

EXERCISE REALLY IS THE FOUNTAIN OF YOUTH!

Lesson 3 Guided Notes



1. It has been found that cognitive abilities are best in those who exercise. After age 70, there is a decreased likelihood of memory and other cognitive abilities being impaired with exercise.

2. Mechanisms of physical exercise include:

- Improves blood flow, oxygen, and glucose
- Increases DNA cell repair
- Protects against free radicals, high glucose levels, and increased glutamate levels
- Improves brain metabolism of cholesterol and other lipids
- Improves insulin's ability to regulate glucose
- Neuron response to stress is improved, especially in the hippocampus, which has stem cells so it can produce more neurons
- Tone of blood vessels is improved because nitric oxide is enhanced
- Lowers blood sugar and increases insulin sensitivity

DR. AMEN'S RECOMMENDED EXERCISES INCLUDE:

- Table tennis
- Dancing
- Coordination exercises
- Walking
- Strength training



3. Exercise helps with many things:

- Brain health
- Vitality, agility, and longevity
- Bone density
- A sense of well-being – plus people feel sexier
- Metabolism decreased the production of fat cells and lowers weight
- Lowers inflammation – but note that extreme sports, like marathons, can cause DNA damage from oxidative stress
- Improved cognition and psychological well-being
- Decreased risk of dementia
- Promotes the effects of antidepressants and anxiolytics
- Increases certain neurotransmitters and upregulates BDNF and neurogenesis

After age 70, there is a decreased likelihood of memory and other cognitive abilities being impaired with exercise.

4. Dr. Amen's recommended exercises include:

- Table tennis – It involves mental and physical coordination and increases blood flow to the frontal lobes and cerebellum – plus, there's a reduced incidence of TBI.
- Dancing and other coordination exercises.
- Walk “like you're late” 4 times/week for 45 minutes.
- Strength training twice weekly: The stronger you are, the more protected you are from developing Alzheimer's disease.