



Movement - JC Notes

Beyond Muscle... Metabolism, Mood and the Mind

WHY MOVEMENT MATTERS

Movement supports nearly every system in the body.

Brain Energy & Function - Muscle & Bone - Cardiovascular Health - Metabolic Health -
Mood & Mind State - Sleep Quality - Balance, Mobility, Flexibility

MOVEMENT'S SUPER POWERS

Brain Health - Learning, memory, mood, attention, neuroplasticity (BDNF).

Muscle - Strength, power, metabolic reserve, healthy aging.

Bone - Bone density, fracture prevention.

Heart & Blood Vessels - Aerobic fitness, circulation, blood pressure.

Metabolic Health - Insulin sensitivity, blood sugar regulation.

Balance & Mobility - Reduced falls, confidence, independence.

Sleep - Better depth and quality .

Mental Well-being - Stress resilience, anxiety reduction, improved mood.

FOUR MOVEMENT FUNDAMENTALS AND PRINCIPLES

Strength Training	Muscle growth comes from stressing your muscles - challenge your own capacity - not what others can do.
Aerobic	A few short Sprint Interval Training (SIT) ⇒ outsize results for time and effort (Beats longer zone 2 sessions for women).
Recovery Days	Essential for muscle adaptation. Alternate training days for intense exercise bouts intended to build capacity like strength and SIT. Enjoy Zone 2 training and other activities any time.
Hourly movement	Break up prolonged sitting (2-10 minutes every 30-60 minutes) <i>*muscle contraction required to activate transport of O₂ and glucose to the brain.</i>

BONUS: The more room you have to improve, the greater the benefit of each small step.

These notes summarize an understanding of current evidence and personal learning at the time of writing. They are intended to support more informed decisions and do not replace professional medical advice.



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DECIDING WHAT TO PRIOTIZE

Begin with matters most to your priorities.

Fundamental	Most Value
Strength Training	Ability to move, balance, prevent falls More capacity for transporting O2 and absorbing glucose - legs in particular
Aerobic Fitness	Heart, lungs, brain cognition, BDNF (neuroplasticity)
Regular Movement	Brain energy and cognition Loss of years life expectancy correlation to extensive sitting likely due to lack of O2 and glucose flow

PROGRESS KRYPTONITE

Classic behaviors largely due to old myths can sabotage efforts.

Kryptonite	Why
Skipping recovery	Muscles have no time to adapt and grow (adapt during rest)
Pushing too far too quickly	Risk of demotivation (pain, discomfort) and risks of injury Need push our own boundaries, not try to exceed our own capacity
Ignoring pain	Set backs, injury, de-motivation

A NOTE TO READERS

Exercise physiologist [Stacy Sims](#) reminds us that '*Women are not small men*'. Most existing exercise research has been based on studies of men though more studies now include or focus on women, helping to identify the differences. **My research priorities include particular attention to areas where women's needs differ.**

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