

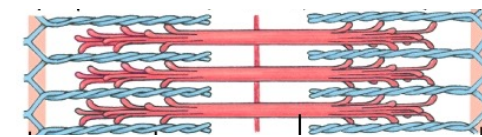
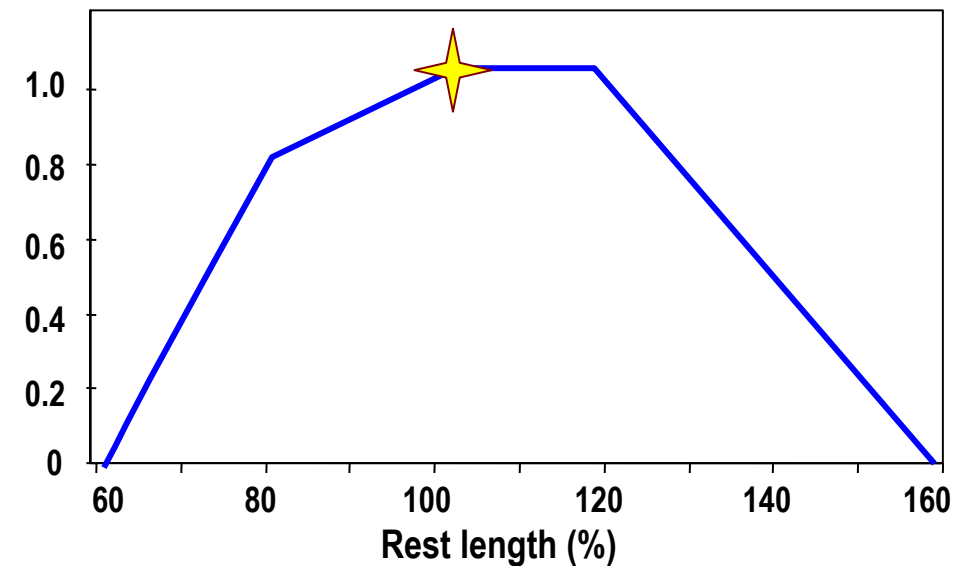
# 2 Fundamental Properties

## Skeletal Muscle

### Length-Tension Curve

muscle length-force output

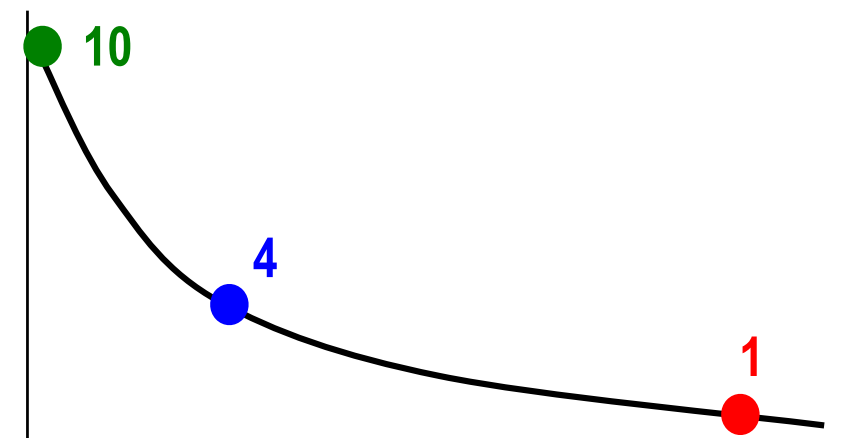
Muscle Force



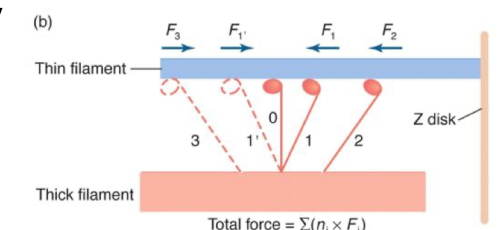
### Force-Velocity Relationship

force output-muscle velocity

Muscle Force

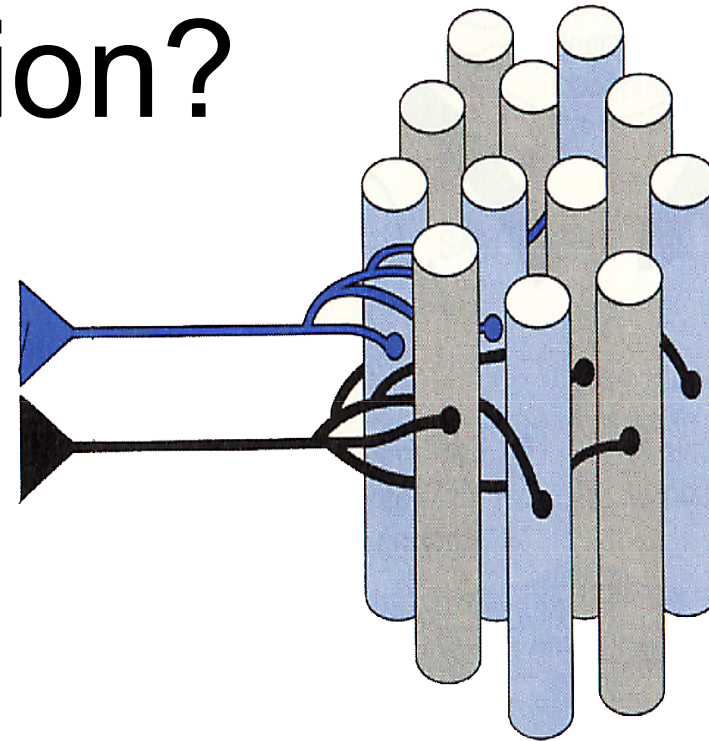


Velocity

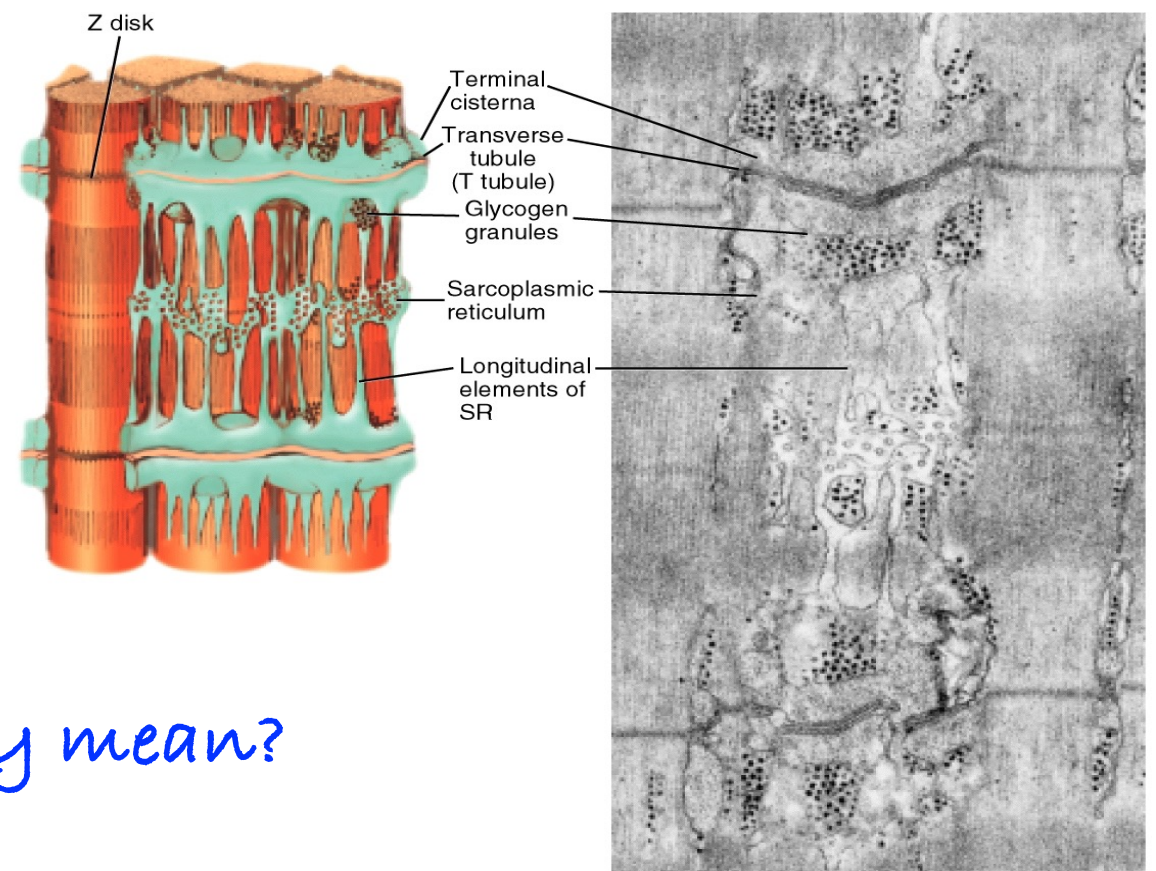


# How do you initiate a muscle contraction?

- Excitation Contraction Coupling
  - Muscles are activated by motor neurons.
  - Motoneurons, motoneuron endplates & motor pool.
- Inward flow of depolarization conducted through transverse-tubule system (T tubules)

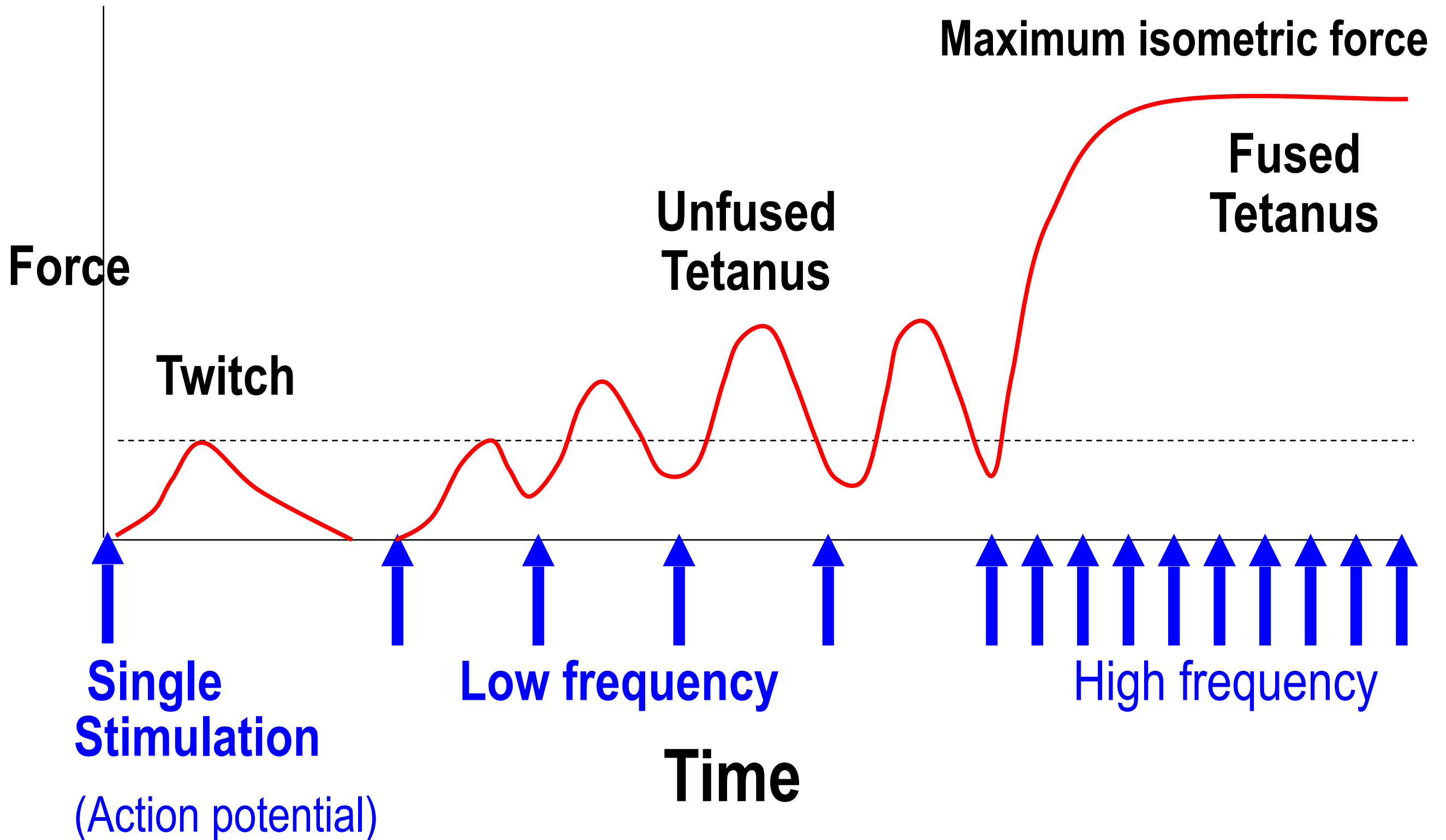


*Muscles  
depolarize  
too!*



*What does increasing muscle activity mean?*

# Activation & Summation



# Lever Systems

Lets consider the load that can be supported by effort (Force in) from the biceps using the forearm (which is a lever system around the elbow joint) :

