

Symptomatic Treatment of MS

Symptomatic treatments approved for use in patients with MS

Generic name	Market name	Symptoms Indicated
Baclofen	Lioresal ®	Spasticity, cramps, stiffness
Tizanidine	Zanaflex ™	Same as baclofen
Corticosteroids	Solumedrol, Prednisone	MS attacks
Dextromethorphan/Quinidine	Nuedexta®	Pseudobulbar Affect
Dalfampridine	Ampyra ®	Walking

28. Which MS symptoms can be treated?

MS is associated with a number of symptoms including vision difficulties, speaking and swallowing difficulties, weakness, numbness, pain, limb stiffness, clumsiness, tremors, bladder, bowel and sexual dysfunction, thinking and memory problems, depression, fatigue, and episodic symptoms. These symptoms may affect a patient's functioning and well-being. Treatment of symptoms may improve quality of life and day to day functional ability. However, symptomatic treatments do not slow down the disease from progressing. Often symptomatic treatments used in MS were originally approved for other indications (diseases) but through clinical experience have become useful drugs to treat MS symptoms.

In January of 2010, the FDA approved Amypra, a medication to help MS patients walk better and faster. This is a symptomatic treatment taken by mouth twice daily. It can be very effective in patients who have leg weakness, are sensitive to heat, have poor physical endurance. Overall, it is very safe but it is contraindicated in patients who have a history of seizures. The use of Ampyra and its side effects should be discussed with your neurologist.

29. Can you treat ataxia and tremors in MS?

Ataxia (difficulty with balance and coordination) is a difficult symptom to treat. Most drugs have little effect on ataxia. Similarly, tremor is also a difficult symptom to treat; medications used for tremor may only be partially effective. These include clonazepam, tegretol, INH, and kepra. Several centers have studied the effect of a deep brain stimulator (a device implanted into the brain) on tremor. This procedure is typically used for tremor seen in patients with Parkinson's disease. However, in some MS patients, improvement in hand function has been reported.

30. How do you treat bladder dysfunction in MS?

MS can cause bladder symptoms. Bladder symptoms can also develop from a urinary tract infection or UTI. In order to determine the cause of bladder symptoms, the doctor may order a urine test called urinalysis that may detect an infection which can be confirmed by a culture and sensitivity test. However, many of the symptoms from a UTI can mimic symptoms from a urinary bladder affected by MS. These symptoms include urgency, frequency, incontinence, and retention. It is best that you discuss these symptoms with your doctor before any medications are prescribed. An assessment by a urologist to evaluate urinary bladder function can be helpful.

31. What are some preventive measures for bladder dysfunction?

- Optimizing fluid intake (6-8 large glasses of water a day)
- Scheduling times to urinate throughout the day
- Scheduling self catheterizations (if instructed to do so by a urologist)
- Making toilets more available (bedside commodes, portable urinals for both men and women)
- Pelvic muscle strengthening exercises (*see Rehabilitation section*)
- Recognizing skin rashes and improving skin care

32. What are some preventive measures for bowel dysfunction?

- Optimizing fluid (6 to 8 large glasses of water a day)
- Optimizing fiber intake (20g/day)
- Encouraging defecation when the urge is felt
- Maintaining a regular schedule for bowel movements

33. How do you manage bowel dysfunction in MS?

MS patients can often have bowel symptoms and most commonly constipation. Rarely, this is severe requiring regular medications prescribed by a doctor. However, often times, bowel symptoms can be managed by a bulk or high fiber diet. Additionally, the following measures can also be helpful:

- Non-habit forming agents including bulk forming agents (psyllium) and stool softener (docusate sodium)
- Habit forming agents: oral stimulants (milk of magnesia, bisacodyl), rectal stimulants (suppositories, enemas)

Other prescription medications including enemas are also options to consider but generally as a last resort. It is best to discuss this with your doctor.

34. Where can I learn more about bowel and bladder related issues?

For more information regarding the bowel and bladder issues, call or check online with the ***National Association For Continence, phone # 1-800-BLADDER*** (<http://www.nafc.org/>).

35. How do you treat cognitive dysfunction in MS?

Cognitive dysfunction (problems with thinking and memory) can occur in at least 50% of MS patients although some studies suggest an even higher percentage. The cause of cognitive dysfunction is not well understood in MS although MRI studies suggest involvement of grey matter that may contribute to cognitive dysfunction in MS. However, most patients with MS who develop cognitive symptoms do not progress like patients with Alzheimer's disease or other forms of dementia. The treatment of memory and other cognitive symptoms in MS requires careful evaluation before suggesting any medications. Most medications used to treat cognitive dysfunction in MS are usually approved for other diseases such as Alzheimer's but used as "off label" in MS. Two such examples include Aricept® and Nemenda®, although properly controlled studies have yet to be conducted in MS to prove the efficacy of these agents to treat memory problems in MS.

A new drug approved for the treatment of MS patients who have pseudobulbar affect (PBA) was approved by the FDA in 2011. PBA is a condition in which patients can not control their emotions and uncontrolled episodes of laughing or crying. This can be very debilitating. The name of the drug is Nuedexta which can be very helpful for patients with PBA. The use of this medication and its side effects should be discussed with your neurologist.

36. How do you treat depression in MS?

Depression is an important symptom and diagnosis to recognize. It is very common in MS and can lead to a variety of symptoms such as fatigue, loss of appetite, or lack of interest. Conversely, many of these symptoms lead to the diagnosis of depression. Addressing depression and treatment of depression can improve the patient's quality of life. Psychologists or psychiatrists familiar with treating MS patients can be helpful. There are a number of drugs which can be used for the treatment of depression: Selective Serotonin Reuptake Inhibitors (SSRIs) are often preferred because they have fewer side effects compared to other classes of antidepressants. However, it is important to know that there are several options to choose from and should be discussed with your doctor.

37. How do you treat painful episodic manifestations?

Episodic symptoms causing pain such as trigeminal neuralgia can be treated with different types of antiepileptic (anti-seizure) drugs (carbamazepine, gabapentin, topiramate, phenytoin and pregabalin), anti-spasticity agents (baclofen) or with some of

the antidepressants proven to be useful in chronic pain (amitriptyline, nortriptyline, duloxetine). If medical treatment fails to control the symptoms, more invasive treatments such as injecting phenol or ethanol to block nerve conduction or surgery to ablate (cut) nerve roots can be considered.

38. What are some measures used to treat fatigue?

Fatigue is one of the most common and bothersome symptoms of MS. It can be experienced by patients who otherwise are doing well even in the early stages of the disease. The mechanism of how fatigue is caused in MS is not well understood.

There are non-pharmacological and pharmacological measures to deal with fatigue.

- **Non-pharmacological** measures include avoiding aggravating factors such as heat, excessive exercise, and fevers. Also, low intensity physical activity (yoga, walking, exercising in a cool pool) has been shown to help reduce fatigue in MS patients. Afternoon short nap or rest can be very helpful if possible. Relatively lower carbohydrates (sugars) around mid-day are best avoided to minimize the “highs” and “lows” associated with them. Normal sleep cycles at night can also help in controlling fatigue. Treatment of depression may also improve fatigue.
- **Pharmacological** therapies for fatigue are generally modest in their effect and after some time tend to become less effective. There is no controlled trial that has shown unequivocal efficacy of these drugs in controlling MS fatigue. However, on a case by case basis, they can be very effective. These drugs include amantadine, modafinil, CNS stimulants, antidepressants, 4-AP (4-aminopyridine) and levo-carnitine. The use of all of these agents in treating fatigue is considered “off-label”.

39. Treating nystagmus in MS?

Nystagmus (rapid involuntary back-and-forth eye movements) is one of the most challenging symptoms to treat. Some studies suggest that memantine (Nemanda®) may be effective. Medications such as baclofen, clonazepam, and gabapentin have shown modest improvements.

40. How do you treat Spasticity in MS?

There are a number of drugs used to treat spasticity (stiffness, spasms, or cramps caused by MS). These include baclofen, tizanidine, clonazepam, and diazepam. Other medications including tegretol, carbatrol, trileptal, and kepra can also be used to treat severe episodic spasms. In difficult cases, baclofen can be administered directly into the spinal fluid through an implantable pump. For focal hypertonia (stiffness) affecting one arm or one leg only, botulinum toxin can be used. Daily stretching exercises may help temporarily decrease spasticity and help prevent muscle contractures.

41. What are some medical interventions for men with sexual dysfunction?

- Oral agents like sildenafil, urethral suppositories like prostaglandin E1 (PGE1), and injections like papaverine, phenoxybenzamine and PGE1 can be used for erectile dysfunction.
- Vacuum suction devices, or pumps, are used to create an erection. When using a hand pump or a battery-operated machine, air is suctioned out of the tube, creating vacuum around the penis. This causes blood to move into the penis and erection to occur; a band is then placed at the base of the penis to maintain the erection and the device is removed.
- Penile implants, both inflatable and non-inflatable are available. The advantages and disadvantages should be discussed with a urologist.

42. What are some medical interventions for women with sexual dysfunction?

This is a difficult subject to address because the relative availability of medications and devices helping women with sexual dysfunction is minimal. Use of lubricants for vaginal dryness is recommended. A number of natural or herbal supplements have been advertised on the internet with claims of success. We suggest discussing all of these options with your doctor. A good website to visit to learn about sexual dysfunction and available treatments is www.aafp.org, and click under the “news and publications” section for female sexual dysfunction, evaluation and treatment.