GET STRONGER AND LIVE LONGER

How To Manage Sarcopenia and Age-Related Muscular Atrophy Through Power Training

AGENDA

Use It or Lose It

Bedrest Kills

PROTEIN PROTEIN PROTEIN

Get Stronger and Live Longer

“USE IT OR LOSE IT”

WHAT DOES THAT EVEN MEAN?

- Muscular Atrophy Aka “Muscle Wasting”
  - Intentional Disuse or Neurogenic Impairment
    - Exacerbated by Comorbidities, Malnutrition, and Age (Sarcopenia)
      - Preventable Suffering and Decreases the Quality of Life of Older Adults

Muscle Atrophy: Causes, Symptoms & Treatment (clevelandclinic.org)

BEDREST KILLS

LOSS OF MASS

- 0.5% or 150 g of total muscle mass lost/day
- >1 kg of muscle lost/week

LOSS OF STRENGTH

- 0.3% to 4.2% decrease in strength per day

LOSS OF BASIC FUNCTIONALITY

- Inability to perform some ADLs lost in a matter of weeks

Wall, B.T. and van Loon, L.J. (2013), Nutritional strategies to attenuate muscle disuse atrophy. Nutr Rev, 71: 195-208.

PROTEIN

Energy is essential, but overfeeding does not attenuate further atrophy.

Habitual protein intake in a healthy individual usually constitutes approximately 10–15% of total energy intake.

For a healthy 165 lbs male consuming 2400 calories per day, this would equate to approximately 60–90 g of protein daily (0.8–1.2 g protein per kilogram body mass).

Wall, B.T. and van Loon, L.J. (2013), Nutritional strategies to attenuate muscle disuse atrophy. Nutr Rev, 71: 195-208.

POWERLIFTING TO COMBAT SARCOPENIA

- By the age of 80 years, humans generally lose ~30–40% of their skeletal muscle fibers, particularly Type II fibers
- Power output has a strong correlation with performance in a number of functional tasks c
- Power training was more effective for improving muscular power and functional capacity in older adults

Jae-Young Lim, Therapeutic potential of eccentric exercises for age-related muscle atrophy, Integrative Medicine Research, Volume 5, Issue 3, 2016,

BASIC AND EFFECTIVE

SQUATS AND LUNGES

Muscles:
Quadriceps, Hip Flexors, Glutes, Core

ROWING

Muscles:
Shoulders, Scapula, Back, Core

CURL TO PRESS

Muscles:
Biceps, Shoulders, Forearms, Core

SUMMARY

THANK YOU