

# Controlling spasticity



**Feel better and move more easily with the right treatments.**

by **Lori De Milto**

After being diagnosed in 1994 with multiple sclerosis at age 35, Bob Theisen noticed that when he walked, his right knee would sometimes bounce up toward his chest. The problem was a common MS symptom known as spasticity, which makes muscles feel stiff or spasm (contract involuntarily).



**Spasticity in MS is most common in the legs, where it can cause painful, uncontrollable contractions. Damage to the nerves that control impulses to the muscles causes spasticity.**

For a few years, Theisen's spasticity was mild. Then he had bunion surgery on his foot, and his spasticity got much worse because he was sitting still for extended periods, so he turned to a combination of medicines to control the spasms and permit him to sleep. "It turned into a 24-hour-a day issue," says the Tampa, Florida, resident.

### **Seesawing symptoms**

About 80 percent of people with MS have spasticity, which ranges from mild to severe. Spasticity is caused by damage to the nerves that control impulses to the muscles. This makes too many muscles contract at the same time. Spasticity can cause painful, uncontrollable spasms of the legs, where it is most common, or sometimes the arms. It can also cause pain or tightness in and around the joints, and lower back pain. Mandy Rohrig, a physical therapist at Horizon Rehabilitation Centers in Omaha, Nebraska, says people report heavy, achy or very tight limbs.

"When my right leg goes into spasms, it is like a piston going back and forth. [What bothers me] more than pain is that my leg gets tired from the back-and-forth movement," says Theisen.

For each person, and even for the same person at different times, spasticity feels different.



**Ralph Downour takes baclofen pills and Botox® shots for his spasticity. He also receives a therapeutic massage, which gives him more flexibility, twice a month.** Photo courtesy of Ralph Downour

“Spasticity can fluctuate considerably based upon position (sitting versus standing versus walking), time of day, level of fatigue, infections and body temperature,” says Rohrig. Ralph Downour, who’s been living with MS since 1997, says he feels the spasticity in his legs most when he’s tired and at night. The rest of the time, spasticity is just irritating for the 69-year-old from Oregon, Ohio.

Lack of movement can also worsen spasticity, as it did for Theisen when he was recovering from surgery. Even unpleasant sensations such as a full bladder or a full bowel can worsen spasticity, as can anything that constricts the limbs, such as a cast or brace. To identify and manage triggers of spasticity, Rohrig says it’s helpful to track when spasticity occurs, how intense it is, and the activities and the environment just before the spasticity occurred.

Spasticity can affect a person’s ability to fluidly move his or her limbs, which can then interfere with everything from putting on a shirt to walking, showering or driving. For people like Theisen, who has both spasticity and foot drop, the chance of falling increases.

But spasticity isn’t all bad, adds Rohrig. Sometimes, spasticity can provide stability and strength when standing, walking or moving from one position to another, especially if the

legs are weak. A qualified therapist will design treatment to reduce spasticity to just the right level—so that it's helpful but not interfering with movement.

### **Getting early treatment**

With the right treatments, spasticity can be controlled. Getting help early is important, because untreated spasticity can lead to serious problems, including contractures and pressure sores, which in turn can make spasticity worse.

**Contractures** are different than the involuntarily **contractions** in muscle spasms, which are temporary. Contractures are the result of months or years of severe spasticity. They shorten the muscles around a joint and make them so tight that they don't move and the joint becomes "locked" or immobilized. This can lead to permanent disability.

Pressure sores occur in the skin when someone is unable to shift his or her weight—one possible consequence of spasticity. Irritation or pain from pressure sores or other unpleasant sensations can trigger spasticity.

Most people need physical and/or occupational therapy and medication to control spasticity, but the best treatments differ for each person. A doctor, physical therapist, occupational therapist and the person living with MS often work together to find the best way to relieve symptoms and continue doing everyday tasks.

"We encourage people to get into therapy early, when they identify some tightness that wasn't there before but that isn't limiting them that much yet," says Tracy Carrasco, an occupational therapist at the Multiple Sclerosis Comprehensive Care Center at Orlando Health. Your healthcare provider can help begin the process as soon as you've identified symptoms of spasticity.

### **Relaxing muscles**

Treatment usually starts with physical therapy, changes in daily activities and sometimes occupational therapy. Medications are added if these strategies don't help enough. Stretching to lengthen the muscles is a key part of therapy. "Stretching is easy to do and, in conjunction with medication, gives some patients a longer-lasting effect," says Carrasco. Modified yoga positions, when they include controlled breathing and meditation, can also help relax the muscles, though it's best to work with an instructor who has experience with MS or other neuromuscular conditions.



**Bob Theisen, on horse Silver Davis, does therapeutic horseback riding to help with his spasticity.** Photo courtesy of Bob Theisen

Theisen has been doing physical therapy since shortly after his diagnosis, and currently does therapeutic horseback riding. The horse's movement and warmth can relax tight or painful muscles, and build strength and flexibility.

Baclofen, a medication that relaxes muscles via the central nervous system, is the most common medication for spasticity. Both Theisen and Downour use baclofen, which comes in pills but can also be delivered via a pump. Theisen started out taking baclofen in pill form, but when that didn't help enough, his neurologist suggested a pump.

Doctors usually suggest a pump when moderate to severe spasticity isn't well-controlled on pills, or when side effects—drowsiness, dizziness, weakness, nausea and headache—are too pronounced. Much more of the medicine reaches the spinal cord with the pump than with pills, so less is needed. This results in fewer side effects. The pump, which is surgically implanted in the abdomen, delivers liquid baclofen into the spinal fluid through a catheter in the spine. It is comfortable for most people and doesn't hamper movement. The pump is programmed to continuously release baclofen and deliver the right amount at the right time for each person.

For example, Theisen's doctor adjusted his pump to provide more baclofen to help him sleep at night after he gets home from his job as a guest service agent at the InterContinental Tampa hotel.

When Theisen returned home after the outpatient surgery to implant his pump, his spasms

were gone, and he began sleeping better at night—and less during the day. “I was ecstatic,” he says. A few weeks later, he was able to get certified for scuba diving and began doing other “unique stuff,” like tandem hang gliding. “It’s been life-changing,” says Theisen.

About every seven years, the pump needs to be replaced when the battery wears out. Theisen, who’s now 57, is on his fourth pump. Every four and a half months he sees the doctor for a refill of the medication. While the pump was extremely successful for Theisen, it’s not the right choice for everyone.

Downour, for example, began taking baclofen pills for his spasticity within a year of being diagnosed with MS. The retired school bus driver takes them at night to help relax his muscles so he can sleep. In 2015, Downour also started getting Botox® (botulinum toxin) shots, which can relieve spasticity in individual muscles. Downour gets eight or nine shots in each leg, mostly in his hamstrings, but also in his quadriceps and calves, and near the right toe. After getting the shots, Downour has mild flu-like symptoms and soreness for a day or so; then his spasticity is better for up to six weeks. In some people, the relief can last up to three months.

Botox and stretching exercises together can lengthen muscles, even after the medicine wears off. “The muscles are more relaxed because the medication blocks the receptor sites that stimulate contractions. During that time, we can maximize the stretching of those muscles to lengthen them,” says Carrasco. Other muscle relaxants, including tizanidine, can also be used to relieve spasticity.

Twice a month, Downour also has a therapeutic massage, which helps some people with spasticity. “The massages take some of the stiffness out of the muscles and give me more flexibility,” he says. Downour goes to a massage therapist with experience in working with people with MS. Physical therapists can also do massages. “What’s most important is that you’re working with a licensed professional who understands MS, whether it’s a physical therapist or a massage therapist,” says Rohrig.

Medical forms of cannabis that are available by prescription (oral cannabis extracts, or OCEs, known by the brand names Marinol® and Cesamet®) have been shown to lessen both people’s reported symptoms of spasticity and pain from spasticity, according to the American Academy of Neurology. Insufficient evidence is available regarding the effects of smoked marijuana. While the FDA has approved OCEs for certain conditions, MS is not among them, and medical marijuana is only legal in some states. Be sure to check your state’s laws or ask your physician whether it is a legal option for you.

### **Changing positions, activities and home**

Both physical and occupational therapists suggest ways to reduce spasticity through positioning, changes to daily activities and home modifications. If sleeping flat on the back causes spasticity, for example, a therapist might suggest lying on one’s side, perhaps with the hips and knees bent, with a pillow between the knees.

A therapist may recommend changes to activities and the home for people whose spasticity makes it hard to reach for things. Such modifications can range from using a sock aid (a long-handled shoehorn that helps people who can't reach their feet to put on socks) or installing a shower grab bar, to remodeling a kitchen so counters and shelves are lower.

“Spasticity can be effectively managed with the help of your healthcare team,” says Rohrig. “The team will help you identify which treatment strategies would be most effective for you.”

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To find a physical or occupational therapist in your area, ask your doctor or call an MS Navigator at 1-800-344-4867.

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