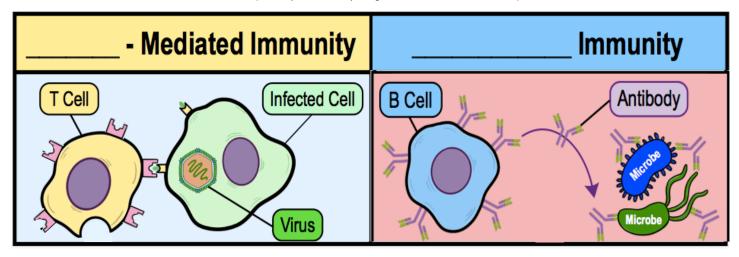
- •Adaptive (Specific) Immunity: components that ______ over time & protect against specific pathogens.
- •Adaptive immunity is considered a *dual system* with two components:
 - 1) Cell-Mediated Immunity: targets & destroys intracellular (inside host cell) pathogens using _____-cells.
 - □ T cells use *T Cell Receptors* (_____s) to generate an immune response.
 - 2) Humoral Immunity: targets & destroys extracellular (outside host cell) pathogens using _____-cells & antibodies.
 - □ B cells use *B Cell Receptors* (_____s) to generate an immune response.



PRACTICE: Cytotoxic T cells are primarily involved in ______.

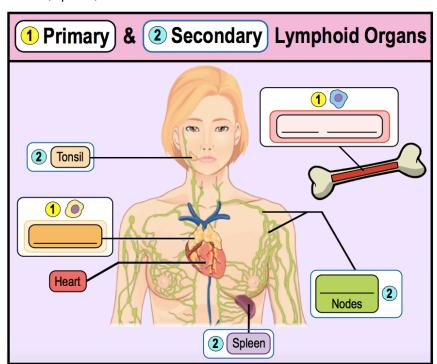
- a) Innate Immunity.
- b) Antibody production.
- c) Cell-mediated Immunity.
- d) Humoral Immunity.

PRACTICE: The humoral response is initiated by production of:

- a) Cytotoxic T cells.
- b) Antigens.
- c) Red blood cells.
- d) Antibodies.

Primary vs. Secondary Lymphoid Organs

● Primary Lymphoid Organs: organs where immature T & B lymphocytes	into naive (inactive) forms.
\Box Includes T hymus (where cells develop) & B one marrow (where cells develop)	ells develop).
□ Both T & B lymphocytes are produced in bone marrow, but T cells	to the thymus to fully develop.
Secondary Lymphoid Organs: organs where naive T & B lymphocytes are	& begin immune functions.
□ Sites where foreign molecules (antigens) are brought into contact with popula	tions of lymphocytes.
□ Includes lymph nodes, spleen, & tonsils.	



PRACTICE: T cells and B cells are produced in the:

- a) Bone marrow.
- b) Thymus.
- c) Bloodstream.
- d) Epithelial Cells.

PRACTICE: T cells mature in the ______ & B-cells mature in the _____.

- a) Bone marrow; Thymus.
- b) Thymus; Bloodstream.
- c) Hypothalamus; Bone marrow.
- d) Thymus; Bone marrow.

PRACTICE: The secondary lymphoid organs:

- a) Are where foreign antigens interact with lymphocytes.
- b) Are the site of antibody production.

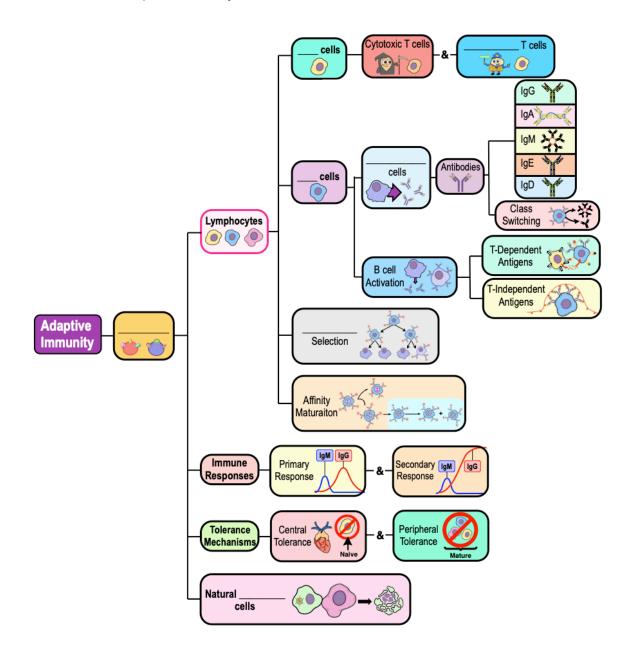
- c) Are hematopoietic.
- d) Include bone marrow & thymus.

PRACTICE: Which of the following are two of the secondary lymphoid organs?

a) Stem cells & Spleen.

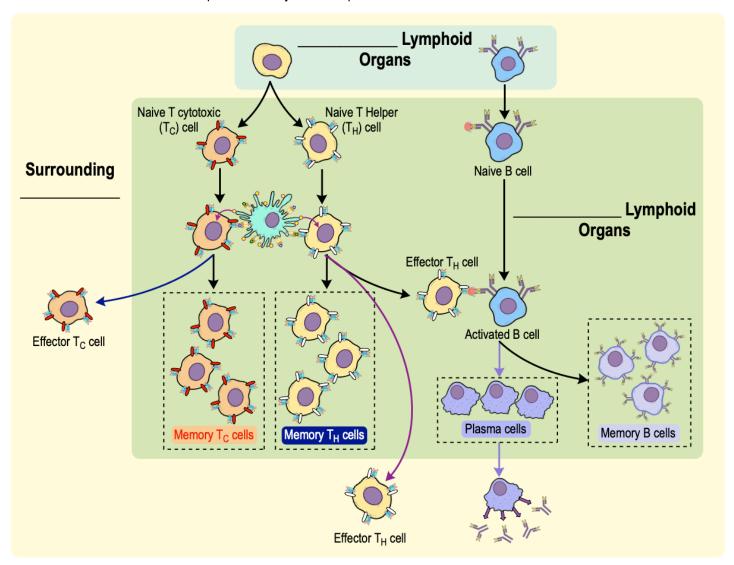
- c) Lungs & Bone Marrow.
- b) Lymph Nodes & Bone Marrow.
- d) Spleen & Lymph Nodes.

Map of the Lesson on Adaptive Immunity



Overview of Adaptive Immunity

•Let's overview the lesson on adaptive immunity. We'll explain & break this down in more detail as we move forward.



PRACTICE: What major advantage is conveyed by having a system of adaptive immunity?

- a) It enables a rapid defense against an antigen that has been previously encountered.
- b) It enables an animal to destroy most pathogens almost instantly the first time they are encountered.
- c) It results in effector cells with no tolerance to host or self-antigens.
- d) It allows for the destruction of antibodies.