



connections
PHYSICAL THERAPY

**NEURO SPECIALTY
NEWSLETTER**

WHAT IS COGNITIVE DYSFUNCTION?



ALSO INSIDE

Signs of Cognitive Dysfunction • Staff Spotlight • Current News



Cognition is the person's ability to be able to think, act, plan, and execute tasks. It relates to memory, recall, planning, language, information processing, word-finding, focus, and attention. Cognitive dysfunction may present in different ways (domains) and can be classified as mild, moderate, or severe. Cognition may be affected by aging, neurological diagnoses, and by other conditions such as depression, anxiety, poor sleep, and fatigue.

“It is important to know that 1 in 9 adults over 65 will report experiencing difficulties with memory or confusion as a result of typical aging.”

In addition, specific diagnoses can also impact cognition:

- **Parkinson's Disease:** ~50% of individuals with Parkinson's disease will develop a cognitive impairment. Up to 70% of those with a diagnosis of Parkinson's may develop dementia.
- **Multiple Sclerosis:** >50% of individuals diagnosed with MS will develop some cognitive impairment. Most people with MS will develop only mild impairment however some are more greatly affected.
- **Post-Stroke:** Based on a 2014 article 20-80% of post-stroke patients may result in some form of cognitive impairments. Post-stroke patients are more likely to develop cognitive impairments resulting from co-morbidities (like high blood pressure, diabetes) or with recurrent strokes.
- **Traumatic brain injury (TBI):** Cognitive impairments are extremely prevalent in cases of TBI, and are dependent on the part of the brain that was injured. Almost any individual who experiences a TBI will experience some point of cognitive dysfunction. Cognitive impairment can correlate strongly with the level or severity of injury and can result in behavioral issues, mood/personality changes, and cognitive changes.



Here are some common cognitive signs you might be experiencing:

- **Short term memory:** forgetting what you entered a room for, asking the same questions even if they have been answered already
- **Word retrieval:** having trouble thinking of a word, getting words mixed up (like saying “bed” instead of “table”)
- **Processing:** taking longer than normal to take in information or learn, having a harder time thinking in loud or distracting environments
- **Organization:** forgetting appointments, having trouble with time management
- **Sequencing:** difficulty following steps in a recipe, coordinating a multi-step physical task or therapy exercise
- **Multitasking and focus:** difficulty with focusing on a task for a determined amount of time, or focusing to two tasks at once like different things on the stove when cooking, or when walking and having a conversation

Did you know that fatigue, a common symptom with neurologic conditions, can also impact your cognition?

Things that can contribute to fatigue include:

- Stressful life events or situations
- Heightened mood (becoming upset, frustrated, or angry)
- Rushing, if you are running late
- Overstimulation (including bright lights, loud noise, distracting environments)
- Physical activity

Poor cognition can affect your general mobility, balance, and increase your risk for falls.

The ability to walk, maintain posture, and balance all require the use of certain cognitive skills. Research demonstrates that safe navigation and mobility are related to specific cognitive functions such as: planning, problem solving, reasoning, judgement, and the ability to manipulate attention (dual-task).

During a motor task (ex: reaching, balancing, walking), a person should be able to assess, plan and respond to any changes in the surrounding environment by adapting his/her movement pattern. The inability to carry out these important executive functions, which can decline with general aging and/or neurological dysfunction, can lead to imbalance and falls. Addressing cognitive impairments or difficulties early on can help keep you and your loved ones safe and more active!

What are the next steps in managing cognitive changes? If you are experiencing any of the symptoms mentioned in this newsletter, it’s important to reach out to your doctor and ask for assistance!

Things to consider at your next doctor’s appointment...

- Ask about medications that may improve your cognitive function
- Ask for neuropsychological testing
- Get more info on Cognitive Behavioral Therapy (CBT)
- Seek a referral/appointment with a rehab professional

What's New in MS Research:

A 2018 study in Frontiers in Behavioral Neuroscience titled “Integrated Cognitive and Neuromotor Rehabilitation in Multiple Sclerosis: A Pragmatic Study” showed patients with multiple sclerosis who had both cognitive and neuromotor training did better in emotional, motor, and cognitive tests when compared to MS patients who only had neuromotor training. Exercise had beneficial effects in MS patients on physical functioning (ex walking ability, balance, and aerobic endurance) AND neuropsychiatric symptoms (ex cognition, depression, and fatigue). The results of this study support an “integrated rehabilitative approach” to include physical and cognitive interventions. This study shows the benefits of physical exercise and cognitive therapy for patients with MS. [Click here to read the link to the full study.](#)

A 2021 study in Frontiers in Neurology titled “Functional and Cognitive Improvement After an Intensive Inpatient Multidisciplinary Rehabilitation Program in Mild to Severe Parkinson’s Disease: A Retrospective and Observational Study” highlights the link between cognitive impairment and decreased quality of life and functional disability in people with Parkinson’s Disease. Subjects in this study received a combination of physical therapy, occupational therapy, speech therapy, and cognitive therapy. The study found greater improvements in functional mobility and cognition in patients with mild to moderate PD vs severe PD. This study also found that patients who had a multidisciplinary approach (PT plus OT) did better than patients who only received PT or OT. It supports patients with Parkinson’s Disease participating in both PT and OT especially in the earlier or moderate stages of the disease. [Click here to read the link to the full study.](#)

THERAPIST SPOTLIGHT:



Dr. Nicole Simmonds PT, DPT, NCS

Nicole graduated from Springfield College with her Bachelor of Science in Health Science in 2011 and continued on to receive her Doctorate in Physical Therapy in 2013. Nicole completed a one year neuro residency during which she worked in inpatient and outpatient settings with various neurologic conditions including Multiple Sclerosis, Parkinsons, vestibular dysfunction, brain injury, spinal cord injury and stroke. She then became a board certified Neurologic Clinical Specialist in 2017. Outside of work, Nicole enjoys practicing meditation and being outdoors hiking or biking to explore new areas of the country.

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



Proudly Serving Your Community

Real People, Real Results, Real Stories:

“My neurologist insisted that I partake in physical therapy at Connections, on 120 Stafford Street, Worcester. Due to my unfortunate diagnosis and neurological injuries, she emphasized that I required training from a physical therapist specializing in neurological injuries and conditions.

I next met with Nicole Simmonds, PT, DPT, NCS. Nicole greeted me warmly and provided care and privacy while we reviewed my medical and physical challenges. While this experience can be quite humbling, Nicole has been nothing but patient and encouraging while also challenging me to reach new milestones.

Nicole’s greatest skills lie not only in the physical exercise programs she designs, but in her capacity to listen and to collect information, record notes and provide feedback. Throughout each visit, we discuss medical appointment and testing results, review nutritional/dietary concerns, and discuss sleep patterns, etc. I have, without question, progressed!

Overall, Connections, has undoubtedly been an enormous support to me and my overall medical team.”

“I have had an amazing experience working with Jean – she looks at the whole picture of my MS, my goals, and has been such a wealth of knowledge for me, even after having MS for over 12 years! She is an invaluable part of my treatment team and support system.”

“My mom has been working with Jean for about 2 years now, and I am so impressed with how much progress she continues to make. Jean is so patient, but also knows what needs to get done and makes sure that her patients put in the numbers. I’m so thankful for a P.T. office that specializes in people with neurological disorders like M.S.!”



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