

**Study Notes and Questions for Week 2
Imaging the Body, Fall 05**

Four Primary Tissue Types

Connective Tissues- Never exposed to external environment

Three components of all connective tissues

Six major functions of connective tissues

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Three types of connective tissue with two subtypes within each type: For each subtype of connective tissues, list examples of places where it is found.

1.
 - a.
 - b.
2.
 - a.
 - b.
3.
 - a.
 - b.

Connective tissue proper

Components of connective tissue proper

Fibroblasts

Ground substance

Fibers

List the three types of fibers in connective tissue proper and examples of where they're found

- 1.
- 2.
- 3.

Major cells found in connective tissue proper

Fibroblasts-Present in all connective tissues, produce and maintain all connective tissues

Adipose cells (adipocytes)- Energy storage and cushioning

Stem cells- undifferentiated “mother” cells that can turn into any of the connective tissue cells. Active in repair

Melanocytes- pigmented cells containing melanin

Mast cells- local “look out” cells that begin the inflammatory response.

Immune system cells

Macrophages-Both fixed and wandering. Eat damaged cells and invaders by engulfing them. They also call in reinforcements from immune system.

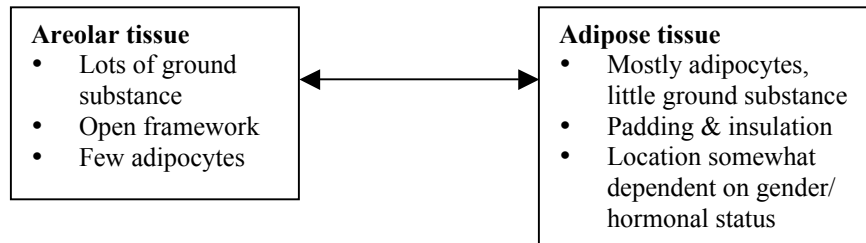
Lymphocytes- help in the specific immune response

Microphages- engulf invaders, respond to call sent out by macrophages and mast cells.

Two major types of connective tissue proper

Loose connective tissue. What are its three major functions?

Continuum between areolar tissue and adipose tissue



Dense connective tissue

Regular- list four types and examples of where they're found

- 1.
- 2.
- 3.
- 4.

Irregular-give function and locations

Fluid connective tissue- List two types and give functions

Supporting connective tissue

Cartilage

Composition

Locations in body

Bone

Composition

Locations in body

Membranes-know the location and function of synovial membranes

Connective tissue framework of the body

Superficial fascia-location and function?

Deep fascia-location and function?

Muscle Tissues

Skeletal

Found where?

Characteristics

Cardiac

Found where?

Characteristics

Smooth

Found where?

Characteristics

The Spine

Central support, information highway and information processing (reflex response)

Bones

List the four curves and the name of the conditions when particular curves are exaggerated

Specialized cervical vertebrae- list them and their motions

1.

2.

Generalized vertebral anatomy

Processes

Foramen

Vertebral body

Ribs

Function

True ribs

False ribs

Floating ribs

Muscles

Superficial

Intermediate- extensors

Erector spinae group

Deep

Flexors

Gravity

Quadratus lumborum

Abdominal muscles

Obliques –internal & external

Rectus

Muscles for breathing

Intercostals

Diaphragm

These are due Monday, Oct 10th at the beginning of class. **Write your answers neatly and legibly on a separate piece of paper that you will turn in.** Be prepared to discuss your answers. You may need to access outside resources to completely answer these questions.

1. What are your daily protein and caloric requirements? List the source you used to calculate these numbers.
2. What about adipocytes make it easier to regain weight that a person has gained and then lost?
3. What is the difference(s) between “true”, “floating” and “false” ribs?
4. How does the anatomy of the vertebrae differ as one moves from the cervical vertebrae to the lumbar? Be specific. Describe at least four trends and briefly outline the reasons for these trends.
5. Give two ways that smooth muscles cells differ from both skeletal and cardiac muscle cells.
6. How do skeletal muscles cells differ from both cardiac and smooth muscle cells?
7. How does cardiac muscle differ from both smooth and skeletal muscle (other than its location)?