Muscle Contraction Note Guide:

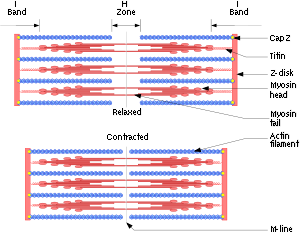
|  |
| --- |
| Exam Question: Why does hyperextension (of a muscle) hurt? |

**Powering the Muscle**

|  |  |  |
| --- | --- | --- |
|  | Oxidative | Glycolytic |
| What |  |  |
| Pro |  |  |
| Con |  |  |

MM Contraction **Basics**

Muscles are attached to bones by **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**



Tendons grab onto **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** on bones

Muscles work in antagonistic pairs

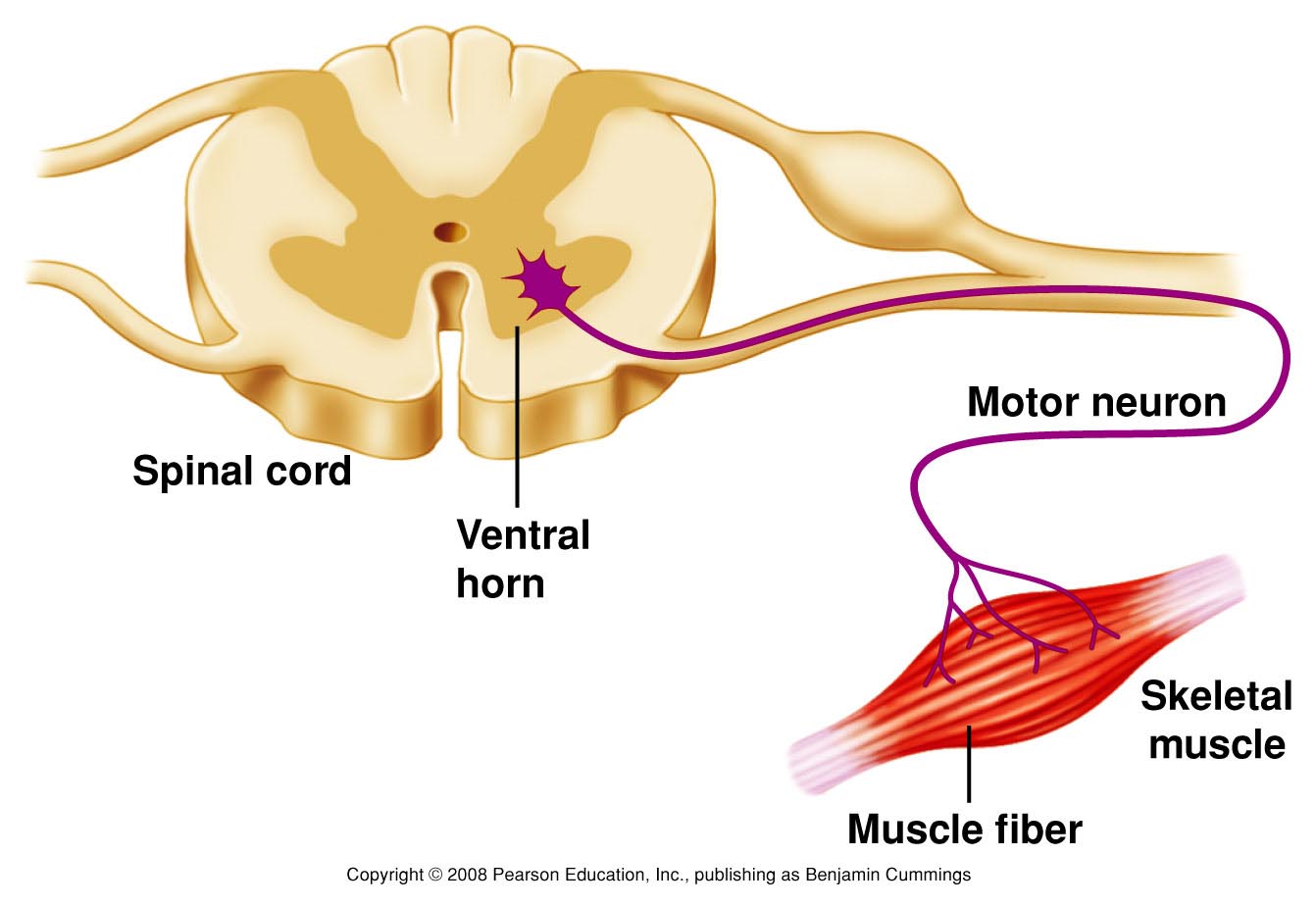
Ex. Biceps and triceps

One muscle contracts while the other relaxes

Functional Unit: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (**[**Video**](http://www.youtube.com/watch?v=Ct8AbZn_A8A)**)**

Actin and Myosin do the actual contracting

The Neuromuscular Junction

* Is the location of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (electrical signal):
  + Travels along nerve axon
  + Ends at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Releases \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (ACh)
* Into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cleft (gap between synaptic terminal and motor end plate)

The Mechanism of Force Generation in Muscle

* Neuron dumps a bunch of \_\_\_\_\_\_\_\_\_\_\_ on the motor plate (mm)
* Action potential
* Ca++ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Ca++ bonds to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_ binding sites are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cycle begins
* Ca++ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Tropomyosin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ biding sites

