



Locomotion

The three systems of the Locomotor system

Passive System

The Passive System needs no energy to maintain except for renewal of cells

Bones - support and stabilize

Joints - allow movement of the skeleton

Cartilage - for support and elasticity

Ligaments - to stabilize joints

Tendons - attach muscles to bone

Active System

The Active System produces heat as a by-product and needs energy to operate and renew cells. The **skeletal musculature** comprises the active system

Additional Systems

Additional Systems are needed for the horse's loco motor system to function:

Circulatory System - transports nutrients and oxygen and removes waste products

Arterial system - transports oxygen enriched blood from the heart - walls of these well-defined tubes are constructed of involuntary muscles

Venous system - carries deoxygenated blood to the heart - flaccid wall layers without muscles, often with valves to prevent backflow of blood

Lymphatic System - subsystem of the circulatory system, immune mechanism, collects and returns interstitial fluids to the blood.

Nervous System - connects the organism to its surroundings, receives and conducts information, regulates movement and organ functions

Epithelial System - covers the outside of the body, covers or lines internal organs or body cavities.

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