

AMEN CLINICS

Physical Exercise

Did you know that physical exercise is perhaps **the single most important thing you can do to keep your brain healthy** over time? Physical exercise not only boosts blood flow and other positive nutrients to the brain – it actually stimulates the brain's ability to generate new brain cells.

The health benefits from physical exercise are truly amazing. Research has shown that the benefits of mild to moderate exercise include:

- protecting brain cells against toxins
- repairing damaged cellular DNA to help protect against cell death
- boosting cognitive ability in people of all ages
- reducing the risk of cognitive impairment, heart disease, and stroke
- improving cholesterol and fat metabolism
- reducing the risk of diabetes, osteoporosis, colon and breast cancer
- increasing the likelihood that you will choose healthier foods
- alleviating depression and anxiety
- easing ADD symptoms
- improving sleeping habits
- helping you manage stress more effectively
- improving muscle tone and endurance, which lowers the risk of fall accidents

So what are you waiting for? Just get started!

It is really important to find activities you enjoy - cycling, swimming, walking, hiking, aerobic classes, Cross-Fit, tennis, or dancing. Try something new!

If you have not been exercising regularly, begin slowly. Even if you commit to walking to the end of the block and back every day, it's a start. Then set a goal to increase the amount and intensity of the physical exercise every week until you are exercising four to five times per week for at least 30 minutes.

For those short on time, interval training is recommended by the American College of Cardiology to be *as effective as sustained aerobic exercise*. Twenty minutes of interval training 3 days per week is equivalent to thirty minutes of cardio 5 days per week.

Interval training is basically 90 seconds of warm-up followed by a series of "bursts" of exercise - 30 seconds of going as fast as you can and then 90 seconds of moderate pace. Repeat this 8 times with a 90-120 second cool down at the end. Interval training can be done with any form of exercise such as running, treadmill, elliptical, Stairmaster, swimming, cycling, and walking.

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Brain Area Specific Physical Exercises

Prefrontal Cortex: Aerobic exercise helps boost blood flow and dopamine in the brain, which has been shown to help with impulsivity. Yoga can also help sharpen focus and strengthen the PFC.

Deep Limbic: Aerobic activities that are social, such as dancing or joining a local sports team are very effective as they calm hyperactivity in the DL system and enhance your mood, in addition to boosting blood flow and multiple neurotransmitters in the brain.

Basal Ganglia: Yoga and tai chi soothe overactivity in the basal ganglia and calm anxiety.

Temporal Lobes: Issues with the TL can be reduced through aerobic coordination activities that involve music.

Cerebellum: Dancing, table tennis, and coordination exercises are highly recommended.

Check with your doctor before beginning any exercise program.

Brain Area Specific Mental Exercises

Prefrontal Cortex: Crossword puzzles, word games, meditation, and hypnosis

Deep Limbic: Killing the ANTS (automatic negative thoughts) and gratitude practice

Basal Ganglia: Deep relaxation, hand-warming techniques, and diaphragmatic breathing

Temporal Lobes: Memory games, naming games, and singing

Parietal Lobes: Juggling and interior design

Cerebellum: Handwriting and calligraphy