

CHAPTER 8: Lymphatic and Immune Systems

1. Know the following terms:

allergy	immunity	pathogen
antibiotic resistance	immunization	plasma cell
antibody	inflammatory reaction	red bone marrow
antibody mediated immunity	killer T cell (cytotoxic)	spleen
antigen	lymph	T lymphocyte
autoimmune disease	lymph node	thymus gland
B lymphocyte	lymph vessel	tonsils
cell mediated immunity	macrophage	vaccine
helper T cell	memory cells (B&T)	
HLA antigens (MHC)	neutrophil	
2. Describe the functions of: neutrophils, lymphocytes and monocytes.
3. Describe the lymph vascular system. How and where is lymph formed?
4. Describe the normal barriers to invasion by pathogens.
5. Describe non-specific defense to invasion by pathogens.
6. Describe specific defense to invasion by pathogens.
7. Distinguish between active and passive immunity. Give an example of each.
8. Describe the problem of antibiotic resistance: its origins, spread and solutions.

Chapter 22: Cancer

1. Know the following terms:

angiogenesis	metastasis	proto-oncogene
apoptosis	malignant tumor	tumor suppressor gene
benign tumor	mutagen	monoclonal antibodies
carcinogen	oncogene	
2. Why is cancer called a genetic disease.
3. Distinguish cancer cells from normal cells.
4. Distinguish benign tumors from malignant tumors.
5. What are oncogenes and tumor suppressor genes? What role do they play in the control of cell division?
6. What are some causes of cancer (mutation)?
7. Briefly explain how the therapies of surgery, radiation and chemotherapy work.
8. Explain the statement that "cancer is largely a personal choice disease".

Chapter 9: Respiratory System

1. Know the following terms:

alveolus	expiration	larynx
bronchiole	external respiration	lungs
bronchus	hemoglobin	pharynx

cell respiration
diaphragm
emphysema

infant respiratory distress
syndrome

surfactant
trachea

2. Describe the structure and function of organs of the respiratory system.
3. Describe the mechanics of breathing.
4. Describe internal and external respiration.
5. Describe oxygen transport and carbon dioxide transport.
6. Describe the role of surfactant in the alveoli.
7. Describe control of the respiratory system by the nervous system.
8. Describe some of the effects of smoking on the respiratory system.

Chapter 10: Excretory System

1. Know the following terms:

ADH (antidiuretic hormone)	nephron	tubular reabsorption
collecting duct	renal artery	tubular secretion
diuretic	renal cortex	urea
glomerular filtration	renal medulla	ureter
glomerulus	renal vein	urethra
		urinary bladder
2. Describe the structure and function of organs of the excretory system.
3. Describe the processes of filtration, reabsorption and secretion in relation to urine formation.
4. Describe the role of the kidneys in salt-water (blood volume) balance.
5. Describe the role of the kidneys in acid-base balance.
6. How do drinking alcohol and coffee result in water loss?

Chapter 11: Skeletal System

1. Know the following terms:

cartilage	osteoblast	red bone marrow
compact bone	osteoclast	sinus
epiphyseal plate	osteocyte	spongy bone
intervertebral disk	osteoporosis	tendon
ligament	periosteum	vertebral column
		yellow bone marrow
2. Describe the functions of the skeletal system and give example of each.
3. Describe the tissues that make up the skeletal system.
4. Describe the anatomy of a long bone (gross and microscopic).
5. Describe bone growth in long bones.
6. Describe the development and prevention of osteoporosis (this is something we have talked about all semester--pull in information from other topics).

Chapter 12: Muscular System

1. Know the following terms:

actin	myofibril	slow twitch fiber
creatine phosphate	myofilament	tendon
fast twitch fiber	myoglobin	
muscle fiber	myosin	

2. Describe the levels of structure of a muscle from the whole muscle to the myofilaments.
3. Describe the general action of antagonistic pairs of muscles.
4. What are three ways a muscle fiber can acquire ATP for muscle contraction?
Relate these energy pathways to different kinds of activity.
5. Contrast slow twitch (red) fibers and fast twitch (white) fibers.
Relate these fiber types to different kinds of activity.