal of blood cells and bacteria from the blood.