Main Types of Tissue

There are four main types of tissue: muscle, epithelial, connective and nervous. Each is made of specialized cells that are grouped together according to structure and function. Muscle tissue varies with function and location in the body. In mammals, the three types are: skeletal or striated muscle; smooth or non-striated muscle; and cardiac muscle, which is sometimes known as semi striated. Smooth and cardiac muscle contracts involuntarily, without conscious intervention. Epithelial tissue can have columnar, cuboidal, or squamous cell shapes. Epithelial tissue has differently shaped bricks - or cells, that is. There are columnar cells, which means “column-like cells”; cuboidal cells, which are cube-like cells; and squamous cells, which are flattened and scale-like cells. The connective tissues include several types of fibrous tissue that vary only in their density and cellularity, as well as the more specialized and recognizable variants—bone, ligaments, tendons, cartilage, and adipose (fat) tissue. Nervous tissue or nerve tissue is the main tissue component of the two parts of the nervous system; the brain and spinal cord of the central nervous system (CNS), and the branching peripheral nerves of the peripheral nervous system (PNS), which regulates and controls bodily functions and activity.

To me, the “wave” of depolarization is referred to as the contractions of the heart steadily going back and forth Like a wave would. Pulmonary circulation is the circulation system that carries deoxygenated blood to the lungs and returns oxygenated blood from the lungs back to the heart. The two blood vessels involved in the pulmonary circulation are pulmonary artery and the pulmonary vein.

The deoxygenated blood flows into the right ventricle from the right atrium. This blood is carried to the alveoli of lungs for the oxygenation by the pulmonary artery. The pulmonary artery, which immediately originates from the right ventricle, is called the pulmonary trunk. The pulmonary trunk divides into two; the left pulmonary artery and the right pulmonary artery. The left pulmonary artery carries blood to the left lung while the right pulmonary artery carries blood to the right lung.

Carbon dioxide is removed from the blood while oxygen is taken into the blood at the alveolar capillaries. The oxygenated blood is carried to the left atrium of the heart by four pulmonary veins. A small amount of oxygenated blood is carried to the heart by the bronchial veins.

The systemic circulation is the circulation system that carries oxygenated blood throughout the body and returns the deoxygenated blood to the heart from the body tissues. The oxygenated blood from the lungs returns to the left atrium of the heart through pulmonary veins. This blood flows into the left ventricle and comes out from the heart through the aorta. The aorta branches

into small arteries, which carry blood to different organs in the body. Within an organ or tissue, these arteries branch to arterioles, which make blood capillaries. The exchange of oxygen and nutrients with the metabolizing cells occurs via blood capillaries. Carbon dioxide and other metabolic wastes are transported back to the blood. The deoxygenated blood drains back to the venules and returns to the right atrium of the heart by vena cava. The deoxygenated blood from the upper half of the body above the diaphragm drains by the superior vena cava while the deoxygenated blood from the lower half of the body drains by the inferior vena cava.