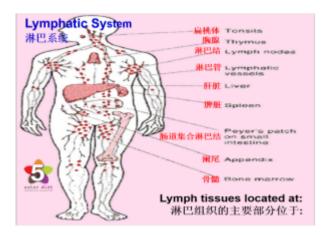


Lymphatic System Overview



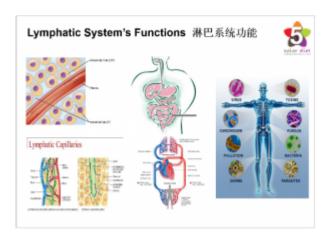


The lymphatic system is a network of tubes throughout the body that drains fluid (called lymph) from tissues & empties it back into the bloodstream. The major parts of the lymph tissues are located in the bone marrow, spleen, thymus gland, lymph nodes & the tonsils except the bones, superficial skin, deeper portion of peripheral nerves, the central **nervous system, endomysium of muscles.** The heart, lungs, intestines, liver, and skin also contain lymphatic tissues.

The lymph nodes are the powerhouses of the lymphatic system & you have more than 500, located at pivotal points along your lymphatic vessels. Lymph nodes are found at various points around the body, including the throat, armpits, chest, abdomen & groin. All lie close to arteries. Bacteria picked up from the tissues by the lymph are trapped in the lymph node. White blood cells called lymphocytes can then attack & kill the bacteria. This is why your lymph nodes tend to swell if you have an infection. Viruses and cancer cells are also trapped by lymph nodes.

Certain diseases can affect the lymph nodes, the spleen, or the collections of lymphoid tissue in certain areas of the body eg: Leukemia, Lymphadenopathy, Lymphadenitis, Lymphomas, Splenomegaly and Tonsillitis, etc.

The lymphatic system's functions





- Helps to maintain fluid balance in the tissues.
- Helps to remove excess fluid, waste, debris, dead blood cells, pathogens (Eg: bacteria, fungi & viruses), cancer cells & toxins from these cells and the tissue spaces between them.
- Helps in clearance of proteins & large particles which are too large to be absorbed into the blood capillaries but can be carried through the lymphatics.
- Aids the immune system in destroying pathogens and filtering waste so that the lymph can be safely returned to the circulatory system.
- Helps in absorption of fats from the small intestine in the process of digestion.
- The lymphatic system also works with the circulatory system to deliver nutrients, oxygen, and hormones from the blood to the cells that make up the tissues of the body.

Risk Factors Of Lymphatic Diseases



A risk factor is anything that may increase your risk for a disease. The risk factors for the different types of lymphomas can vary. Having one or more risk factor does not mean that a person will develop lymphoma. Most people who have risk factors never develop the disease.



Hodgkin lymphoma risk factors include:

- Age: Hodgkin lymphoma occurs most often in early adulthood (between ages 15-40, especially in the 20s) or late adulthood (after age 55).
- Family history: About 5 percent of cases have a family link.
- Previous infection with Epstein-Barr virus (EBV) infection or mononucleosis.
- Weakened immune system

Non-Hodgkin lymphoma risk factors include:

- Age: Most cases occur in people older than 60.
- Chronic infection with Hepatitis C virus (HCV) or Helicobacter pylori.
- Exposure to certain chemicals, including benzene and some herbicides and insecticides.
- Immune system deficiency and Human immunodeficiency virus (HIV) infection.
- Infection with Human immunodeficiency virus (HIV), Human T-cell leukemia virus type 1 (HTLV-1), Human herpesvirus 8 (HHV8), or Epstein-Barr virus.
- Previous chemotherapy or radiation therapy.
- Radiation exposure.

Diseases Of Lymphatic System





Lymphatic disease is a class of disorders which directly affect the components of the lymphatic system.

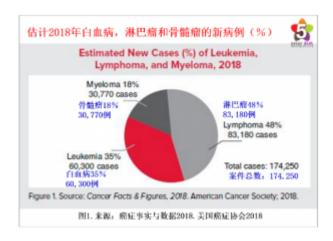
- Diseases & disorder Hodgkin's Disease/ Hodgkin's Lymphoma: This is a type of cancer of the lymphatic system. It can start almost anywhere in the body. It is believed to be caused by HIV, Epstein-Barr Syndrome, age and family history. Symptoms include weight loss, fever, swollen lymph nodes, night sweats, itchy skin, fatigue, chest pain, coughing or trouble swallowing.
- Non-Hodgkin's Lymphoma: Lymphoma is a usually malignant cancer. It is caused by the body producing too many abnormal white blood cells. It is not the same as Hodgkin's Disease. Symptoms usually include painless, enlarged lymph node or nodes in the neck, weakness, fever, weight loss, and anemia.
- Lymphadenitis: Lymphadenitis is an infection of the lymph nodes usually caused by a virus, bacteria or fungi. Symptoms include redness or swelling around the lymph node.
- Lymphangitis: Lymphangitis is an inflammation of the lymph vessels. Symptoms usually include swelling, redness, warmth, pain or red streaking around the affected area.



- Lymphedema: Lymphedema is the chronic pooling of lymph fluid in the tissue. It usually starts in the feet or lower legs. It is also a side-effect of some surgical procedures.
- Lymphocytosis: Lymphocytosis is a high lymphocyte count. It can be caused by an infection, blood cancer, lymphoma, or autoimmune disorders that are accompanied by chronic swelling.

Statistics of United States in 2018 On Leukemia, Lymphoma & Myeloma

New cases of **leukemia**, **lymphoma and myeloma** are expected to account for 10 percent of the estimated 1,735,350 new cancer cases diagnosed in the US in 2018.



Chinese Medicine Theory On Lymphatic System Facts





In **Chinese Medicine's theory**, the lymphatic system is called the **"River of Life"** which performs the vital function of removing excess fluid & waste, destroying pathogens & delivering nutrients and oxygen to the cells of the body. This process protects your body from toxins, allows cells in the body to function at their best and is vital to healthy immune system function. **Chinese Medicine** emphasized that a sluggish lymph is related to the Spleen energy & consuming some herbs may help to strengthen the Spleen's Dry **Dampness & Clear Phiegm** are used according to the signs and symptoms of each individual.

A **stronger lymphatic system** means a more resilient & reactive immune response and defense. A **sluggish lymphatic flow** can also be a root cause of arthritis, bronchitis & pneumonia, chronic fatigue syndrome, chronic sinusitis; colds, eczema, swollen glands, upper respiratory, sinus & ear infections, throat problems and even cancer.

When your colon isn't working optimally, your lymphatic system will also back up. If your lymphatic system is congested, it can take several months to get your lymph circulating properly. Your lymphatic system plays a role in helping destroy toxic substances, but your liver and kidneys work continually to remove these substances from your body. The liver is very permeable to fluids which flow freely into the **liver's lymphatic system**. The liver is an expanding and contracting reservoir of **blood**, **lymph** & **bile**. If circulation is poor, these fluids will have a tendency to **congest the liver**.



Causes & Symptoms Of Lymphatic System's Problems **Causes Of Lymphatic System's Problems**

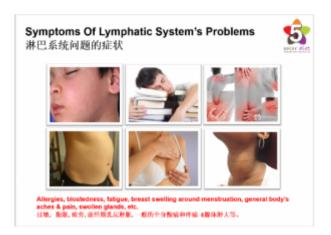


- Digestive imbalances.
- Genetic.
- Injury.
- lodine deficiency.
- Lack of Exercise.
- Medications like Tamoxifen.
- Obesity.
- Parasitic infections.
- Recurrent infections or illnesses.
- Skin or wound infections (Eg: Lupus).
- Smoking or second-hand smoke.
- Stress.



- Surgery.
- Cancer of the lungs, breast, neck or abdomen, etc.

Symptoms Of Lymphatic System's Problems



- Allergies.
- Bloating.
- Breast swelling around menstruation.
- Cellulite.
- Fatigue.
- Food sensitivities.
- General body aches & pains.
- Pain in the hands & feet.
- Rashes.
- Swollen glands, etc.

Recommended Food Sources For Improving Lymphatic System's Problems





- Fruits: Avocados, berries, citrus fruits & lemon juice, etc. Also, Green fruits which are alkaline, helps to neutralize harmful pathogens, therefore lessening the burden on the lymphatic system.
- **Grains:** amaranth, barley, black rice, brown rice, Chinese barley, germinated brown rice, millet, purple rice, quinoa, cereals, oats, lentils & legumes, etc.
- Herbs & Spices: black pepper, burdock, cardamom, cinnamon, coriander, fennel, garlic, ginger, licorice, onions, parsley, peppermint & turmeric, etc.
- **Meat & Seafood:** fish especially deep-water fish.
- Nuts & Seeds: almonds, brazil nuts, chestnuts, hazelnuts, macadamia nuts, walnuts, chia seeds, flaxseeds, pumpkin seeds & sunflower seeds, etc.
- Oils: Castor oil, chia seeds oil, coconut oil, flaxseed oil & olive oil, etc.
- Vegetables: Barley grass, carrot, corn silk, kelp, seaweed, sweet potatoes & wheatgrass, etc. Also, Green vegetables which are alkaline, helps to neutralize harmful pathogens, therefore lessening the burden on the lymphatic system.
- Others: Honey, yogurt & teas (Eg: Apple cider vinegar, Burdock, Chrysanthemum, Echinacea, Marigold, Mullein & Peppermint, etc). Consume 8-10 glasses of water daily including teas & soups to keep yourself hydrated. Do not drink water only when you are thirsty.
- Strengthen Spleen with green, orange & yellow fruits & vegetables.



- Detox your kidneys: Follow the kidney's detox program.
- Detox your liver: Follow the liver's detox program.

Foods To Avoid Or Least Intake For Improving Lymphatic System's Problems



- Artificial sweeteners.
- Carbonated drinks.
- Dairy products (Eg: Butter, cheese, eggs & milk except yogurt).
- Fried & oily foods.
- Hydrogenated fats (Margarine).
- Preservatives beverages & foods (Eg: cured meat, canned foods, canned beverages & preserved vegetables, etc.).
- Processed foods.
- Red meat.
- Refined grains (Eg: white rice & white flour).
- Refined sugar (Eg: biscuits, cakes & buns, etc).
- Shellfish.
- Salt.



• Unhealthy oils (Eg: cottonseed oil, palm oil & peanut oil, etc).

Supplementary For Improving Lymphatic System Problems



- Herbs: Astragalus, Bilberry, Burdock, Corn Silk, Chlorella, Cleavers, Dandelion, Devil's Claws, Echinacea, Figwort, Goosegrass, Gotu Kola, Horsetail, Red Clover, Spirulina, Black Walnut & Wheatgrass, etc.
- Amino Acids, Vitamins & Minerals: Fish oils, Vitamin A, Vitamin B complex, Vitamin C, Vitamin D, Vitamin E & Selenium, etc.

Note:

- (1) To take supplements at an interval of 1 to 2 hours from caffeine beverages or medication.
- (2) Consult health experts' advice shall you need to take any supplements, especially if you are pregnant, breastfeeding or having any medical conditions.

Alternative Therapies For Improving Lymphatic System Problems





- Acupuncture: Stimulates lymph flow.
- Exercise: During periods of rest, lymph is sluggish. During exercise the lymphatic pump becomes very active. Exercise can increase lymph flow ten to thirty-fold. Thus, regular exercise is the most important factor in keeping a healthy lymph flow.
- Lymph drainage or tuina massage: These massages help to stimulate lymph circulation, drains fat, fluids, toxins & other waste materials from your cells.
- **Meditation**: Meditation helps to balance the body' system.
- Sauna: Saunas, steam baths or footbath are an excellent way to sweat out toxins through the skin & cleanse your body's system's toxins.

Lymphatic Drainage Helps To Detox Your Body's Toxins





You can use a brush or some oil for this lymphatic drainage.