

## Vertebrate vs. Arthropod Muscles

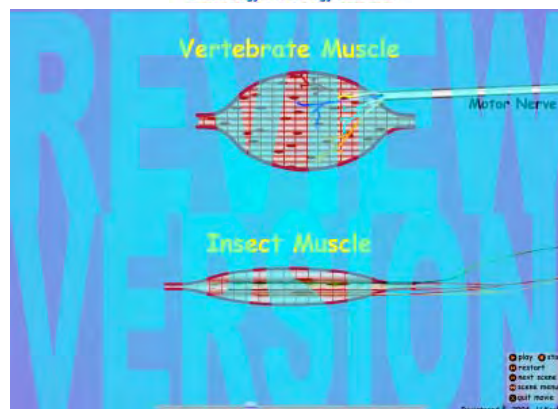
Small bodies cannot fit hundreds of fibers into each muscle

	Vertebrate Skeletal Muscle	Arthropod Skeletal Muscle
<b>Fibers/Muscle</b>	100–1000s	1–10s
<b>Fiber innervation</b>	1 motor end plate from 1 motor neuron/fiber	Multi-terminal & polyneuronal
<b>Motor neuron action</b>	Always excitatory	Some excitatory; some inhibitory
<b>Neurotransmitter</b>	Acetyl-choline	Glutamate [E]; GABA [I]
<b>Fiber conduction of depolarization</b>	Cell membrane & T-tubules of entire fiber	Localized T-tubules only
<b>Fiber contraction</b>	All-or-none twitch	Graded
<b>↑ Muscle strength/speed</b>	Recruit more fibers per muscle	Recruit more sarcomeres per fiber

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