

General Notes

Good vs. Bad Stress

- >Radiation at 'high-dose' was deemed beneficial due to adaptive response
- >Intense, infrequent exercise can cause CV failure
- >Low amounts/extreme amounts of stress is metabolically damaging

Adolf:

- Stress has a unique fingerprint and adaptations are specific
- >We don't immediately adapt, we accommodate

Acclimation vs Acclimatization

- >Acclimation: Lab setting; simulation (ie: Hyperbaric chamber)
- >Acclimatization: Nature, environments provide change

Katy Bowman: Nutritious Movement and Disease Captivity

- >Orcas
 - Deformation in the wild vs. captivity— Why?
 - Swimming in a counter-clockwise loop
 - **Repeated mechanical stress**
 - Diet
 - Surface swimming (Reduced pressure)
- >Nutritional labels for exercise
 - Macros: Type of Load, Direction of Load, Duration
 - Micros: Frequency, ROM, Temperature, Location

Specificity of Adaption:

- Insufficient adaption? Over adaption? — Threatens survival
- >Adaptation isn't free (ATP overdrive)

How Organisms Respond to Stress?

- > Shocker; Adapt to tolerate
- >Evolution; Darwinism

Angular Specificity: A specific muscle action will elicit improvements in the capacity for the muscle to perform that type of action

- >The loudest signals for adaptation tend to arise from the last few days (Protein turnover). The body becomes more sensitized to the patterns of exposure.
- >Different stressors have different timeframes

Take Home:

1. No source of stress that doesn't have a unique fingerprint
2. 'GAS'—No adaptation is general, it's specific
3. It's not just your muscles adapting, it's multi-system
4. Adaptations are aimed at self-preservation
5. All living cells, organisms are constantly adapting and making changes (homeostasis)
6. Corrective exercise is the manipulation of biological stress and mechanical loads placed upon tissues to restore cell signaling (ie: change mechanical load)