



## THE IMPORTANCE OF THE LYMPHATIC SYSTEM



The lymphatic system is an extremely important system in the body and working in conjunction with the circulatory system it helps with the elimination of toxins and other waste materials from the body. The lymphatic system consists of various organs, lymphatic ducts, and lymph nodes, and it transports a clear fluid called lymph. The lymph and the lymphatic system does not receive the same attention as that of the blood circulation, and remains a mysterious entity for many.

The main organs of the lymphatic system are the lymph, lymph vessels, lymph nodes, spleen, and thymus gland:

**Lymph** is the filtered form of blood plasma. Plasma is the watery part of the blood that is required to carry the blood cells through the circulatory system. Lymph is the blood plasma that seeps through the veins and carries away cellular waste, white blood cells, fats, proteins, glucose, cancer cells, and dead cells. The lymph then fills the interstitial spaces between muscles, bones and any other empty space in the body, and then is collected in the lymph vessels. The smaller lymph vessels connect to form large lymph vessels. The two main **lymph vessels** in the body are the right thoracic duct which drains only the upper right part of the body, and the left thoracic duct which drains all other lymph vessels from the rest of the body. However, due to lack of a centralized organ or a pumping mechanism, the lymph vessels have to rely on several muscle contractions and other movements to propel the lymph towards nearby lymph nodes. Therefore, it is important to remember that a sedentary lifestyle can significantly restrict the lymph flow and thereby block its immune and detoxification functions.

There are approximately 600 **lymph nodes** distributed all

over the body. The lymph nodes act as immune filters before lymph proceeds to re-enter into the circulatory system. For example if any pathogen is identified, the white blood cells multiply preparing for its destruction and thereby causing the lymph nodes to swell.

Other important organs in the lymphatic system are bone marrow (a site for manufacturing of B-lymphocytes), the spleen, and the thymus gland. **The spleen** is small glandular organ located in the upper left corner of the abdomen under the ribcage. It helps in filtering old and dead red blood cells and other foreign pathogens from the bloodstream and supports immunity. **The thymus** gland is inside the ribcage behind the breastbone. The thymus produces the T-lymphocytes which are important for immediate immune response to an invading pathogen.

A large concentration of lymph tissue known as **GALT** (gut associated lymphoid tissue) surrounds the digestive system. It includes the tonsils and adenoids, Peyer's patches, appendix and other lymph tissue dispersed around the intestines. GALT tissue absorbs fats and actively separates nutrients from pathogens providing immune support as required.

The main functions of the lymph and the lymphatic system are to produce and supply different types of the white blood cells when required for immune function, removal of excess fluids from body tissues, absorption of fatty acids and subsequent transport of fat to the circulatory system.

In the next Health Science News Page we will focus on lymphatic system diseases.

This information is provided to you by the Dr. Rath Research Institute a leader in the breakthrough of natural health research in the field of cancer, cardiovascular disease and other common diseases. The Institute is a 100% subsidiary of the non-profit Dr. Rath Foundation.

The ground-breaking nature of this research poses a threat to the multi-billion dollar pharmaceutical "business with disease". It is no surprise that over the years the drug lobby has attacked Dr. Rath and his research team in an attempt to silence this message. To no avail. During this battle, Dr. Rath has become an internationally renowned advocate for natural health. Says he: "Never in the history of medicine have researchers been so ferociously attacked for their discoveries. It reminds us that health is not given to us voluntarily, but we need to fight for it."

This information is based on scientific research results. It is not intended to substitute for medical advice to treat, cure, or prevent any disease.  
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