

# Medicine for Managers

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## Why Do I Need Lymph Nodes?

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**We've all got lots of lymph nodes in the body, over 600 in all. They play a key part in helping to keep us healthy and yet we only tend to hear about them when we have a sore throat and the doctor nods sagely and tells us that the nodes in the neck are swollen. So what are they and why do we need them?**

The first thing to say is that they are often called lymph glands, but they are not glands at all. Glands secrete things, like saliva or milk. Lymph nodes do not secrete anything, so to be correct they should be called **nodes**.

Each node is a spherical or bean-shaped structure which varies in size from 0.5 to 2 cm in diameter and which is part of the body's immune system. Each node is linked together by channels which form a network throughout the body. Each one has a fibrous outer capsule within which is a cortex and at the centre of which is a medulla.

The nodes have many functions but in general the cortex manufactures cells when exposed to infection (antigen) and the medulla contains cells which produce antibodies. Each node contains white blood cells called lymphocytes which continually recirculate through the lymph nodes and the blood stream. The lymphocytes make antibodies and increase in number when the body is under attack from particular types of infection. There are clusters of lymph nodes

in the neck, the armpits, in the chest, in the abdomen and in the groin. The channels linking the nodes are delicate and carry lymph fluid around the body. There are usually several of the (afferent) channels carrying the fluid to

each node but only one (efferent) channel.

Lymph nodes have another important function. They act as a filter catching any foreign particle, be it organism, abnormal cell or debris that should not be circulating. This has significant body defence consequences. The tonsils and the spleen are really large lymph nodes and serve similar

functions although the spleen filters blood rather than lymph.

The nodes may become enlarged or inflamed in various conditions, varying from minor infections to life threatening illnesses including cancers. The lymphocytes collect and destroy invading organisms and multiply during times of infection to be able to defend the body effectively. In consequence the nodes in the area of the infection will become enlarged. In

*We need our lymph nodes to manufacture cells and antibodies to fight infection and to remove circulating foreign particles*

cases of throat infection, the nodes in the neck may become enlarged, in the breast or arm, the nodes in the armpit will become enlarged and in the leg, the nodes in the groin will enlarge. The enlargement may be temporary in, for example, simple bacterial infections (such as tonsillitis) or may be more persistent in such conditions as glandular fever or HIV.

Glandular enlargement in cancer occurs because malignant (cancerous) cells are carried in the lymph from the site of the tumour. They lodge in the node and multiply. During this period the tumour spread may be delayed and the nodes are therefore very important in combatting the disease temporarily. For this reason in cases of, for example, breast cancer, surgeons removing a tumour may also remove the associated lymph nodes. These can be examined under a microscope to ascertain whether the tumour has spread from its original site and whether the spread has been confined only to the lymph nodes rather than spreading more distantly. This is important because knowledge of the degree of spread often governs the nature of treatment offered to the patient and can be used as a measurement of the likelihood of cure or survival. In cancers affecting the blood itself (the leukemias), the uncontrolled multiplication of malignant lymphocytes may cause generalised nodular enlargement.

So, should we seek medical care if we have enlarged nodes. Well, nodes can, on occasion, be of significance and if you are aware of enlarged nodes which have persisted for more than a fortnight, particularly if they are accompanied by more general signs of infection or if you have experienced recurrent or prolonged fever, fatigue and weakness, night sweats or weight loss, you should consult a

doctor. In such circumstances the doctor will take a history and examine you and may identify an infection which may need treatment. If there is not a clear reason why the glands are enlarged further investigation may be needed in the form of a scan of the affected area. Sometimes it is necessary to remove one of the nodes for microscopic examination to make a diagnosis.

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