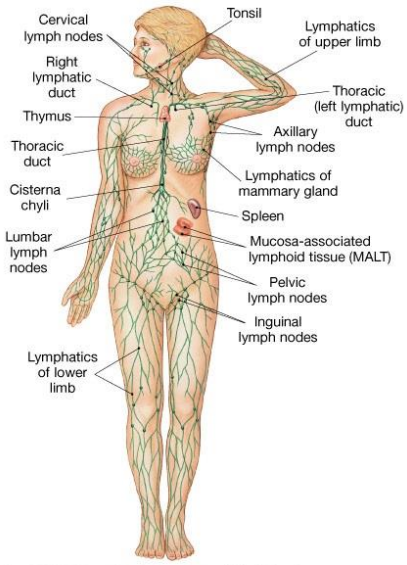
Lymphatic System

People often talk about swollen glands but what they mean is swollen lymph nodes. Lymph nodes are part of your lymphatic system. It's your lymphatic system that carries out your immune responses - fights infection and protects you from bacteria and viruses. Your lymphatic system is vital to your health.

Lymph nodes are oval structures located along the length of lymphatic vessels. They range in size from 1 to 25 mm in length. Lymph nodes are scattered throughout your body, usually in groups. They are heavily concentrated in certain areas like your neck and jaw line, your armpits, around your breasts and in your groin.



The role of lymph nodes is to filter lymph fluid and to break down foreign substances. Lymph nodes produce immune cells that fight infection. When bacteria or other immune threats are present in lymph, your lymph nodes swell because they increase their production of infection-fighting white blood cells. People often talk about swollen glands, but what they really mean is swollen lymph nodes.

Lymph nodes that enlarge during an infection are usually soft and tender. It's worth remembering that, in contrast, cancerous lymph nodes usually feel enlarged, firm and non-tender. NB/ Cancer cells may travel via the lymphatic system and produce clusters of tumour cells. Such secondary tumour sites are predictable by the direction of lymph flow from the organ primarily involved. Knowing where lymph nodes are situated and the direction in which lymph flows is important in the diagnosis and prognosis of the spread of cancer by metastasis.

You are constantly producing lymph. Lymph is the excess fluid that drains from spaces between cells all over your body. It is an on-going process. Your daily lymph volume is estimated to be around 3 litres. Lymph circulates around your body in lymphatic vessels. But whereas your blood circulates because of your heart pumping, your lymph only circulates because of your breathing and your skeletal muscle contractions. A key reason to keep active, is that when you're active you breathe more deeply and you use more muscles. Breathing and muscle contraction are what makes your lymph circulate. Circulating your lymph is what boosts your immune response.

Your thymus and red bone marrow are known as your primary lymphatic organs, so-called because they produce the B and T cells that carry out your immune responses. Your major secondary lymphatic organs are your spleen and lymph nodes. This is where most immune responses occur. You also have lymphatic nodules which stand guard in your mucous membranes (gastrointestinal tract, respiratory passageways, urinary tract and reproductive tract) to help guard against invaders.

Ultimately, lymph drains into your venous blood through your right lymphatic duct and thoracic duct (left lymphatic duct). These are located near to where your collar bones meet your sternum i.e. at the junction of your subclavian and internal jugular veins.

Your lymphatic vessels also transport dietary fats (lipids) and fat soluble vitamins (A, D, E and K), absorbed by your gastrointestinal tract, to your blood.

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