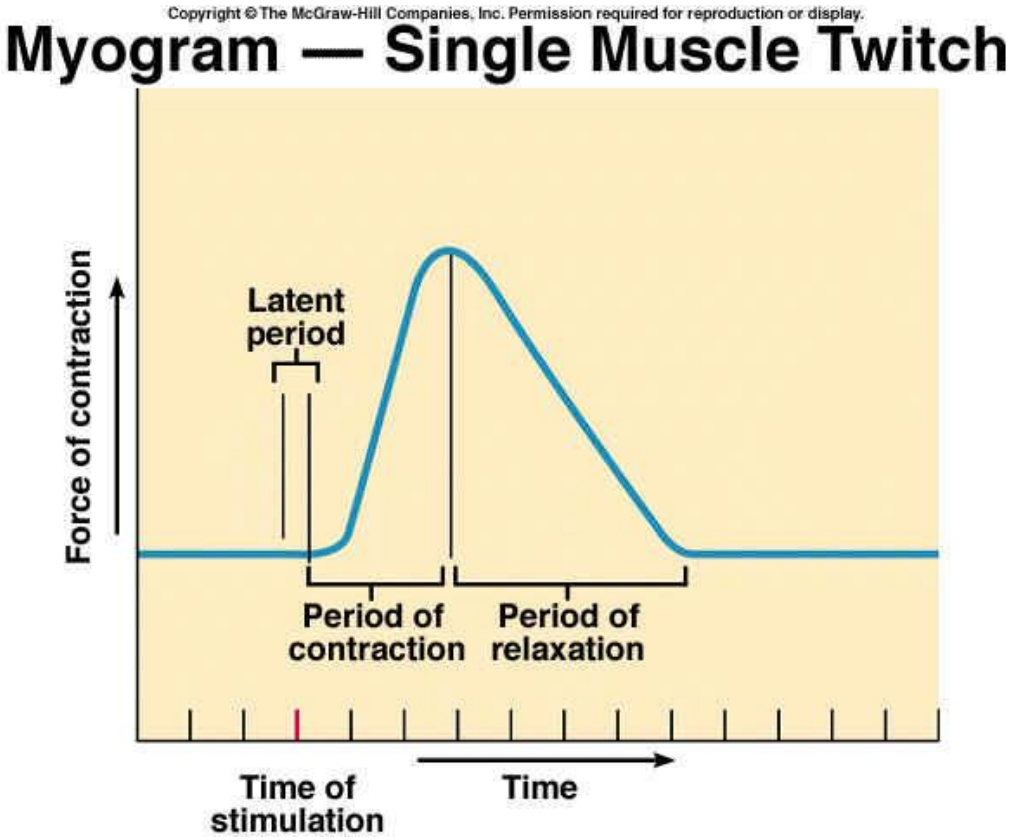
Physiology notes

1-Between page 5 and 6 in handout 2

Single muscle twitch..



Latent period : it's the time between stimulation of motor neuron , and onset of muscle contraction …

So it's time where we have :

1-stimulation of the nerve

2-propagation of action potential along nerve axon

3-releasing Ach from nerve terminals

4-binding of Ach to nicotinic receptors

5-end-plate potential

6-releasing of Ca+2

Contraction period (interaction between action + myosin)

Relaxation period (end of this interaction)

We don't have refractory period in muscle contraction , because action potential starts and ends on the latent period …

*effect of temperature on single muscle twitch :

Increasing Temp → shorter latent period → bec. Of higher conductance

Increasing Temp → higher amplitude → bec. Of less viscosity (less resistance)

Increasing Temp → shorter duration → bec. Of high activity of enzymes ..

Other note :

In hypocalcemia : We are going to have convulsions ... !?

Less Ca --> less IPSP --> more signals to the muscles --> contraction ...

***Ca levels in muscles are independent from Ca level in the plasma**