

Day 11 – 3/12/14

## Student Learning Objectives

By the end of this class you will be expected to understand:

- The behavior of muscle fibers and motor neurons as a motor unit
- The comparative behaviors and roles of slow- and fast-twitch muscles
- The types of exercise and the changes they produce in the body
- The functions of cardiac and smooth muscle in the body
- The structures that permit involuntary muscles to contract regularly and continuously

Support videos:

- Motor units and fast/slow twitch
  - <http://www.youtube.com/watch?v=f5wnaf96TH4>
- Cardiac muscle cells
  - [http://www.youtube.com/watch?v=\\_\\_afuK1CMpQ](http://www.youtube.com/watch?v=__afuK1CMpQ)
- CrossFit and Rhabdomyolysis (not for the faint of stomach)
  - <https://medium.com/health-fitness-1/97bcce70356d>

Assigned reading:

- Chapter 6: p131-137

Vocabulary:

- Motor Unit
  - All-or-none Principle
  - Twitch
  - Recruitment
  - Summation
- Fast-twitch
  - Glycosome
  - Lactic acid
  - Creatinine
- Slow-twitch
  - Myoglobin
- Exercise training
  - Strength training
    - Anaerobic training
  - Endurance training
    - Aerobic training
  - Stretching exercise
- Involuntary muscle
  - Cardiac muscle
  - Smooth muscle
  - Gap junction
  - Pacemaker cell
  - Intercalated disc
- Muscle Injury
  - Cramp
  - Tear
  - Rhabdomyolysis