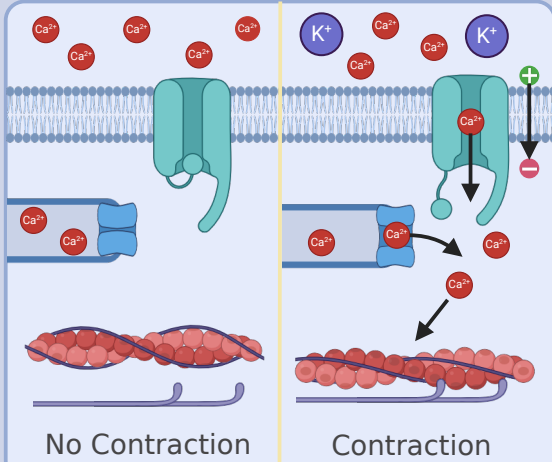
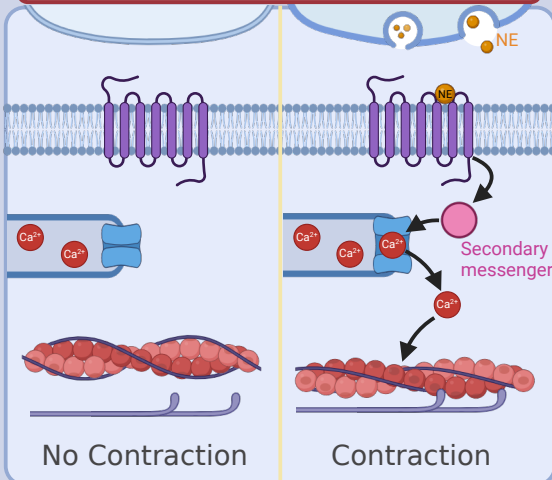


Calcium Pools Involved in Contraction Initiated by Vasoconstrictive agents KCl and NE

K⁺ Signalling Pathway in VSMCs



NE Signalling Pathway in VSMCs



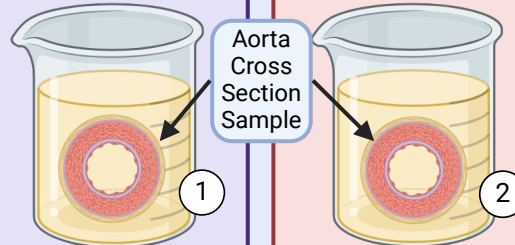
Hypothesis: High Potassium KCl solution will use extracellular calcium while Norepinephrine will use intracellular calcium to induce smooth muscle contractions.

Methods

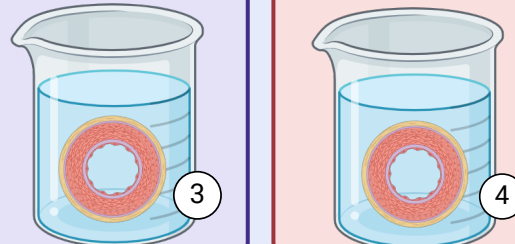
KCl as stimulant

NE as stimulant*

Kreb's Solution + Calcium

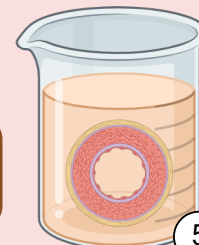


Kreb's Calcium Free Solution + EGTA



NE as stimulant*

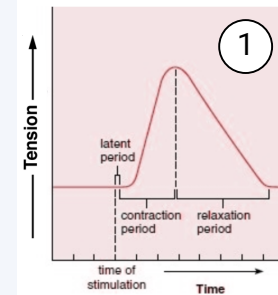
Kreb's Solution + Calcium + CPA



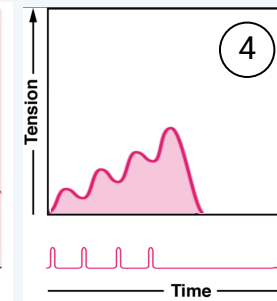
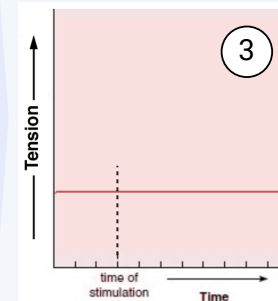
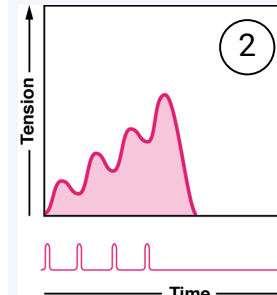
*NE stimulant is added in a dosage gradient

Results

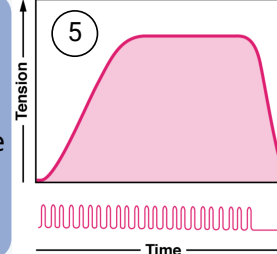
KCl Results



NE Results



Results indicate KCl uses extracellular Calcium ions to initiate contraction while Norepinephrine uses intracellular calcium ions to initiate contraction



Graph References:
Davis, J. (2023). *Skeletal muscle contraction*. Pressbooks.pub; Pressbooks. <https://iu.pressbooks.pub/humanphys/chapter/skeletal-muscle-contraction/>
encyclopedia.lubopitko-bg.com. (2024). *Muscle Responses*. Modulation of Muscle Responses. Lubopitko-Bg.com. https://encyclopedia.lubopitko-bg.com/Muscle_Responses.html