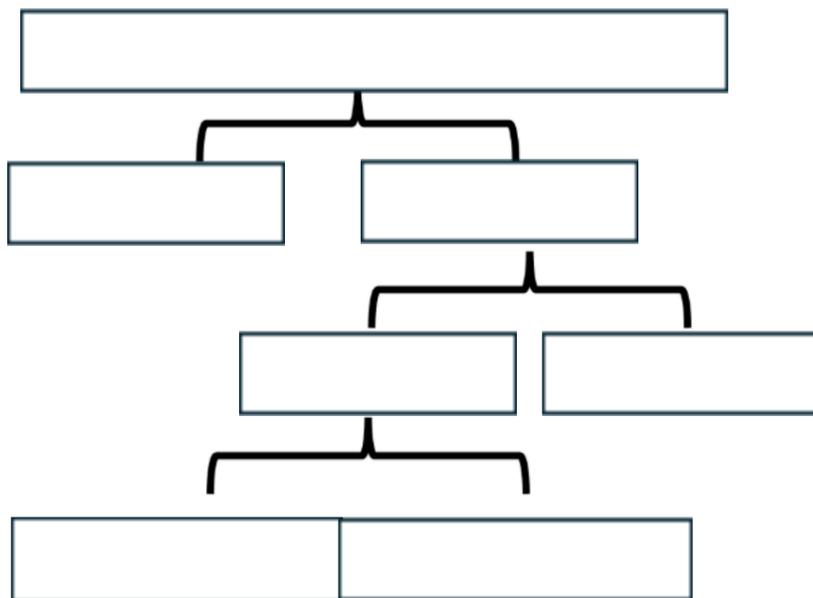
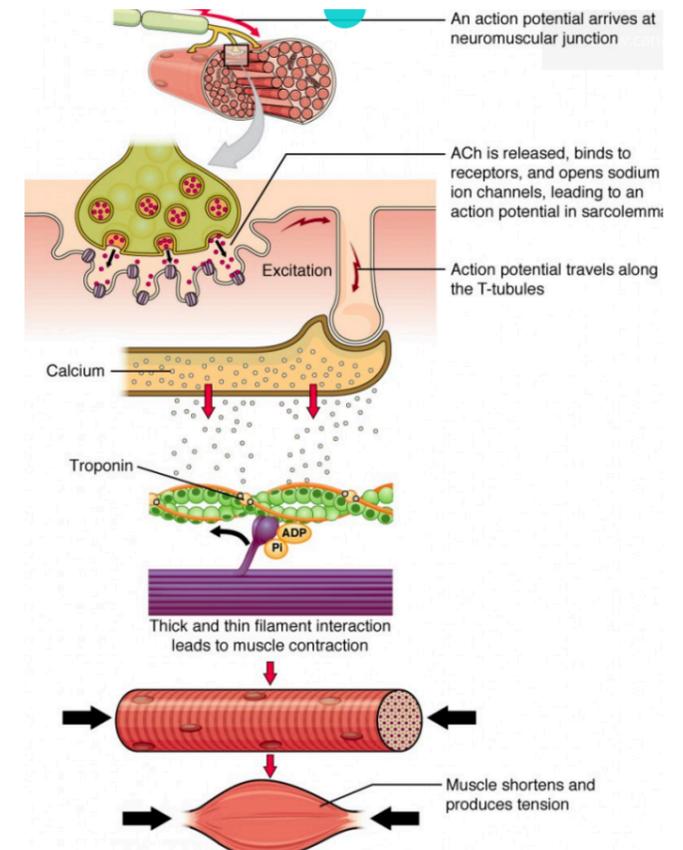




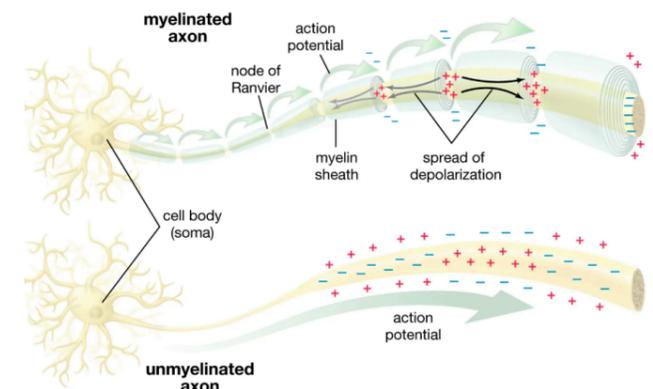
Fatigue..



Peripheral fatigue:

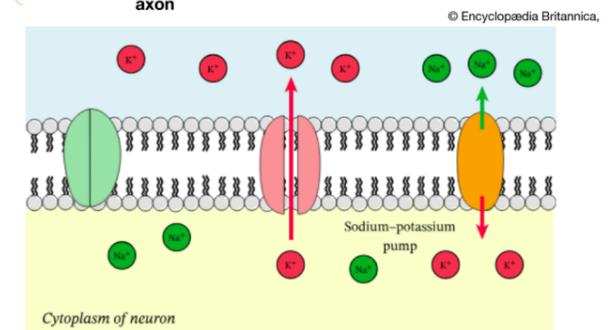


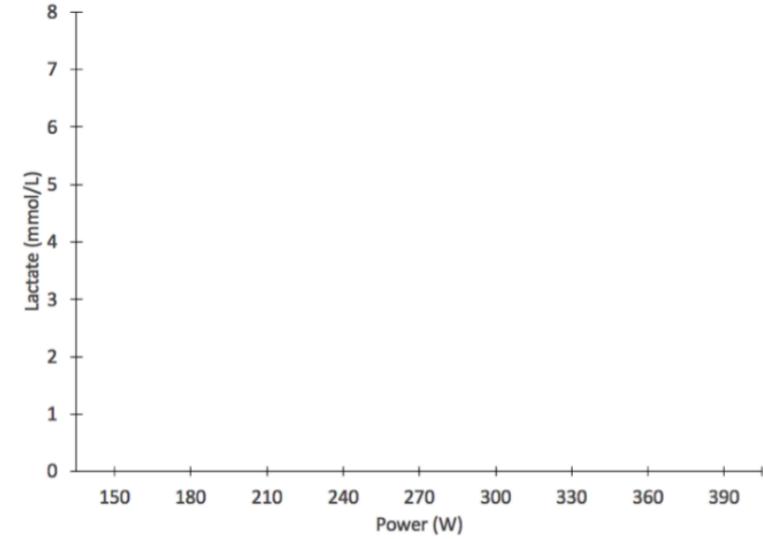
Central fatigue:



Causes of fatigue in high intensity activities

Causes of fatigue in endurance activities





Term	Cause	Results in
pH imbalance (acidosis)	Reduced availability of calcium ions for excitation–contraction coupling	Reduced enzyme activity, impaired actin–myosin cross-bridge formation, decreased force and power output
Dehydration	Depletion of muscle glycogen and/or low blood glucose levels	Reduced ATP resynthesis, slower contraction rates, decreased endurance and power output
Insufficient fuel availability	Fluid loss exceeding fluid intake leading to reduced plasma volume	Impaired thermoregulation, reduced nerve impulse transmission, earlier onset of fatigue
Calcium (Ca²⁺) deficiency	Accumulation of hydrogen ions (H ⁺) during high-intensity anaerobic metabolism	Decreased cross-bridge formation, slower action potential propagation, impaired muscle contraction, increased fatigue and cramping
Sodium (Na⁺) & Potassium (K⁺) imbalance	Electrolyte loss through sweat affecting membrane excitability	formation, reduced muscle force production

