Life Processes

Lymphatic System

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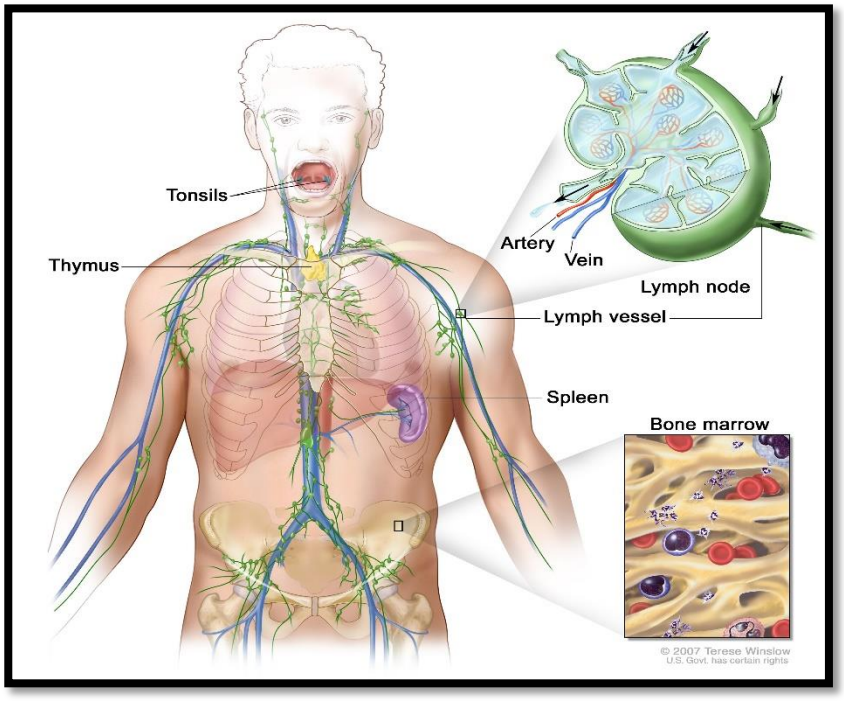
There is another type of fluid also involved in transportation. This is called lymph or tissue fluid. Through the pores present in the walls of capillaries some amount of plasma, proteins and blood cells escape into intercellular spaces in the tissues to form the tissue fluid or lymph. It is similar to the plasma of blood but colourless and contains less protein. Lymph drains into lymphatic capillaries from the intercellular spaces, which join to form large lymph vessels that finally open into larger veins. Lymph carries digested and absorbed fat from intestine and drains excess fluid from extra cellular space back into the blood.

The tissues and organs that produce, store, and carry white blood cells that fight infections and other diseases. This system includes the bone marrow, spleen, thymus, lymph nodes, and lymphatic vessels (a network of thin tubes that carry lymph and white blood cells). Lymphatic vessels branch, like blood vessels, into all the tissues of the body. Also called lymph system.

Anatomy of the lymph system, showing the lymph vessels and lymph organs including lymph nodes, tonsils, thymus, spleen, and bone marrow. Lymph (clear fluid) and lymphocytes travel through the lymph vessels and into the lymph nodes where the lymphocytes destroy harmful substances. The lymph enters the blood through a large vein near the heart.



The lymphatic system is a network of tissues, vessels and organs that work together to move a colorless, watery fluid called lymph back into your circulatory system (your bloodstream).

Some 20 liters of plasma flow through your body's arteries and smaller arteriole blood vessels and capillaries every day. After delivering nutrients to the body's cells and tissues and receiving their waste products, about 17 liters are returned to the circulation by way of veins. The remaining three liters seep through the capillaries and into your body's tissues. The lymphatic system collects this excess fluid, now called lymph, from tissues in your body and moves it along until it's ultimately returned to your bloodstream.

Your lymphatic system has many functions. Its key functions include:

- **Maintains fluid levels in your body:** As just described, the lymphatic system collects excess fluid that drains from cells and tissue throughout your body and returns it to your bloodstream, which is then recirculated through your body.
- **Absorbs fats from the digestive tract:** Lymph includes fluids from your intestines that contain fats and proteins and transports it back to your bloodstream.
- **Protects your body against foreign invaders:** The lymphatic system is part of the immune system. It produces and releases lymphocytes (white blood cells) and other immune cells that monitor and then destroy the foreign invaders — such as bacteria, viruses, parasites and fungi — that may enter your body.
- **Transports and removes waste products and abnormal cells from the lymph.**