

Cognitive Dysfunction in Fibromyalgia

70% of individuals with fibromyalgia experience cognitive dysfunction symptoms including impaired concentration, memory, comprehension, word finding difficulty, and mental slowness/fog.²

Impact on Daily Life



Communication

- Impaired social interaction; difficulty with conversation, lost train of thought
- Generates difficulty receiving support and understanding from health providers, friends, and family; increased social isolation



Activities of Daily Living

- Forgetting appointments and medications, difficulty planning/scheduling activities
- Difficulty fulfilling responsibilities as a parent, student, employee, etc.



Reduced Sense of Self

- Cannot perform at pre-FM efficiency; easily overwhelmed
- Loss of career or reduced role, difficulty engaging in previously enjoyed hobbies

Causes of Cognitive Dysfunction

While the cause remains unclear, there are identified contributors.



Pain

Pain perception and cognitive processing rely on overlapping neural networks. Pain processing may be prioritized over cognitive function.²

Sleep Disturbance



Disturbed sleep is associated with impaired attention, memory, and executive function (e.g., planning, flexible thinking).¹

Psychological Disorders



Fibromyalgia-related depression and anxiety are associated with impaired memory and attention.³

Medication Side Effects



Medications used to treat Fibromyalgia-related pain, sleep disturbance, and depression often produce cognitively impairing side effects.

Ways to Improve Cognitive Dysfunction Symptoms



Continuing to use and challenge cognitive skills (e.g., reading, word games) can help limit impairments. Regular social interaction with friends and family is beneficial.



Work with a mental health professional to develop skills and coping mechanisms for cognitive dysfunction symptoms.

Establish a healthy sleep routine (e.g., routine sleep/wake times, period of no technology before bed).



Work with your physician to balance medication benefits and side-effects.



Exercise can improve cognitive dysfunction symptoms and help develop cognitive resiliency.



Facts & Myths

MYTH Cognitive dysfunction symptoms are untreatable.

FACT Symptoms can be managed and reduced.

MYTH Cognitive dysfunction symptoms are chronic.

FACT Symptoms can fluctuate as a result of sleep quality, medication quantities, and pain severity.

MYTH Cognitive dysfunction symptoms are progressive.

FACT Research has not shown symptoms worsen over time.³

Reduce Cognitive Load



Patients:

- Take notes, voice memos
- Use assistive technology; set reminders for medications & appointments
- Break down large tasks into smaller, achievable tasks

Health Providers:



- Use prompts to help patients explain symptoms
- Encourage note taking
- Provide written summary of appointments and recommendations



For more information



Millar, Crump, & LaChapelle
Rehabilitation Psychology
Research Laboratory

1. Williams, D. A., Clauw, D. J., Glass, J. M. (2011). Perceived cognitive dysfunction in fibromyalgia syndrome. *Journal of Musculoskeletal Pain*, 19(2), 66-75. <https://doi.org/10.3109/10582452.2011.558989>
2. Bell, T., Trost, Z., Buelow, M. T., Clay, O., Younger, J., Moore, D., & Crowe, M. (2018). Meta-analysis of cognitive performance in fibromyalgia. *Journal of Clinical and Experimental Neuropsychology*, 40(7), 698-714. <https://doi.org/10.1080/13803395.2017.1422699>
3. Kravitz, H. M., & Katz, R. S. (2015). Fibrofog and fibromyalgia: A narrative review and implications for clinical practice. *Rheumatology International*, 35, 1115-1125. <https://doi.org/10.1007/s00296-014-3208-74>.