



Summary of Evidence-based Guideline for **PATIENTS** and their **FAMILIES**

EMOTIONAL DISORDERS IN PEOPLE WITH MULTIPLE SCLEROSIS

This fact sheet presents the current research on emotional disorders in multiple sclerosis (MS) and summarizes the main findings of a newly published guideline on emotional disorders in MS.

The American Academy of Neurology (AAN) is the world's largest association of neurologists and neuroscience professionals. The AAN is dedicated to promoting the highest quality patient-centered care for people with diseases of the brain and nervous system. Experts from the AAN carefully reviewed the available scientific studies on screening, diagnosing, and treating emotional disorders in MS. The following information is based on evidence from those studies and the guideline.*

To read the full guideline, visit AAN.com/guidelines.

People with MS are at high risk of developing emotional disorders. When undiagnosed and untreated, these disorders can worsen problems with functioning caused by MS. Emotional disorders also can:

- Limit the quality of life of people with MS and their families, particularly work, relationships, and leisure time
- Interfere with people's ability to be fully involved in their care and effectively manage their MS
- Lead to suicide

What is MS?

MS is thought to be an autoimmune disease that affects the central nervous system (CNS). The CNS consists of the brain and spinal cord. The immune system normally protects the body from illness. However, in MS, the immune system attacks and damages the myelin sheath that covers nerve fibers. This process is known as demyelination. What triggers this abnormal immune response remains unknown. For more information on MS and its disease process, visit the National Multiple Sclerosis Society's (NMSS) website at NationalMSSociety.org.

Demyelination can lead to the following symptoms:

- Fatigue
- Weakness
- Numbness
- Incoordination
- Imbalance
- Vision loss
- Bladder dysfunction
- Bowel dysfunction
- Difficulty speaking
- Cognitive impairment

Episodes of demyelination can occur at any time and trigger new symptoms or worsen old ones. These episodes are called relapses, exacerbations, attacks, or flare-ups. Symptoms may resolve completely (remission). However, when there are areas of scarring (sclerosis), symptoms remain, and functioning progressively worsens.

Typically, symptoms first appear between ages 20 and 50, although MS can develop in childhood or adolescence as well.

The US Food and Drug Administration (FDA) has approved several medications known as disease-modifying therapies (DMTs). DMTs are thought to reduce the number and severity of relapses. These medications also may slow the progression of disability. New medications are under development and review by the FDA. Medication, rehabilitation, and other interventions can also help relieve MS-related symptoms. For more information on MS interventions, visit the NMSS website at NationalMSSociety.org.

What emotional disorders occur in MS?

Emotional disorders are common in MS. There are two types. Mood disorders have to do with the inner experience of emotion. They determine how someone feels in a persistent, sustained way. Affect disorders have to do with the outward expression of emotion and tend to fluctuate. Mood tends to be a steady experience, and affect tends to be changeable.

The most common mood disorders in MS are:

- Major depressive disorder
- Anxiety disorders
- Adjustment disorder
- Bipolar disorder

Some mood disorders occur more often in people with MS than in the general population. One-third to one-half of people with MS will have a major depressive episode in their lifetimes. This compares with less than one-fifth in the general population. Anxiety disorders affect more than one-third of people with MS, and adjustment disorders nearly one-fourth. Bipolar disorder occurs in 13 percent of people with MS and in less than 5 percent of people without MS. Suicide may be twice as common in people with MS.

In MS, mood disorders result from a complex interaction of factors. These include the disease process, genetic predisposition, and life events that lead to a sense of loss and grief.

Depressive and manic or hypomanic symptoms may occur with the high-dose corticosteroids that may be used to treat relapses as well as with other medications. There has been concern about depressed mood occurring with some DMTs. However, more research is needed to clarify this issue.

In contrast with mood disorders, affect disorders are caused by the MS disease process. The most common of these is pseudobulbar affect (PBA). In this disorder, people experience periods of sudden, uncontrolled crying or laughing. These symptoms occur even when the person does not feel sad or has no apparent reason to laugh. Another affect disorder is euphoria. In this condition, a person with severe disability seems inappropriately cheerful or not sufficiently concerned with his or her situation. In spite of this appearance, the person may feel quite sad. Apathy and emotional lability also are affect disorders. A person with apathy lacks emotional expression. Lability describes constantly changing emotions.

How are emotional disorders treated in people with MS?

In the general population, research indicates that emotional disorders are best treated with a combination of medication and psychotherapy. In the guideline, the treatment options examined were limited to those meeting AAN quality standards of how well studies are designed. For treatments commonly used today, high-quality research is needed to show whether they are effective. This guideline is based only on studies involving adults with MS. However, MS, mood disorders, and affect disorders occur in both children and adolescents.

The available studies mainly looked at three types of treatment:

- A type of counseling called cognitive behavioral therapy (CBT)
- Certain antidepressant drugs for treating depression and anxiety
- Dextromethorphan with quinidine (DM/Q) for treating PBA

Provided by a trained mental health professional, CBT teaches a person how to redirect false or harmful thought patterns to healthier ones and, in this way, change behavior. CBT can be done as individual or group therapy. It is one of many types of psychotherapy. However, none of the others has been rigorously studied in people with MS.

Weak evidence* shows that CBT sessions held by phone for 16 weeks may help treat major depressive disorder. There is not enough evidence to show whether in-person CBT, in-person CBT with relaxation training, or group CBT may also help treat depression or anxiety. Likewise, there is not enough evidence to show whether the antidepressants desipramine, paroxetine, or sertraline may help treat depression or anxiety in people with MS; other antidepressants have not been studied.

The drug DM/Q is currently the only drug approved for treating PBA. However, antidepressants and other drugs are used in clinical practice. Weak evidence* shows that DM/Q may help treat PBA.

More and better studies are needed on the different treatments for emotional disorders in MS. Your doctor or care team may recommend therapies not discussed here. Most people can find relief from emotional disorders with proper treatment.

I have MS and have had some emotional symptoms. What can I do if I think I have an emotional disorder?

If you have MS and have emotional symptoms, be sure to discuss them with your doctor or care team. People with MS play an important role in their own health. Communication is key to managing emotional disorders in MS: Patients and family members need to inform care providers about emotional symptoms so that their providers can diagnose these disorders and recommend effective treatment. Treating emotional disorders may help lessen their impact on your disease burden and daily functioning.

This statement is provided as an educational service of the American Academy of Neurology. It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

*After the experts review all of the published research studies, they describe the strength of the evidence supporting each recommendation:

Strong evidence = more than one high-quality scientific study

Moderate evidence = at least one high-quality scientific study or two or more studies of a lesser quality

Weak evidence = the studies, while supportive, are weak in design or strength of the findings

Not enough evidence = either different studies have come to conflicting results or there are no studies of reasonable quality