CHAPTER 9 & 10 MUSCLES AND MUSCLE TISSUE Fall2013

2 Chapter 9 Muscles and Muscle Tissue
Overview of Muscle Tissue
_______ types of muscle: __________________________
________________________________________________ are all prefixes for muscle
Contractility – all muscles cells can __________________________
Smooth & skeletal muscle cells are also called ________________

3 I. _______ Muscle Tissue
.   a. Only in the ________
.   b. Makes up most of the heart – ________________
.   c. Involuntary - no __________control
.   d. ___________ - has vertical, perpendicular ________ throughout the tissue
.   e. Cells are ________________ w/ 1 or 2 _______
.   f. Cells are ________and interconnected by an _______________ ________ so they can’t _______
.   g. Volume ________________ vs. 2% in skeletal muscle (chapter 18)

4. Figure: 18.11a & b page: 674
5 II. _________Muscle
.   A. Found in____________________________________________________
.   B. ________________
.   C. ________________ – no stripes

III. Skeletal Muscle Tissue
A. Muscles are packages of muscle tissue wrapped in fascia (CT), connecting one bone to another
B. Voluntary: conscious control
C. ________________
D. ________________
6 Table 9.3; page 309 (physio – actin/myosin - ?)

7 Skeletal Muscle – Gross Anatomy
Muscles (organs) made up of ________________ tissues
A. ________________ – primary tissue
B. ________________ vessels
. 1. Enter near muscle __________
. 2. Blood vessels __________ when muscles __________ & __________ w/ muscle ________________
C. Individual muscles surrounded w/ __________ that goes _______ the muscle interior - _______

8 1. __________: (______) outer layer of ________________
   2. ________________: (______) CT that surrounds bundles of muscle fibers called ________________
   3. ________________: (______) thin, whispy ________ CT – surrounds individual ________________/cells
All sheaths are ________________ w/ one another

9 Fig. 9.1 pg278

10 Figure: 9.1b; page 278

11 Continuous fascia sheets connect w/ ________________of bone
A. __________: Epimysium to bone
B. __________ Fascia extends beyond muscle to form rope-like __________ or, sheet-like, ________________
12. Microanatomy of skeletal muscle
   Muscle ______/muscle ________
   Cytoplasm called ____________
   A. Contains ________ - stored form of ________
      -_________

13. Sarcomere
   B. Contains rod-like _____________
   1. Strands of _______________ - contractile
      (functional) unit of ___________ ____________
      a. contractile _____________ thick (__________
         & thin (__________)
      b. _________ filaments slide together over the __________
         shortening the _____________

14. Fig. 9.2a; page 280

15. Fig. 9.2b; page 280

16. Fig. 9.2c; page 280

17. Fig. 9.2d; page 280
Muscular System - Chapter 10

Interactions between multiple skeletal muscles.

Roles of muscles:

1. _____________
2. _____________
3. _____________
4. _______

A. Prime mover/________________: _________ muscle(s) responsible for a ________________ at a joint

19 B. ________________________: responsible for __________ movement

1. Needs to be __________ when prime mover is contracting
2. __________ role with___________ action
3. Best to have __________ strength

C. __________: “________________”

1. _______________/smooth out motion
   a. _______________ force
   b. Reduce _______________
   c. supraspinatus (rotator cuff) – ________________
D. __________: __________e muscles, bone of ________

1. “specific” type of synergistic muscle

Review: Muscles attach to different bones across a joint
   1. One bone moves (usually distal) ________________
   2. Other bone stationary “anchor” ________________

Fascicle Arrangement – bundles of muscle fibers
   A. __________: __________ of muscle tissue ie: obicularis
      oris/oculi, pyloric sphincter
   B. ________________: ___________ of fibers ________________
      to single tendon – pectoralis major

C. ________________: All fibers run ________________
   1. strap like; sartorius
   2. fusiform: both ends taper down to tendons
   D. __________: Fascicles are attached to a long ________ –

fig. 10.1 pg. 322

Muscle naming criteria
   A. Muscle __________: Indicates name of
      ____________________________________________ its associated with
      ie: temporalis muscle – temporalis bone; Intercostal muscle –
      between ribs
   B. ________________: ie: Deltoid - (G) Triangle; Orbicularis – (l)
      round
   C. ________________: ie: Gluteus maximus/Gluteus minimus –
      Big butt/little butt muscle
   D. ________________: ie: Rectus abdominus, abdominal oblique,
      abdominal transversus – straight, angled, across/horizontal
24 E. ________________: ie: biceps, triceps, quadriceps – 2,3,4 points of bony attachment

F. ______________________: Named according to _______ and _______

1. ________________ named first
2. ie: Sternocleidomastoideus (SCM) – originates on manubrium of sternum, and medial clavicle while it inserts on mastoid process of skull.

G. _____________: Name for __________________ –

adductormagnus,
flexor digitorum