

# Lecture 8

Wednesday, July 14, 2021

08:55

## Finishing Size Principle

- Type I - first ones to the party and last to leave
- Type II - last ones to the party and first to leave
- Train type II's
  - o Baseball: why train type I's and do anything over 3 reps?
  - o Jensen - "it's stupid"
- Initial improvements to strength training?
  - o Lots of stuff
    - Neurotransmitters, agonist/antagonist recruitment activity, withdrawal of inhibition by GTO (golgi tendon organ), rate coding, changes to motor cortex and descending neural tracts, better motor end plate connections, etc.
  - o This stuff tends to be metabolically cheaper than building more muscle
- GABA - primary inhibitory neurotransmitter in the CNS; made from glutamate
  - o Permits chloride (negative) to enter the nerve or K (positive) to exit, which hyperpolarizes that nerve
- As we age, we tend to lose some reactive inhibition
- If type I fibers are fatigued, type II fibers won't be as effective
  - o Baseball - allow bench players to sit down and not always having to stand up and cheer
- "science wins games; traditions lose games"
- Don't static stretch before an event as it will not reduce the risk of injury
  - o Specificity of adaptation (I already took this class...basically)