Lymphatic System Study Guide

* Functions
* Lymphatic vessels
* How does lymph move through the body?
	+ Capillaries, vessels, veins in thorax
* Lymph nodes- what is their function? What are in high density in lymph nodes?
* What is the fluid in lymph vessels called?
* What moves lymph around?
* What is an edema?
* What do the spleen and thymus do?
* Nonspecific immune response
	+ Collectins- bind to carbohydrate molecules on pathogen- make them easier for macrophage detection
	+ Defensins- bind to pathogen and make the pathogen’s cell membrane unstable
	+ Interferons- proteins that inactivate virus and alarm other cells of the infection
	+ Inflammatory response- mast cells dilate blood vessels using histamines. The dilated blood vessels allow macrophages and other phagocytic cells to leak through and engulf the pathogens.
	+ Fever- raising the body’s temperature often helps to destroy pathogens because the high temperatures remove iron from your body, which is needed for the pathogen.
	+ Mucus, stomach acid, skin (first line of defense)
* Specific immune response
	+ Humoral
		- Pathogen, antigen
		- B-cells
		- Helper T-cells
		- Plasma cells and antibodies
		- Memory B-cells
		- Marking of pathogen for easy engulfment by phagocytic cells
	+ Cell-mediated
		- Macrophage
		- Helper T-cell
		- Cytotoxic T-cell
		- Destroys any of your infected cells
* Allergies
	+ What are they caused by?
* Vaccines
	+ What do they consist of?
	+ What is the history for these and the fight against pathogens?
		- Jenner
		- Lister
		- Pasteur
		- Flemming
* Antibiotic-resistant bacteria
	+ What is creating them?
	+ What are they?