

muscle physiology lecture 8

task specific improvement - learning how to recruit muscles needed for a task

pain alters / impairs recruitment if muscle fibers experience pain (wrong muscles, delay, etc.)

fatigue will also compromise performance (takes longer to get to type II fibers)

if you hold something for long enough time, then you can activate type II fibers out of need

size principle not strictly based on load (it mostly is) but mechanoreceptors also look @

amount of force, duration of tension, speed of contraction, angles, muscle length, etc.

it all depends on the muscle and the characteristics of the load.

the muscle will accommodate the demand safely & efficiently, meaning that type I fibers

will handle the load and if they cannot, then you will climb Henneman's ladder

until you reach muscle fibers that can take on the demand.

type I fibers don't have the same growth ceiling as type II. athletes w/ mostly

type I fibers will not be as large even with training.

GABA - primary inhibitory neurotransmitter in the central nervous system. made from glutamate. allows chloride to enter nerve or potassium to exit nerve.

your body prioritizes self preservation.

adaptive behavior relies on the ability to inhibit actions, such as stopping yourself

from crossing the road if a car suddenly crosses. this is an example of

reactive inhibition.

example of proactive inhibition - slowing down your driving when near a school

a consequence of aging is inhibitory control deficits. decline in force control.

stretching does not reduce risk of injury since it does not work the same muscles as

a high intensity sport. stretching is static & can help for other things but not your performance.