

Importance of Bone Marrow.

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Bone marrow

The bone marrow also produces and releases more white blood cells in response to infections, and more platelets in response to bleeding. If a person experiences serious blood loss, yellow bone marrow can be activated and transformed into red bone marrow. Healthy bone marrow is important for a range of systems and activities. Together with the liver and spleen, red bone marrow also plays a role in getting rid of old red blood cells. Yellow bone marrow mainly acts as a store for fats. It helps to provide sustenance and maintain the correct environment for the bone to function. The function of bone marrow in the body's ability to suppress illness comes from marrow's ability to produce lymphocytes or white blood cells from the underdeveloped cells located inside of it. These white blood cells are crucial in the fight against foreign invaders. Bone marrow is the soft, flexible connective tissue within bone cavities. A component of the lymphatic system, bone marrow functions primarily to produce blood cells and to store fat. Bone marrow is highly vascular, meaning that it is richly supplied with a large number of blood vessels.

IMPORTANCE OF BONE MARROW

Bone marrow is an essential component of the human body. Inside specific bones in the body, it is made up of soft, spongy tissue. It's also where we make all of our blood, which contains stem cells. Even though it is found in our bones, bone marrow is considered a part of our immune system. It aids in the prevention of infection as well as the production of healthy blood that can be circulated throughout our bodies. As a result, bone marrow has become a highly sought-after product that can be used to treat a wide range of illnesses. Bone marrow contains two types of stem cells, stromal stem cells, and hematopoietic stem cells. This bone marrow is usually found in the bigger bones of the body, such as the hip bones, ribs,

vertebrae, and shoulder blades. The stem cells found in bone marrow tend to be best at treating certain kinds of cancers, tuberculosis, bone, or heart disease. Not all stem cells are created equal. And certain stem cells can only treat certain kinds of conditions. In fact, some conditions can only be treated by patients receiving bone marrow transplants.

Your bone marrow can generate billions of new blood cells every day. Red bone marrow consists of hematopoietic stem cells, which are responsible for the production of blood cells. The types of blood cells produced by the bone marrow and their functions include:

Red Blood Cells (RBCs) transfer the oxygen from lungs to the body.

White Blood Cells (WBCs) fight infections by producing different types of antibodies and chemicals.

Platelets play an important role in the clotting of blood to prevent loss of blood.

Mesenchymal stem cells which are predominantly found in yellow bone marrow produce the non-blood cell components of the marrow. These non-blood cell components include fat, cartilage, fibrous connective tissue, and stromal cells.

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