

The Balance of Muscle

Questions to ponder

- Why is the third set of the same exercise with the same weight harder than the first?

Definitions

Muscle: number of muscle fibers bound together by connective; Cardiac, Smooth and Skeletal

Muscle Fiber: muscle cell

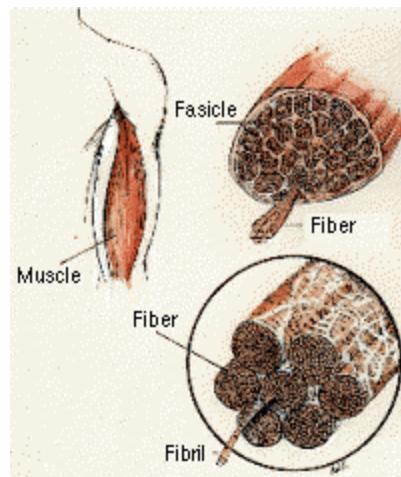
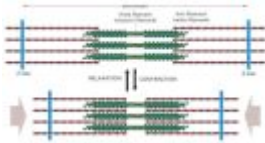
Motor Unit: A single motor neuron and the muscle cells it innervates

Muscle Fatigue: decrease in muscle tension with prolonged activity

Connective Tissue: elements that connect, anchor and support body structures

Skeletal Muscle Structure

Sarcomere-the basic contractile unit



Each motor unit contains all of the same type of type of fibers. All skeletal muscles have a ratio of fast to slow twitch fibers. This ratio helps to define the primary use of the muscle and is genetically predisposed, but appropriate training can alter the ratio. This ratio also changes as we age by decreasing the number of fast twitch fibers.

Fast and Slow twitch Muscles

	Fast Twitch	Slow Twitch
Purpose:	Produce Power, faster and stronger	Repeat contractions
Recruitment:	Last	First
Adaptation to training:	Hypertrophy	Increase capillaries, Increase in ability to produce energy