

# LYMPHATIC SYSTEM

rvsd 15Mar2016

Martini's 5<sup>th</sup>: 751-795, 6<sup>th</sup>: 779-820, 8<sup>th</sup>: 776-822, 9<sup>th</sup>: 765-778, 10<sup>th</sup>: 782-795

**Lymph:** (p. 784) “ interstitial fluid”, leaks from capillaries, composition similar to plasma.

Bathes organs, (excess lymph: **edema**)

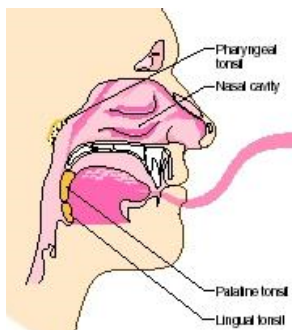
collected by **lymphatic capillaries:**

called **lacteals** in villi of intestines, collect absorbed fat in form of **chylomicrons** (juice, tiny)

**valved lymph vessels** (p. 785) collect lymph, carry it to lymph nodes which filter it.

**Cisterna chyli** (p 786) collects filtered lymph (at level of 2nd lumbar vertebra) drained by **thoracic duct** into left subclavian vein

Lymph is filtered by variety of organs:



**TONSILS:** (P 791) lymphoid tissue embedded in oral and pharyngeal epithelium

**pharyngeal tonsils** (adenoids) at back of nasopharynx  
**palatine tonsils** seen on either side of mouth at rear  
**lingual tonsils** down throat from tongue

**LYMPH NODE:** (p 792)

Three functions of lymph nodes:

- 1) Remove and destroy bacteria and foreign particles
- 2) B cells in nodes may differentiate into PLASMA CELLS
- 3) return tissue fluid to blood stream

**Anatomy:** (p 792)

afferent lymphatic vessels

fibrous capsule

**trabeculae** divide it into compartments

reticular fibers trap and hold:

**lymphocytes** in germinal centers

**macrophages** (in medullary cords)

sinuses direct flow from cortex to medulla

efferent lymphatic vessels

**Lymphangitis:** inflamed lymph vessel, seen as “red lines” from site of infection.

**Bubo** = infected, swollen lymph node, turns black (bubonic plague)

**LYMPHOID ORGANS:** (p 793) (see for overview)

**THYMUS:** largest in childhood, atrophies thereafter

T cells originate here, empowered to differentiate, mature

**SPLEEN:** (P 795) largest lymphoid organ

functions: RBC formation in embryo

filters blood stream (Effete RBC etc removed)

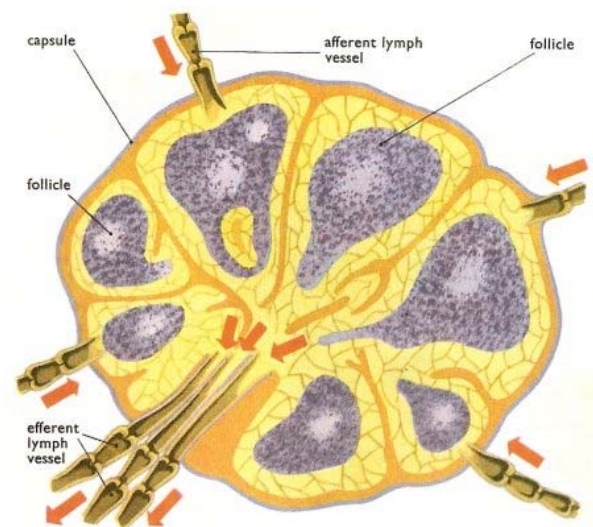
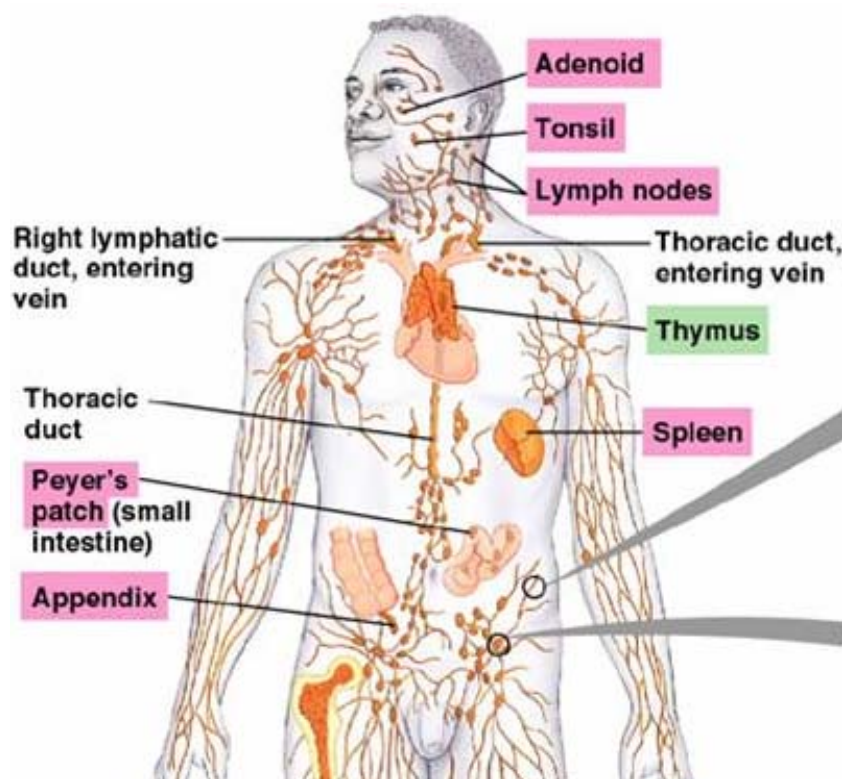
Blood reservoir

**PEYER'S PATCHES:** lymphatic tissue imbedded in walls of ileum

Respiratory lymph nodes

Axillary lymph nodes

Inguinal lymph nodes



# ACTIVATION OF LYMPHATIC VALVES

