

I. RESPIRATORY SYSTEM

For every part of your body to stay active and be able to function, nutrients in the food you eat and oxygen in the air you breathe is needed. As oxygen is breathed in, carbon dioxide is released. The respiratory system helps deliver oxygen to the red blood cells and to remove the waste product carbon dioxide.

Fig. 1.1 Section Through the Head

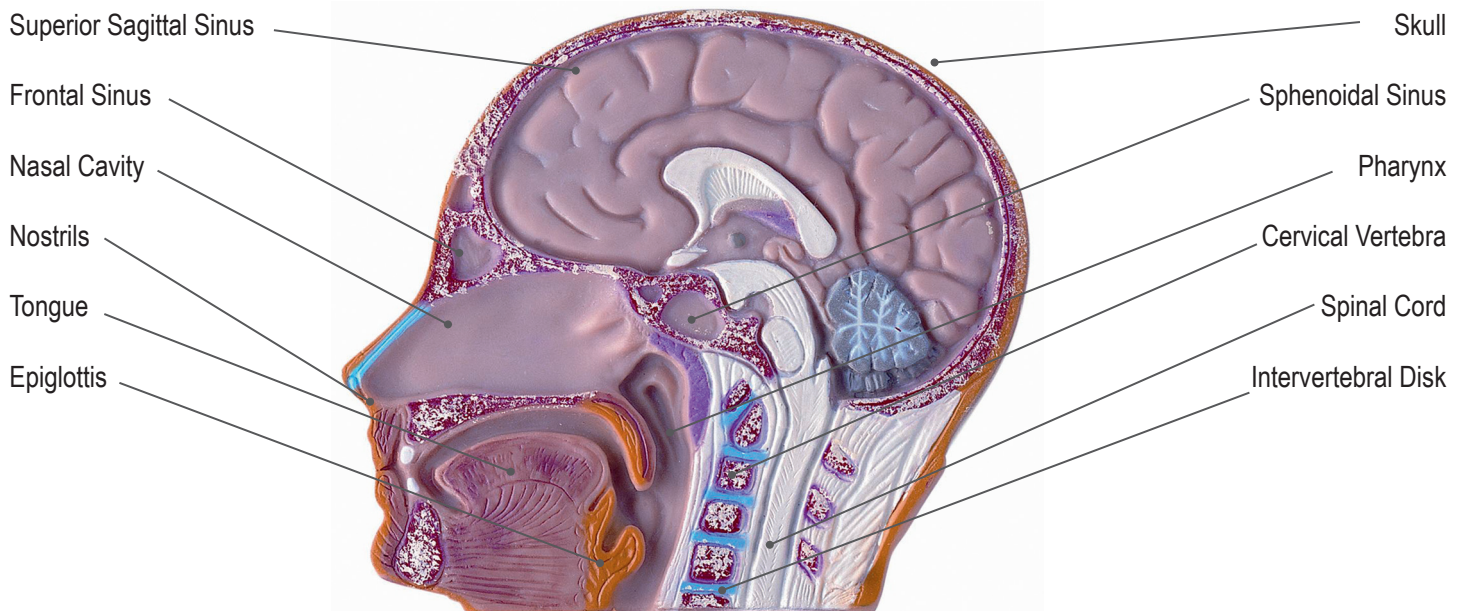
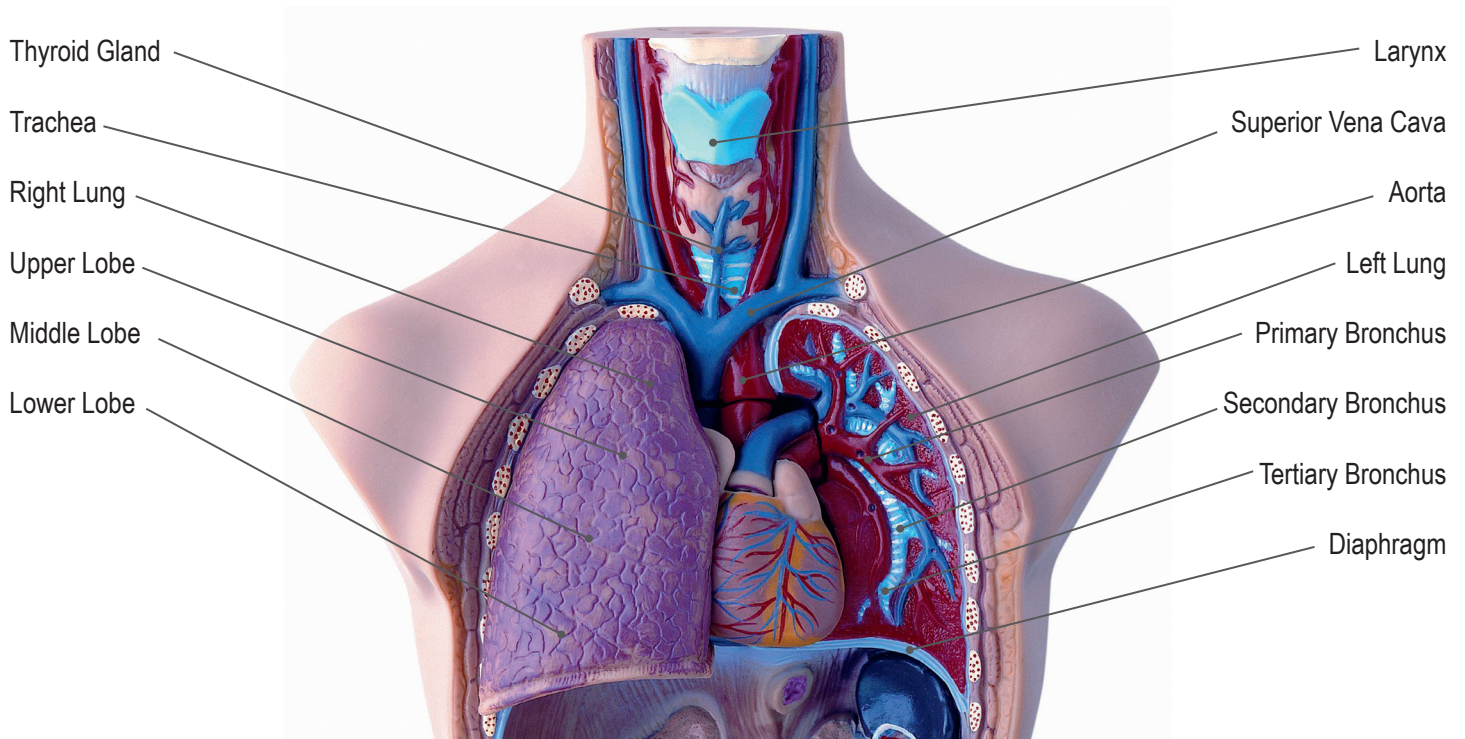


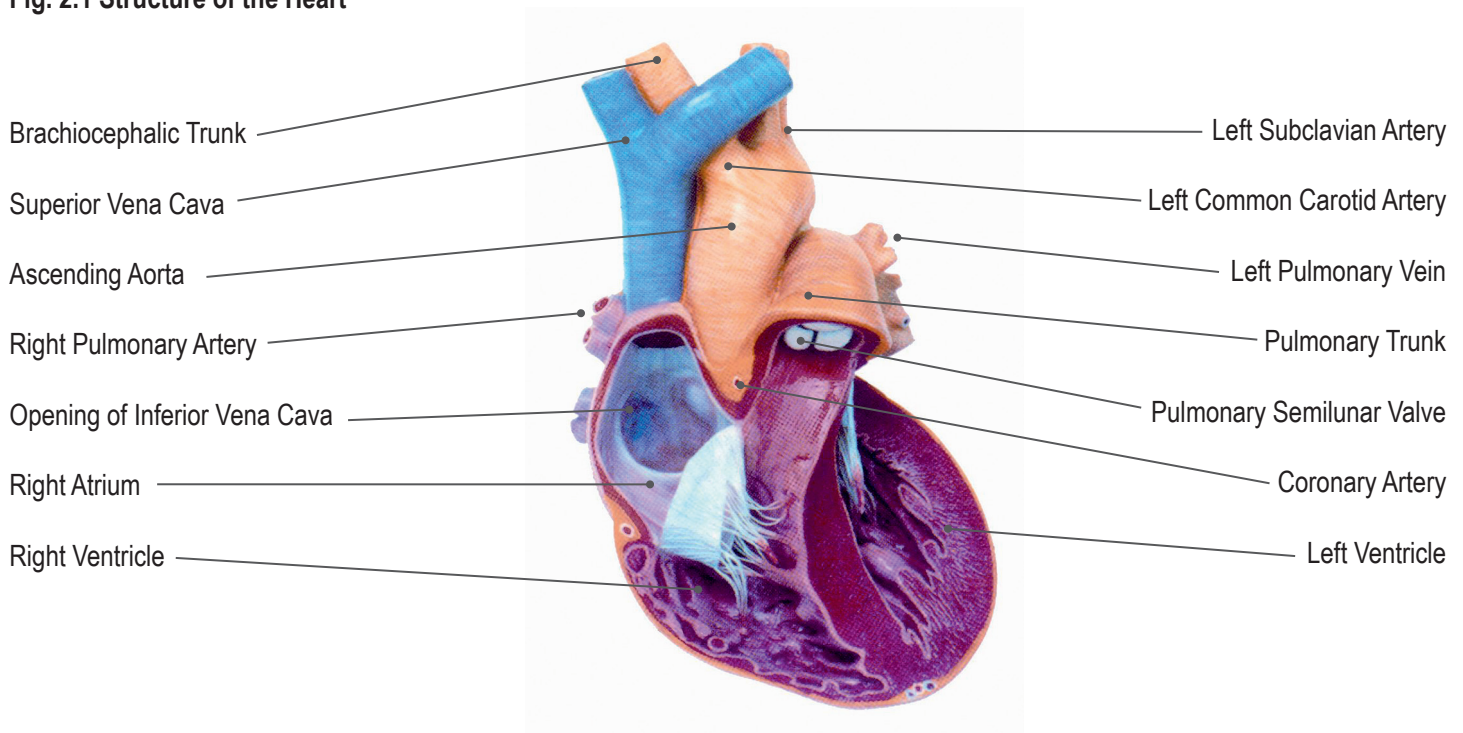
Fig. 1.2 Structures of Thoracic Cavity



II. CIRCULATORY SYSTEM

Being the main transportation system inside your body, the circulatory system brings oxygen and nutrients to every part within and carries away the carbon dioxide through the bloodstream. Your heart and blood vessels (which consist of arteries, veins and capillaries) play an important role in “telling how the blood should flow”.

Fig. 2.1 Structure of the Heart



III. NERVOUS SYSTEM

The body's communication network consists of the brain, spinal cord, and nerves. The brain and the spinal cord form the Central Nervous System (CNS) which is the body's main control center. The nerves are actually billions of neurons grouped together and forms the Peripheral Nervous System (PNS). The nerves are grouped in pairs and are distributed in sensory organs such as the head and the neck and extend from the spinal cord to the body trunk and limbs.

Fig. 3.1 Structures of Thoracic Cavity

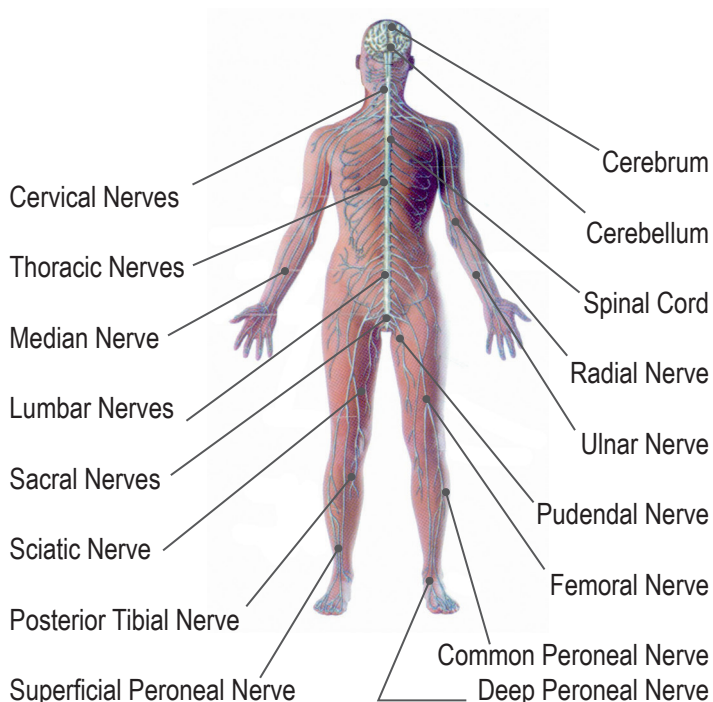
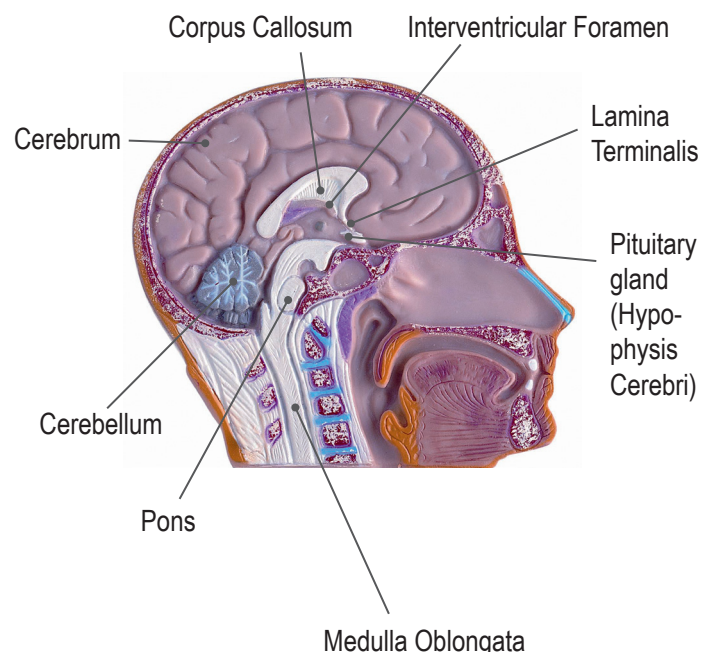


Fig. 3.2 Section Through the Brain



IV. DIGESTIVE SYSTEM

The digestive system converts the food you eat into soluble particles for the body parts to absorb and use. The digestive process starts as soon as food enters the mouth. It is ground by the teeth and reacts with the chemicals in the saliva. The process of swallowing takes place next. A flap called the epiglottis closes the windpipe (trachea) to prevent food from entering the lungs and forces the food to enter the esophagus. The food is forwarded down the esophagus by peristalsis (contractions of the involuntary muscles along the esophageal wall).

Fig. 4.1 Section Through Nose, Mouth and Throat

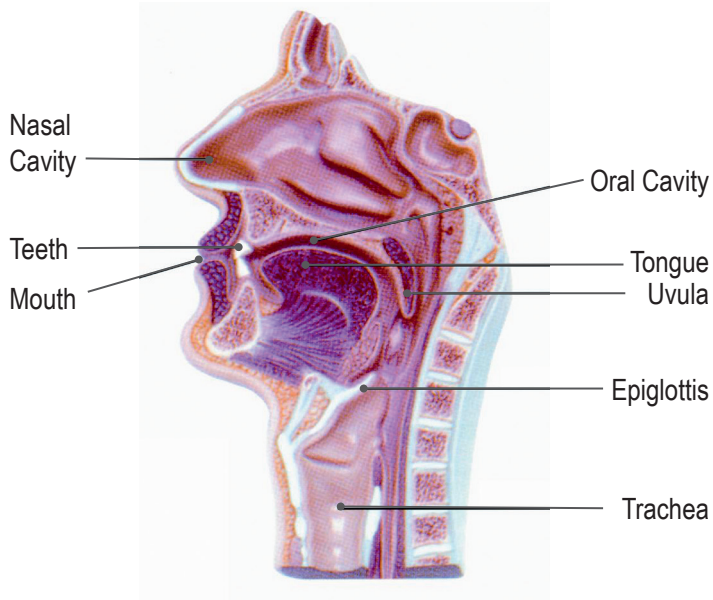
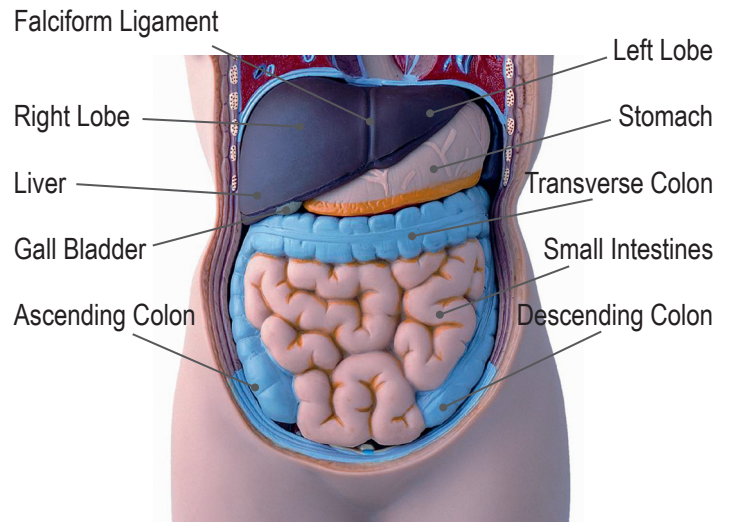


Fig. 4.2 Alimentary Canal



V. URINARY SYSTEM

The waste in your blood is filtered and diffused into your kidneys. The red renal arteries bring the contaminated blood to the kidneys, while blue deoxygenated renal veins carry the clean blood back to the circulatory system. In the kidneys, water and useful components, such as amino acids, glucose (sugar) and some other nutrients are reabsorbed into the bloodstream. Excess water and waste, in the form of urine, are transported through the ureters to the muscular bladder for storage. At the bottom of the bladder is a sphincter muscle, which is tightly contracted to prevent the urine from leaking out. However, when the urine reaches the volume of approximately 320ml, the bladder is uncomfortably distended. If your bladder is full, nerve endings in the bladder wall are stimulated. Impulses are sent to the brain, which reacts by telling your bladder to contract and the sphincter to relax, so that urine can pass out of your body through the urethra.

Fig. 5.1 Urinary Tract

