CHAP 22-

LYMPHATIC SYSTEM, NON-SPECIFIC, NON-SPECIFIC RESISTANCE & IMMUNITY

1.

The Lymphatic System Consists of

1.
2.
3.
4.

2.

Functions of Lymphatic System

1.
2.
3.

3

Lymph Vessels + Circulation

1. Tiny w/ valves* lacteal _____
2. _____ w/ Lymph Nodes
3. _____
4. _____ = largest
   a.
   b. "BULGE"

4.

Lymphatic Organs/Tissues

1. Primary Lymphatic Organs=
   a.
   b
2. Secondary Lymphatic Organs=
   a.
   b.
   c.

1. Primary Lymphatic Organs
   a. Red bone marrow (B cell)
   b. Thymus gland cells (T cell)
2. Secondary Lymphatic Organ
   a. Lymph nodes - Spleen
   b. Lymphatic Nodules

1. Lymph Capillaries
2. Lymph vessels w/ Lymph nodes
3. Lymph trunks
4. Lymph ducts
   a. L. lymphatic duct
   b. R. lymphatic duct
1. Cysternae Chyli

1. Lymph
2. Lymph Vessels
3. Lymphatic tissue
4. red bone marrow

1. Draining not absorbed capillaries
2. Transport - Lipids Lacteals
3. Facilitating Immune response

8.

I. First line of defense
A. 1.
2.
II. Second line of defense
B. 1.
2.
C. all:

9.

Definitions of Nonspecific
1. Mechanical =
2. Chemical =
3. _____ = chemical to protect neighboring cells
4. _____ = 20 proteins
5. _____ = attack Tumor cells
6. Inflammation = 4 steps
7. _____ caused by pyrogens detected by hypothalamus

5.

Thymus Gland

1. hormones: _____
2. target site = _____
3. action =

6.

Lymph Nodes

6. have more than _____ _____ vessels.

7.

Lymph Organs/Nodules

1. _____ composed of white + red pulp.
2. _____ immune response in respiratory system, w/o capsule
3. _____ immune response in small intestine, w/o capsule

I. A. SKIN & MUCUOUS MEMBRANE
1. MECHANICAL
2. CHEMICAL
II. B. ANTIMICROBIAL SUBSTANCE
1. INTERFERON
2. COMPLEMENT SYSTEM
C. NATURAL KILLER CELLS
D. PHAGOCYTES
E. INFLAMATION
F. FEVER

1. epidermis, mucous membranes, lacrimal, saliva etc.
2. oil, pH of skin, vagina, gastric juice etc...
3. Interferon
4. Complement System
5. Natural Killer Cells
6. Redness, Heat, Swelling, Pain
7. Fever

1. Hormone = thymosin
2. T-cells
3. proliferation + maturation of T-cells

1. capsule
2. cortex
3. nodule
4. B cells
5. Medulla
6. More afferent than efferent lymph vessels

1. spleen
2. tonsils - pharyngeal
3. ~~pyres patch~~ / looks like cake. Peyer's Patch -

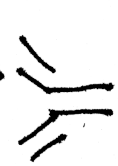
Antigens

1. Definition = ____________
2. What won't be recognized = ________
3. Diversity is because ________ and ________
4. ____________ = antigens that are your cell's markers.

Cell Mediated Immunity

1. ________ cells
2. CD4 = (memory!) ____________ = ________
3. CD8 = (memory) ____________ = ________

Antibody - Mediated (Humoral)

1. ________ cells → a. ________ → b. ________
2.  ← a
3. Function of #2

Types of Immunity

1. Naturally active = ________
2. Naturally passive = ________
3. Artificially active = ________
4. Artificially passive = ________

1. - Antigen exposure like sneezing
2. Antibody in milk
3. Antigen (weaker dead) in shot
4. Injection of antibodies (antivenom)

1. substance that is recognized by immune system and evokes response
2. Metals and plastics
3. Genetic recombination + Somatic Mutations
4. Major Histocompatibility Complex

1. B lymphocytes
   a. plasma cells → antibodies
   b. memory cells
2. Antibody = 2 heavy chains
   2 light chains
3. immobilize and Opsinization

1. T- lymphocytes
2. CD4 = helper cells = proliferation of T and B cells
3. CD8 = cytotoxic cells = cytolysis