

## Lymphatic system

The lymphatic system is a network of tubes throughout the body that drains fluid (called lymph) from tissues and empties it back into the bloodstream. The main roles of the lymphatic system include managing the fluid levels in the body, filtering out bacteria, and housing types of white blood cells. Lymph is filtered through the spleen, thymus and lymph nodes before being emptied into the blood.

### Keeping a balance of fluid

Blood vessels tend to seep fluid into surrounding tissue. The lymphatic system drains off any extra fluid to stop the tissues from puffing up. The feet in particular are prone to puffiness.

### Lymphatic vessels

Lymphatic vessels criss-cross the entire body, except for the central nervous system. Some lymphatic vessels have valves (similar to the valves in veins), which stop the lymph from running back the wrong way.

### Spleen

The spleen is inside the abdomen, just under the diaphragm. This is one of the filtering organs of the blood. As well as removing microbes, the spleen also destroys old or damaged red blood cells.

### Thymus

The thymus is inside the ribcage, just behind the breastbone. This is another filtering organ of the blood, that contains many white blood cells called lymphocytes.

### Lymph nodes

Lymph nodes are found at various points around the body, including the throat, armpits, chest, abdomen and 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 and 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.

### Common problems

Some common problems of the lymphatic system include:

- **Glandular fever** - symptoms include tender lymph nodes
- **Hodgkin's disease** - a type of cancer of the lymphatic system
- **Oedema** - swelling caused by too much fluid in the tissues
- **Tonsillitis** - infection of the tonsils in the throat.

### Things to remember

- The lymphatic system maintains fluid levels in the body.
- Bacteria and other microbes are taken up by the lymph and delivered to the lymph nodes for destruction.
- The spleen and thymus are organs that filter the blood.

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