

### Understanding Lymph Nodes

The most fundamental part of the lymphatic system is the lymph nodes. We look at how lymph nodes originated lymphatic drainage massage, their structural ability to maintain our health and explain why swollen lymph nodes cause aching joints.

Origins of manual lymphatic drainage: in 1932 Emil Vodder Ph.D., M.T (1896 – 1986) and Estrid Vodder (1898 – 1996), whilst working as massage therapists in Cannes on the French Riviera, observed a common ailment through many treatments and observations of their patients. They recorded swollen lymph nodes in the necks of patients which coincided with chronic sinusitis. At the time, now over 75 years ago, treating the lymphatic system was unthinkable for massage therapists, or even for physicians. As they were working around the throat and over swollen and tender areas their application was very light. After five years of studies they took their findings to Paris for the first time. Their success and treatment went on to be called MLD - manual lymphatic drainage - and is currently used today although sadly not for its original purpose.

Firstly, I must draw your attention to two terms that are commonly and often improperly used. The term “lymph gland” should be avoided because lymph nodes do not secrete like glands. Small lymph nodes can be referred to as “nodules” and is this is misleading. Lymph “node” refers correctly to the organs that are encapsulated in connective tissue and have a specific inner structure.

#### Structure of a Lymph Node

Their primary roles within our system are to filter and clean lymph fluid for waste removal, proliferate new lymphocytes for immunity and to regulate concentration of protein to help maintain correct blood pressure.

We have between 700 and 1,000 nodes spread throughout the entire body, with between 300 and 500 in the abdomen with more in and around the joints to facilitate the contraction and filtration effect through movement. From 0.2cm to 3cm, lymph nodes vary in size with additional factors influencing them in respect of shape, number and size. They can be spherical, oval, spindle shaped, or kidney shaped depending on their topographical position. Despite this some groups of nodes can display similar characteristics. For example, inguinal lymph nodes are large and round, outer iliac lymph nodes are oval and large and inner iliac small and round.

Lymph reaches the nodes via afferent vessels and is drained away by efferent vessels; this is perhaps more easily remembered as arriving vessels and exiting vessels. Usually there are many vessels arriving with waste to be cleaned with only one, two or three exiting. Ensuring a slow exit allows better filtration of waste and toxins with many more lymphocytes present in efferent lymph fluid.

Lymph nodes have a contractile outer capsule which is densely packed with collagen fibres, a few elastic fibres and isolated smooth muscle cells, allowing fluid movement when we are at rest. The hilus is the location where efferent vessels exit to join along the lymphatic system and the lymph fluid which is passed through is filtered, continuously cleaned and transported out and towards more lymph nodes. Filtration of waste passes through hundreds of lymph nodes to be effectively cleaned.

## Understanding Lymph Nodes

Particles which pass through our lymph nodes every second of every day consist of foreign substances, trans fats, toxins, metabolic waste, proteins, fat at high levels in the Peyer's Patches found in the small intestine, dead red and white cells, water and new lymphocytes.

### Summary

In times of sickness particularly in Glandular Fever or Flu, even a common cold can leave us with sore aching joints. It is easier now to understand that our lymph nodes, which are swollen and fighting infection are causing the pain because infected, over stretched and swollen lymph nodes congregating in and around the joints of the body will have an adverse sensation effect on surrounding nerve endings. With winter approaching I recommend self-lymphatic massage of head and neck lymph nodes to help speed up healing of any sore throat or blocked nose. Firstly, by pressing into the supraclavicular lymph nodes at the base of the neck then by applying continuous firm pressures into the submandibular lymph nodes. Keep repeating for at least ten minutes and there is no harm in regularly pressing in and around all these areas to help keep your lymphatic system naturally healthier in the cold/flu season.

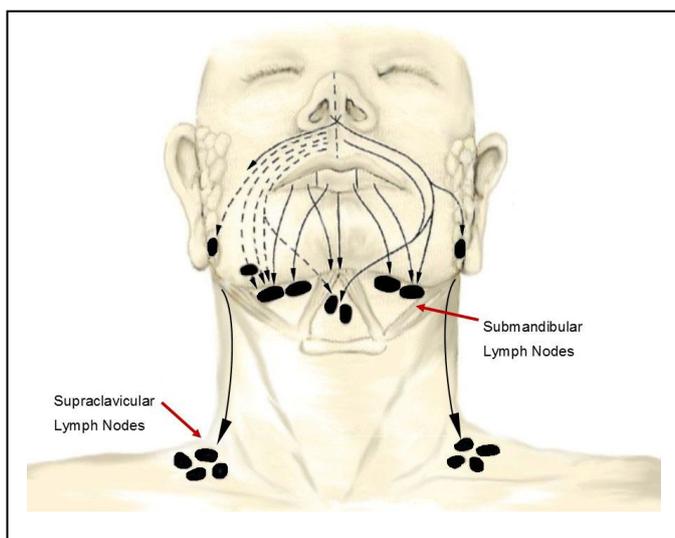


Fig.1

Some lymph nodes of the face and neck showing direction of lymph flow.

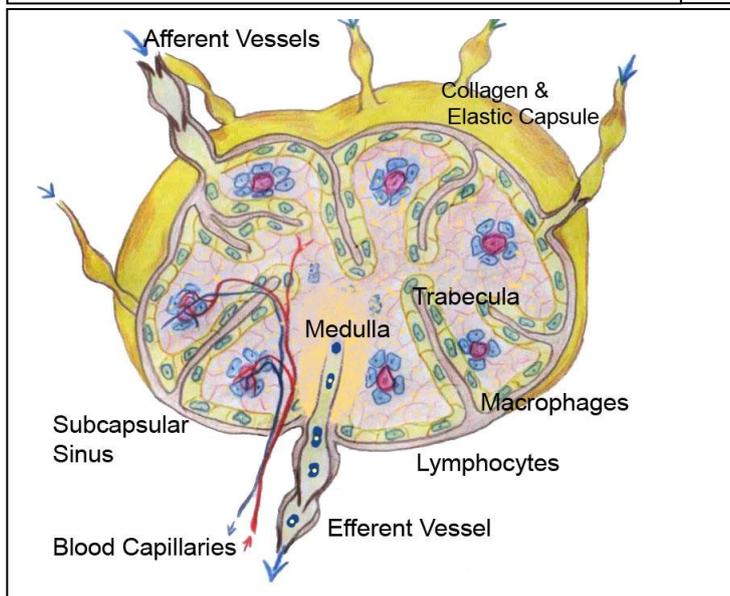


Fig.2

Showing the complicated internal workings of a lymph node.