



connections
PHYSICAL THERAPY

**NEURO SPECIALTY
NEWSLETTER**

IMPROVING COGNITION: MIND, BODY AND PRACTICE



ALSO INSIDE

Aerobic Activity & Cognition • Staff Spotlight • Current News



We all know that exercise is good for the body, but did you know that it is good for the brain too? Research has shown that aerobic exercise, such as walking and biking, CAN improve processing speed as well as the ability to plan and prioritize.

Exercise can also...

- Improve memory and thinking skills
- Improve mood and sleep quality
- Decrease stress levels
- Decrease inflammation in the brain
- Increase production of chemicals that aid in the growth of new blood vessels and cells in the brain

The goal of your aerobic exercise should be 20-30 minutes, 3-5 times a week. When just starting out, make sure that you take it slow, and rest as needed to avoid fatigue. Know you may need to break up your sessions into shorter times throughout the day. Endurance should improve as you continue to exercise.

Below are some examples of aerobic exercises:

- Walking
- Biking
- Swimming
- Yoga
- Pilates
- Zumba
- Dancing
- Boxing
- Tai Chi

- *Boxing and swimming:* works cross body coordination and multiple muscle groups at once
- *Yoga:* emphasizes deep breathing and relaxation to improve focus
- *Zumba and Tai Chi:* challenges multitasking by combining movement with verbal and visual instruction

These benefits can help reduce the stress and attention required during walking to allow for more brain power to be used elsewhere.

Before starting a new aerobic exercise:

- Check with your medical doctor to ensure cardiovascular exercise is safe for you
- Ask your physical therapist which exercises are best for your individual needs



There are many options for activities to strengthen the brain itself. Here are a few links to free online puzzles and writing suggestions:

- [Crossword puzzles](#)
- [Sudoku](#)
- [Writing in a journal](#)

Read the articles below on certain activities that can improve cognitive function:

- [Painting](#)
- [Card games](#)
- [Board games](#)
- [Jigsaw puzzles](#)

(Please note, we are not affiliated with, nor do we endorse any specific companies. The above links are only examples of websites and activities you can use to strengthen your cognition and learn.)

	7			2		4	6	
	6					8	9	
2			8			7	1	5
	8	4		9	7			
7	1						5	9
			1	3		4	8	
6	9	7			2			8
	5	8					6	
4	3			8			7	

If you are having trouble with memory, planning, or any other cognitive tasks, occupational therapy (OT) can help!

Occupational therapists can help with cognitive difficulty by:

- Suggesting brain exercises and games to stretch your thinking
- Working with you to build up your cognitive endurance
- Guiding you through specific activities in therapy to target your problem areas
- Introducing strategies to help you stay independent in your daily routine

Advice from an occupational therapist...

Here are some quick strategies to help with organization and memory in your daily routine:

- Utilize a calendar or planner to manage appointments
- Set reminders and alarms on your phone or watch
- Schedule your day to make sure you have enough time for each activity
- Maintain the same routine daily or weekly
- Use pill boxes for medications and set them up when you are feeling focused
- Use sticky notes for visual reminders (you can even color code them based on importance or type of reminder!)
- Make to-do lists and check off items as you finish them
- Organize your space to help you find items you need quickly

What's New in Research:

Cognitive rehabilitation is a proven and increasingly promising tool to improve cognitive functioning. A literature review by Goverover, Chiaravalloti, O'Brien and DeLuca (2017) reviewed 59 studies conducted between 2007-2016 that focused on cognitive rehabilitation, specifically with those diagnosed with multiple sclerosis (MS). They found that research supporting cognitive rehabilitation as a method of treating cognitive decline in patients with MS has been growing steadily in past years. They also found that many of the studies they looked at noted strong evidence that cognitive rehabilitation is effective at improving memory, planning, attention, processing speed, and learning in persons with MS, especially when using treatment methods that have been developed and improved upon in recent years. [Click here to read the link to the full study.](#)

As we age, our brain undergoes changes that can impact cognitive functioning. The term "crystallized intelligence" refers to the ability to recall familiar information and tasks that are practiced often such as recognizing family members or objects commonly seen around the house. The term "fluid intelligence" refers to learning new tasks and adapting to changing situations. This fluid intelligence has greater potential to decline as we age. However, regular physical activity is thought to act as a protective mechanism to cognitive decline by improving attention, mood, and memory. Research done by Laura K Stewart and colleagues in 2007 showed that a 12 week exercise program including both cardiovascular and strength training caused decreased levels of inflammatory markers in the brain. A more comprehensive illustration of potential cognitive benefits of exercise can be found in the listed figure. [Click here to read the link to the full study.](#)



Proudly Serving Your Community

THERAPIST SPOTLIGHT:

Dr. Erica Hoffmann OTD, OTR/ORL, LSVT

Erica received her Bachelor's in Human Development and Family Studies from University of Connecticut and continued on to receive her Doctorate in Occupational Therapy from Western New England University. She joined Connections PT in January 2021 to work closely with patients on endurance and fatigue management, upper extremity strengthening, fine motor skills, cognitive rehabilitation, reducing tremors, use of adaptive equipment, and most importantly, on regaining and maintaining independence in their daily routine. In her free time, she enjoys participating in and supporting community theater, print making, reading, baking and going for walks in her local park.

OUR TEAM:



Dr. Alex Warden-Michl PT, DPT,
MSCS, LSVT



Dr. Amy Roberts PT, DPT,
LSVT



Jean Feder-Ewell PT, MSPT,
MSCS, LSVT



Dr. Nicole Simmonds PT,
DPT, NCS



Dr. Erica Hoffmann OTD,
OTR/ORL



Dr. Eileen Gardner PT, DPT,
LSVT



Dr. Jeffrey Ragosta PT, DPT

Real People, Real Results, Real Stories:

After 37 years living with MS and close to that many years of physical/occupational therapy, I believe I have finally found “My Place” at Connections Physical Therapy. Alex, Jeff, Erica and the whole gang have been instrumental in not only guiding me through changes in my physical life but my emotional health as well. My new physical life and emotions are no longer “I can’t, I don’t and I won’t” but are now “I can, I do and I will.” My brain has been RE-TRAINED!! and if it’s not perfect, do it again are my new mantras! Thanks to the whole group for this guidance! It works!

Since being diagnosed with MS almost 2 years ago I had been going to your typical Physical Therapist for about a year in which I had learned how to balance and strengthen my body. Although she had helped me with many of my issues I felt I needed to find someone that specialized in my disease. Since the beginning of this January I have had the pleasure of working with Jean from the Wellesley location. What a gem!! She’s so compassionate and knowledgeable! With the little time we have spent together I have learned so much about my body and the way it works. Highly recommend her for anyone whom has MS!!



connections
PHYSICAL THERAPY