

# Cognitive Changes in MS

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Cognition refers to high-level functions of the human brain, including: the processing of incoming information; attention and concentration; learning and memory; planning, problem-solving and decision making; and acting on information and communicating it to others. Over half of people living with MS experience some changes in cognitive functioning.

## The relationship between MS and cognition

- Cognitive changes can occur at any time, even as a first symptom of MS.
- Cognitive changes can occur with any disease course but are more common in progressive MS.
- The changes are usually mild and generally progress slowly but can become more challenging over time.
- Cognitive changes are unrelated to degree of physical disability; you may have significant physical limitations with no cognitive problems or you may have significant cognitive limitations with no physical limitations.
- Cognitive problems can lead to leaving the workforce early.
- Cognitive problems can affect self-esteem, interfere with communication, and impact relationships.
- Early identification of cognitive problems can lead to early intervention and implementation of strategies to manage the symptoms.

## When cognitive testing may be appropriate

- When you, your loved ones, healthcare providers, or colleagues have noticed changes.
- When you have difficulty carrying out your responsibilities at home or at work.
- When you are considering applying for disability.
- When you want to identify your cognitive strengths and weaknesses so you can begin to develop strategies to address any problems you're experiencing.

## How cognition is evaluated

- Screening is recommended at least once a year to identify potential problems.
- Identification of cognitive changes can lead to referral for a more comprehensive evaluation, including a mood evaluation. Both depression and anxiety can impact cognitive functioning, so

treating the depression or anxiety may improve your cognition.

- Neuropsychologists, as well as some speech-language pathologists and occupational therapists, evaluate cognitive functioning. They use a variety of cognitive assessment tools with the goal of determining how, and to what extent, cognitive changes may be interfering with your ability to function effectively at work and at home.

## How cognitive changes are treated

- Although many medications have been evaluated, none have demonstrated effectiveness in large-scale clinical trials.
- Disease-modifying therapies (DMTs) that reduce MS disease activity (number of relapses, lesion activity as shown on magnetic resonance imaging (MRI), and degree of tissue loss (atrophy)) may slow cognitive changes.
- Cognitive remediation therapy (CRT), also known as cognitive enhancement therapy, is a treatment method designed to improve attention, memory, and executive functions. Tools provided by this treatment approach include:
  - Exercises to improve attention and memory.
  - Organizational tools and strategies that compensate for changes – for example, filing systems, work and family calendars, and templates for completing complex tasks like bill-paying, meal-planning, and projects at work

## Taking the important first step

The standard neurologic examination does not detect most cognitive changes in people with MS. Therefore, if you are experiencing a change in cognitive function let your MS provider know so that an assessment can be done and a management plan determined.