**Immune System Quiz #2 Study Guide**

**The following are topics to study for the quiz.**

**PPT Slides 22 – 32, 42-43, 48, 55- 56.**

* Antibodies vs antigens
* Passive Immunity vs Active Immunity
* T-cells vs B-cells
* Cell Mediated vs Humoral Immunity
* Vaccination
* Immune malfunctions and allergies

**3. SPECIFIC IMMUNE RESPONSE - - Specific - Internal**

 **Third Line of defense targets SPECIFIC ANTIGENS =** protein or polysaccharide on cell membrane that identifies it as foreign.

 Examples of antigens: toxin from insect sting, protein coat of a virus, or molecule unique to P.M. of bacteria, pollen, protozoa or other foreign cell.

 **Lymphocytes** = originate in bone marrow but concentrate in lymphatic

 tissues - nodes, thymus, spleen, classified as follows:

 **B Cells** (originate and mature in bone marrow) -> **Humoral Response**.

 B cells proliferate when they bind antigens🡪 2 kinds of B cells:

 Plasma cells – circulate and produce specific antibodies that bind to

 specific antigens

 Antibodies inactivate antigens by binding them.

 Then they are phagocytized by macrophages

 Memory cells - - long lived respond to subsequent invasion by the same

 antigen. Provides us w/immunity to many diseases after their first

 occurrence. Memory cells produce the secondary immune response –

 see graph on PPT

 **T Cells** (originate in bone marrow – mature in **T**hymus gland)–->

 **Cellular response**

 Cytotoxic T cells (=killer T-cells) – recognize (specific antigens) and

 destroy non-self cells by puncturing them until they lyse.

 Helper T cells stimulate proliferation of B cells and Cytotoxic T cells

CLONAL SELECTION - The division of T cells or B cells producing daughter cells

 that are all copies of the parent that are specific to

 the antigen that stimulated their divisions

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