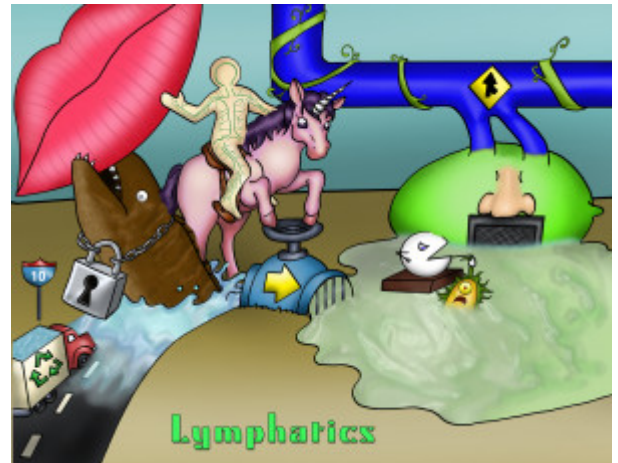


Lymphatics

The lymphatic system is a part of the circulatory system that is involved with both circulatory processes and immune system processes. While the majority of the plasma that goes through capillary filtration will re-enter the bloodstream directly, about 10% of it is left behind in tissue as interstitial fluid. The lymph system recycles this 10% of interstitial fluid and transports it back into the blood. Additionally, it helps transport large lipids through lacteals, because large lipids are too big to travel through the capillaries into the blood. Lymph travels unidirectionally because its valves are unidirectional and prevent backflow. The lymph is full of white blood cells that monitor it for pathogens. At the lymph nodes, antigen-presenting cells stimulate the adaptive immune response. The lymph nodes filter the lymph, which enters into the lymph vessels and lymphatic duct. From the lymphatic duct it merges with veins, allowing lost plasma to travel back to the blood.



PLAY PICMONIC

Characteristics

Recycles 10% of Interstitial Fluid

Recycling-truck on Interstate-10 with Fluid

While majority of the plasma that goes through capillary filtration will re-enter the bloodstream directly, about 10% of it is left behind in tissue as interstitial fluid. The lymph system recycles this 10% interstitial fluid and transports it back into the blood.

Transport Large Lipids from Lacteals

Large Lips eaten by Locked-eel

The lymph system also helps transport large lipids from the small intestine that cannot be absorbed through cardiovascular capillaries. Large lipids are absorbed by the lacteals, lymphatic capillaries, and are transported in lymph.

Unidirectional Valves

Unicorn on One-way Valve

Lymph flows unidirectionally due to the unidirectional valves designed to prevent backflow.

Lymph Nodes Filter Lymph

Lime-nose filters Lime-juice

The lymph nodes are filtration sites for lymph. Additionally, the lymph nodes are one of the main locations of the immune system response to pathogens.

WBCs Monitor Lymph for Pathogens

White-mac-man Monitors Lime-juice for Pathogens

White blood cells monitor lymph at the lymph nodes for pathogens. Antigen-presenting cells trigger the adaptive immune response at lymph nodes if a pathogen is encountered.

Merge with Veins

Merging-sign going to Vine-vessel

Lymph vessels drain into lymph ducts, which merge with veins and recycle plasma into the bloodstream.