

Worksheet for lecture 23

- Draw a simple cross section of a muscle indicating the outline of the muscle, a muscle fascicle and a muscle fiber.
- Explain how a muscle shortens beginning with release of neurotransmitter at the neuromuscular junction and ending with the response of actin and myosin filaments. A simple drawing of the filaments before and after contraction could be useful.
- Make a table showing the characteristics (speed, force & fatigability) of type I, IIa and IIb muscle fibers. What might explain the differences in fatigability?
- Diagram the motor pathway starting with an upper motor neuron in cortex and ending at a muscle fiber in a leg muscle. Be sure to indicate the approximate position of the neuron in cortex and the lower motor neuron in spinal cord.
- Make a list of the various inputs possible on a (lower) motor neuron.