

## Breaking News

Brain imaging to detect tissue damage associated with cognitive impairment in MS may help determine benefits of treatments [nationalMSSociety.org/brainimaging](http://nationalMSSociety.org/brainimaging)

FDA approves twice-daily capsules called Tecfidera™ (formerly called BG-12) for relapsing MS [nationalMSSociety.org/bg12news](http://nationalMSSociety.org/bg12news)

## Patient Resources

Information about symptoms: Cognitive Dysfunction [nationalMSSociety.org/cognition](http://nationalMSSociety.org/cognition)

MS and the Mind (PDF) [nationalMSSociety.org/MSmind](http://nationalMSSociety.org/MSmind)

Solving Cognitive Problems (PDF) [nationalMSSociety.org/solvecognition](http://nationalMSSociety.org/solvecognition)

Books for purchase: **Multiple Sclerosis: Understanding the Cognitive Challenges** <http://ntl.ms/amazonppb>

**Mental Sharpening Stones: Manage the Cognitive Challenges of Multiple Sclerosis** <http://ntl.ms/sharpenMS>

Cognitive impairment (PDF) <http://nationalmssociety.org/cognitionbulletin> occurs in up to 65% of all people with MS. The cognitive domains commonly affected are speed of information processing, learning and memory, perceptual skills and executive functions, often resulting in significant impact on work, family life, clinical care and daily activities. As a healthcare provider, you face the challenge of effectively screening for these deficits, discussing them with patients and their families, and offering guidance for management and rehabilitation.

## Screening and Treatment

In 2010, Consortium of Multiple Sclerosis Centers (CMSC) member professionals were surveyed on clinical practices related to screening, assessment and treatment for cognitive problems. This article (<http://ntl.ms/screencognition>) summarizes the conclusions and provides preliminary suggestions for screening and brief assessment.

Screening using the Rao Brief Repeatable Neuropsychological Battery (BRNB) and the Minimal Assessment of Cognitive Function in MS (MACFIMS) (<http://ntl.ms/memoryMS>) have demonstrated reliability and validity, however, generally require a neuropsychologist or other rehabilitation specialist to administer. Evidence is mixed regarding pharmacological approaches to improve cognitive symptoms. Some preliminary evidence suggests that disease-modifying therapies may slow cognitive deterioration but findings are inconsistent. A number of studies suggest that cognitive improvement via rehabilitation may be effective (see "Recent Research on Cognition and MS," below).

## Recent Research on Cognition and MS

- *Cognition in multiple sclerosis*. Langdon examines the concept of cognitive reserve which seems to offer some protection from the cognitive impact of MS. [http://journals.lww.com/co-neurology/Abstract/2011/06000/Cognition\\_in\\_multiple\\_sclerosis.10.aspx](http://journals.lww.com/co-neurology/Abstract/2011/06000/Cognition_in_multiple_sclerosis.10.aspx)
- *Neuroplasticity and functional recovery in multiple sclerosis*. Tomassini, et al., suggest that functional plasticity may be enhanced by neuropsychological intervention and may have the potential to expand the brain's functional reserve. <http://www.nature.com/nrneurol/journal/v8/n11/abs/nrneurol.2012.179.html>
- *Neuropsychological rehabilitation in adult multiple sclerosis*. Mattioli, et al., found that intensive and specific training of attention, information processing and executive functions is significantly effective in ameliorating dysfunction and in reducing depression. <http://www.ncbi.nlm.nih.gov/pubmed/20640467>

## Practice Tips

- Ask patients and family members routinely about changes in cognitive function. For brief screening/monitoring, consider the 15-item MS Neuropsychological Screening Questionnaire ([https://secure5.azati.com/iomsn\\_org/pdf/msnq.pdf](https://secure5.azati.com/iomsn_org/pdf/msnq.pdf)), which is self-administered by patient and informant. A standard mental status exam may miss up to 50% of people with cognitive deficits. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1027722/>
- Provide reminders as patients with MS may have difficulty remembering their appointments.
- Provide instructions in written form as well as orally to improve treatment adherence.
- Consider depression, sleep deprivation, fatigue, medications (e.g. oxybutynin), and other medical conditions that may contribute to cognitive dysfunction.