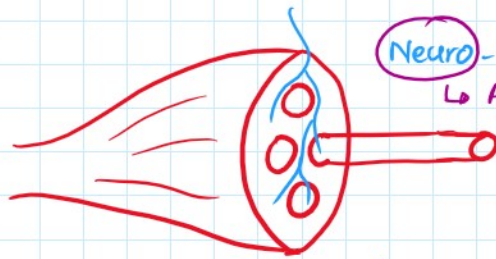


Control of Cross Bridges

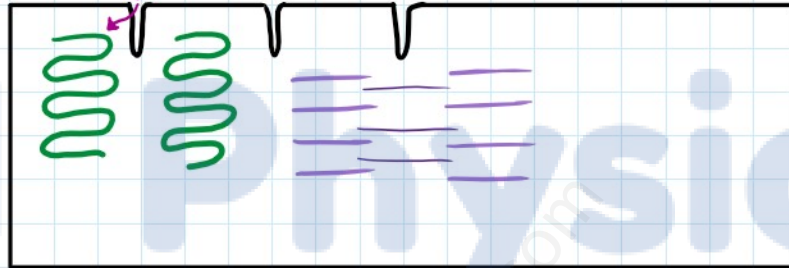
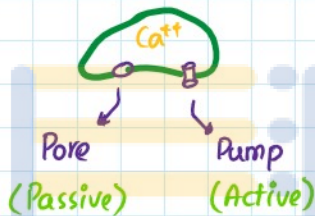
Triads → 2 Terminal Cisternae
1 T-tubule



Neuro-muscular Junction / Plate

↳ Axon Ending releases Neurotransmitters (Acetylcholine)

- ① Release of Neurotransmitter at T-tubule.
- ② Ca^{++} pores & Ca^{++} releases in cytosol
- ③ Ca^{++} attaches at troponin "C"

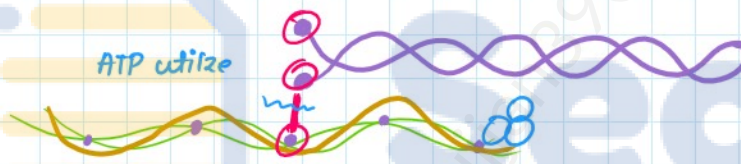


1 motor Neuron + muscle Fibers



• Ca^{++} attachment with troponin → slides tropomyosin

↓
Exposure of attachment site on Actin.



- ④ Result in sliding of thin filament on thick filament.

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*

CHANGES DURING CONTRACTION

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• A - Band

No Effect

No Effect

• I - Band

Shortens

Elongate

• H - zone

Disappear

Re-appear

• M - Line

No effect

No - effect

• Z - line

Came closer

Get away

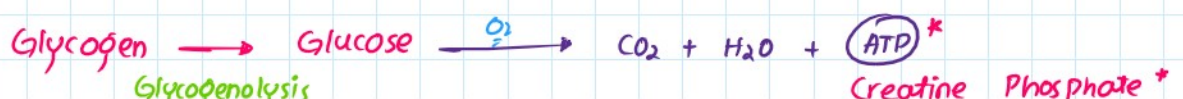
• Sarcomere

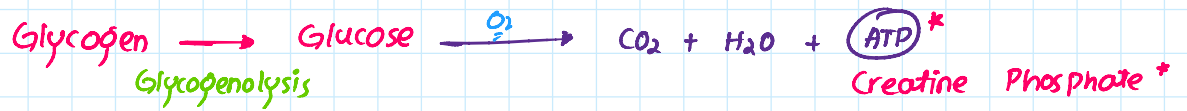
Shortens

Elongate

Average length
2.2 μm

ENERGY REQUIREMENT → Carbohydrates + Fats





RIGOR MORTIS (Inability to Relax)

- Starts after 4 hour of death
- Continue upto 40 hours.
- After that decomposition

Reversible \rightarrow cold conditions
 Irreversible \rightarrow Burning Effect.

ANTAGONIST

- \rightarrow Opposite Action
- Flexors (Flexion)
- Extensors (Extension)

AGONIST

- \rightarrow Same function
- Brachialis
- Biceps

- \rightarrow Muscles only pull not push (BTB)
- \rightarrow Human Eye Contraction 0.01 Second (STB)

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