

Function of the lymphatic system



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The key function of the lymphatic system is to bring together and transport tissue fluids from the intercellular spaces that does gas exchange, water transport and also for ion movement into all the tissues of our body and then back to the veins into the blood system. It does an important role by returning plasma proteins to the bloodstream, and then digests the fats that are absorbed and then it transported from the villi into the small intestine then to the bloodstream thru the lacteals and lymph vessels.

The new ones of lymphocytes are being factory-made in the lymph nodes antibodies and anti-assist that the body builds up an effective immunity to infectious diseases. The lymph node does an important role to protect mechanism of the body and it filters out micro-organisms such as, bacteria and foreign substances e. g. toxins.

As it transports giant molecular compounds e. g. hormones and enzymes from their manufactured sites into to the bloodstream. The lymph nodes are small and they are bean-shaped like kidney It work as filter of the lymphatic fluid and as the lymph passes through the lymph nodes, pathogens present in the lymph activates lymphocytes and macrophages to destroy the microbes.

Lymphatic vessels take place through the body beside arteries in the veins or viscera also in the subcutaneous tissue. They absent from the central nervous system to bone marrow, teeth, and avascular tissues.

A lymph vessel transports the fluid it is called lymph, the lymph contains white blood cell that transports in and out of the bloodstream as it's needed. If the body is attacked by a foreign substance, it's often transported from the

bloodstream into the lymphatic system for removal. The lymph vessels has not have central pump however, lymph needs to be transported by the peristaltic contractions of the vessels themselves.

Lymphatic ducts are a main lymph vessel that gathers lymph draining from the right upper our body and head. The lymphatic duct is quarter-inch in diameter and about two inches long; it discharges into the right subclavian vein, delivering lymph into to the bloodstream.

The thymus is an organ in the body controls the immune processes, the thymus procedure is a type of white blood cell that is known as a T-lymphocyte by this it means that they help our cells to recognise and destroy invading viruses, bacteria, abnormal cell growth e. g. cancer, and foreign tissues. Thymus gland helps to protect the heart along with the pericardium, as it produces hormones that stimulate the manufacture of certain infection fighting cells. In the children it helps immunity by producing white blood cell including T-cells. It atrophies as the child gets older therefore, person grows its roles becomes less so that the adults doesn't tend to have one as the bones and spleen take over those jobs.

The spleen's function is connected to the immune system or with the blood supply. The spleen get rid of the old red blood cells that is call erythrocytes from the blood supply and also removes stores and then produces white blood cell called lymphocytes. The lymphocyte produces antibodies and assists in removing microorganisms and bacteria from the blood supply.

Task 2(M5)

The lymphatic system maintains the immune system in removing and destroying waste remains, toxins, dead blood cells, pathogens, and cancer cells. The lymphatic system absorbs fats and vitamins from the digestive system then delivers the nutrients to the cells where it uses it cells, also the lymphatic system get rid of excess fluid and also waste products from the interstitial spaces among the cells.

The main maintain is the fluid and balance protein in the body, the lymphatic system performances as a minor circulatory system and plays a key role in continuing homeostasis good healthily. The Lymph is the fluid that is carried by the lymphatic system. It initiates as blood plasma the liquid component of the blood, after when it has been lost from the circulatory system due to hydrostatic pressure. Then the plasma leaks out of the blood vessel and into the surrounding tissues. Then it enters the lymphatic system once when it's within the lymphatic system, the lymph has alike work to the original interstitial fluid, and the extracellular fluid that surrounds cells. The large gap between the cells is designed, which allows fluid, interstitial proteins and other e. g. bacteria to flow into the lymph capillary.

The lymph has one way system that travels between the cells of the body, from the interstitial spaces to the subclavian veins just next of the neck. As the lymphatic system doesn't have no central pump like " heart" to pump it, its movement depends with the muscles and joint pumps. As it moves upper body towards the neck the lymph passes slowly through the lymph node that filters, it to remove debris and pathogens the neck lymph flows into the subclavian veins on whichever side of the neck.

The fluid vertebral into the venous circulation of the circulatory system from the tissues in order to stop dehydration fights against the infections and recycle plasma protein. The blood carries nutrients, oxygen, and hormones for the cells. The 10% remaining of the fluid that stays in the tissues as it's known as lymph. The 90% of this fluid then returns to the venous circulation through the venues and continues as venous blood.

The (MALT) mucosa associated lymphoid tissue is immune responses to specific antigens come across alongside all mucosal surfaces, MALT inductive immune tissues where antigen sample occurs. The larger group function is like lymph nodes smaller, spreads MALT are mostly T lymphocytes also it has B cells and plasma cells. The IgA in the intestines and respiratory tract is to protect against pathogens that may access to underlay tissues. lymphatic-system

Task 3 (D3)

Infection of the Lymphatic System

Lymphedema: One of the disorders which occurs due builds-up of lymphatic fluid in the interstitial tissue. The affects is swelling in the arm, legs and in other part of the body. The harshness of this disorder varies an abnormal virus which is painful, disfiguring and cellulite infections deep in skin. If this doesn't get treated, the skin eventually becomes fibrotic “ thickening of the skin and subcutaneous tissues” losing normal structure, functionality and movement.

There are two types:

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Primary Lymphedema: Is genetic condition that occurs due to impaired or missing lymphatic vessels, which can affect from one to several as four limbs at other part of the body this may carry an internal organ which could be exhibited at birth, develops onset of puberty or happens in adulthood without any apparent causes.

Secondary Lymphedema: is basically developed regional lymphatic insufficiency which occurs due to infection, any operation or suffocating that disrupts the lymphatic vessels or even loss lymph nodes. http://i3.squidoo.com/resize/squidoo_images/-1/lens8897831_1262976791exercise_for_lymphedema.ghhttps://www.vascularweb.org/vascularhealth/PublishingImages/NorthPoint%20Images/Lymphedema_01_Base_225.jpg

There are a few abnormal count of the patient's blood:

His Red Blood (Platelet count) is in the normal range, but it's very low

His white blood cell count is higher than the normal average range, it's 15.0 when it's meant to be between 4.0 -6.0

His Basophilis and Eosinophils both are very low

His Lymphocytes is too high, it's over the normal range

His Monocytes is in the average but it's high

The underlying mechanisms that could have produced this abnormal blood count in a patient with Lymphoma, is because Lymphoma is a cancer that <https://assignbuster.com/function-of-the-lymphatic-system/>

attacks the white blood cell by that the patient's blood count to have Lymphoma. Patients with lymphoma produce abnormal lymphocytes, which they are white blood cell. Lymphocytes are mostly found in the lymphoid tissues and lymph nodes, which that make the lymphatic system. this is where lymphoma occurs