



BRAIN HEALTH BOOST



High-Intensity Workouts a HIIT with Some Seeking Better Brain Health

*The Brain Health Initiative (BHI) is working to develop brain healthy communities, creating a culture that promotes brain health protective factors and decreases risk factors, thereby improving brain health, optimizing brain performance, and preventing and fighting brain illness across the lifespan for the Florida Suncoast region and beyond. **It has been long established that exercise is vital to brain health. But how long do you have to work out and how much sweat is enough?***

Your brain loves exercise. And we're not just talking about the kind of exercise that requires critical thinking, like crossword puzzles, [Wordle](#), [Sudoku](#) or a tough riddle. No, your brain thrives when the rest of the body gets a good workout as well.

According to a [Harvard Health](#) post, regular exercise boosts your memory and thinking skills. It does so, in part, by stimulating the reduction of insulin resistance and inflammation and encourages the production of chemicals that affect the growth of new blood vessels in the brain and promotes the overall health of new brain cells. Studies also suggest parts of the brain that control thinking and memory are actually larger in volume among people who exercise than in people who don't.

What is not yet determined is what type of exercise works best, either for overall health or brain health.

One style of exercise that remains popular in gyms and online fitness classes is high-intensity interval training (HIIT). HIIT features short bursts of high-intensity exercise (usually lasting one to four minutes) interspersed with periods of lower-intensity activity or rest. The main advantage to HIIT is that you can boost your fitness levels faster by working harder, not longer. It's good for people who have difficulty finding time to get to the gym.

[Harvard Health](#) says HIIT can help decrease body fat, increase strength and endurance, and improve health outcomes. Its main appeal is that it can achieve similar fitness and health benefits in a shorter duration, and that it includes periods of rest.

A study published in [BMJ Open](#) included 1,567 healthy, active Norwegians with an average age of 73. About half (the control group) were assigned to do 30 minutes of exercise most days. The rest got the same instructions, but half were assigned to replace two of the week's exercise sessions with HIIT workouts (see example in the box below). The other half swapped in moderate-intensity continuous training twice weekly.

After five years, there were no survival differences among the three groups, although the HIIT group had slightly fewer deaths.

Of course, HIIT may not be for everyone. People who are out of shape, recovering from injury, elderly, are overweight, or have medical conditions should be monitored closely by their physician and an exercise professional, because of the higher intensity achieved with HIIT.

WHAT YOU CAN DO TODAY TO PROTECT YOUR BRAIN HEALTH

Below is the 4x4 HIIT workout used in the BMJ Open study. It lasts 43 minutes.

- 10-minute warm-up (brisk walking or jogging) at 60 percent of maximum heart rate
- Four minutes of high-intensity exercise at 85 percent to 95 percent of maximum heart rate
- Three minutes of lower-intensity exercise (jogging or brisk walking) at 60 percent of maximum heart rate
- Repeat steps 2 and 3 three times, for a total of four cycles.
- Five-minute cool down.

NOTE: To get a rough idea of your maximum heart rate, subtract your age from 220. For 60 percent, multiply by 0.6; for 85 percent, multiply by 0.85. As an example, the estimated maximum heart rate for a 75-year-old would be $220-75=145$; 60 percent of that would be $145 \times 0.6 = 87$.

Below is a [specific HIIT workout](#) from dailyburn.com. Perform each exercise (described in more detail in the linked article) at 100 percent effort, with 30 seconds of rest in between. Repeat every other day with the goal of completing it faster each time.

- 50 sit-ups
- 40 jump squats
- 30 push-ups
- 20 split jumps
- 10 tricep dips
- 30 seconds of burpees

About the Brain Health Initiative (www.brainhealthinitiative.org)

The Brain Health Initiative (BHI), a 501(c)(3) nonprofit, uses a cutting-edge approach to protecting brain health, promoting brain performance, and preventing and fighting brain illness across the lifespan. The BHI is building brain healthy communities, cultures that foster brain health protective factors and address risk factors, thereby improving brain health and optimizing brain performance outcomes for the Florida Suncoast region and beyond. Join the **Be Brain Healthy** movement, **because brain health matters, and lifestyle makes a difference.** To view all Brain Health Boosts [click here](#).