

muscle physiology lecture 10

good vs. bad stress

stress begets fortitude & adaptation. workers exposed to radiation (30 thousand)

a study found that the workers exposed to high doses of radiation had a 41.

lower mortality than the low radiation workers. physiological relationship between

stress & protection (similar to broccoli & vaccinations)

there is an amount of stress that is good for you. people can handle the

same amount of stress differently - people tolerate different amounts

all sources of stress has a unique fingerprint which correlates to how we respond

to those stresses and adapt specifically for that. the adaptations are based

on how / which bodily systems are challenged.

acclimation - lab setting, laboratory experiments

acclimatization - out in nature / the environment nature's natural stress

physical activity as "nutrition" - kathy bowman. book - move your DNA

your body documents all the stress in its cells. if a cell does not have

its needs met, it can't survive, but if it adapted beyond its needs,

that would threaten its survival as well because adaptation comes with

an expense. @ cellular level, a ton of energy (limited resource) is needed

the initial energy cost is not necessarily the same as the total energy cost.

if the adaptation results in a higher basal metabolic rate then your energy

cost to live will be much higher. our bodies are reluctant to make even

small changes because we are genetically equipped to endure famines.

this is because humans have been exposed to food shortages for generations.

nonlethal/nonthreatening stress - ignored. significant stress - accommodate

until it ends. frequently severe stress - adapt to tolerate it. specific adaptation

towards the characteristics of the stress. generational stress - drives genetic

adaptation towards handling the stress. evolution

adaptation is greatly influenced by the last few days. environmental acclimation

can be the last few weeks. your physical form is the embodiment of its stresses.