

Essential Function of Flat Bones in Maintaining Balance and Posture of a Body

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DESCRIPTION

When talking about the human skeletal system, bones are the strong part of our bodies which usually take center stage. The flat bones are our bodies' anatomical system, whereas long bones are well known for their vital roles in support and movement. Flat bones, as the name suggests are thin, flattened structures that come in various shapes, ranging from roughly parallel surfaces to curved structures. Unlike long bones, which are elongated and primarily contribute to the support and movement of the body, and these flat bones serves as a different set of functions. A layer of spongy bone sits between two thin layers of compact bone to form flat bones. They are not spherical, rather they are flat. The ribs and skull are two examples. Although they lack a bone marrow cavity, flat bones nevertheless contain marrow. The human body is a place to several prominent flat bones, including the skull bones, ribs, scapulae, and the sternum. One of the paramount functions of flat bones is to provide a protective shield for some of our most critical organs. The skull is a collection of flat bones that encases and safeguards the brain and it is the epicenter of our nervous system.

The delicate organs such as the heart and lungs are encased and protected by the rib cage, which is made up of flat rib bones. Cranial flat bones, including the frontal, parietal, and occipital bones, create a robust structure that not only safeguards the brain but also provides a foundation for facial features. The intricate design of these bones allows for the protection of our sensory organs, ensuring the eyes, ears, and nasal passages remain shielded from potential harm. Although one of the most notable characteristics of flat bones is their ability to shield essential organs, their function goes beyond simple defense. The process of making blood cells, known as hematopoiesis, is greatly aided by flat bones. The spongy layer of flat bones contains the

red marrow, which functions as a bustling factory producing platelets, white blood cells, and red blood cells. The sternum and the ribs, are crucial sites for the generation of blood cells. Red marrow within these bones plays a pivotal role in maintaining the body's blood cell count, ensuring a steady supply of oxygen-carrying red blood cells and immune-boosting white blood cells.

The synergy between flat bones and the circulatory system highlights their multifaceted importance in the overall functionality of the human body. In addition to their hematological and defensive functions, flat bones are essential for preserving the body's structural stability and integrity. The scapulae, also referred to as the shoulder blades are flat bones that support and stabilize the upper back muscles and help the shoulder joint to move. Their wide, level surfaces give muscles and ligaments many of places to attach, which makes it easier for the arms and shoulders to move in complex ways.

The pelvic bones are another set of large and flat structures form the foundation of the spine and support the weight of the upper body. The sacrum, a triangular-shaped flat bone at the base of the spine, connects the spine to the pelvic bones, forming a sturdy structure that bears the load of the upper body and provides stability during activities such as walking, standing, and sitting.

Flat bones work in harmony with their long and irregular counterparts to create a robust framework that supports our bodies in various activities. Their contribution to maintaining balance, stability, and posture often goes unnoticed, are more conspicuous functions of other bone types.

Structural stability, blood cell synthesis, and organ protection are just a few of the many functions that flat bones perform complex physiological processes that occur inside our bodies.

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