National
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MS Learn Online
Feature Presentation

Spasticity and MS: Management Strategies
Featuring: Dr. Stephen Krieger, Dr. Aliza Ben-Zacharia, and Dr. Susan Bennett

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Kathi: I take medication for it

Walt: I use a cane, and what it does is it slows me down so I don't fall over all the time.

Donna: I do a lot of imaging now and a lot of breathing exercises, and I just relax and give myself a chance to just get over that bump, because it doesn't last for long, and then I can move on.

Cheryl: I have several sized balls. I have a tennis ball, a racquetball and a golf ball, and what I do is I'll take the ball and put it behind my back. And I'll either roll it out, roll out the tight muscles by rolling against the wall or a chair, or even lay on the ball to help kind of smooth out, to help relieve some of the pain.

Vito: I'm on a drug that I take all day long, every day for my spasticity.

Cermit: I stretch every morning when I get probably for a half hour, to get all these old bones and muscles moving and that, and that is important. At work, if I've sat in a chair for a long time, I will get up and stretch.

>>Kate Milliken: Spasticity is one of the more common symptoms of MS. It may be as mild as muscle tightness or as severe as uncontrollable spasms of extremities. Hi I'm Kate Milliken and welcome to MS Learn Online. Joining us are three health professionals who will give us their own perspectives on spasticity.

Dr. Stephen Krieger is coming to us from New York City where he is a neurologist at the Corinne Goldsmith Dickinson Center for MS. He is also an assistant professor at Mt. Sinai Medical Center.

Dr. Susan Bennett is a physical therapist and clinical associate professor at the University of Buffalo.

Dr. Aliza Ben-Zacharia is a Nurse Practitioner at the Corinne Goldsmith Dickinson Center for MS at Mt. Sinai Medical Center in New York.

Welcome to MS Learn Online. Let's turn to Dr. Krieger, are there medications that may help manage it?

>>Dr. Stephen Krieger: There are. Spasticity is a symptom in MS that is amenable to treatment. There are a number of oral medicines that can be useful to help relax the muscles. There are manipulations and maneuvers that can help to stretch out the muscles and relax them through physical therapy and stretching regimens. And then there are even more aggressive things that can be done to address spasticity, such as injection medications or even intrathecal pumps of medications placed into the spine.

>>Kate Milliken: Nurse Practitioner Ben-Zacharia?

>>Dr. Aliza Ben-Zacharia: The medication that we use for stiffness are a few. There are some oral medications. There are some injectable medication, and there is even a pump to use. The oral medications are either baclofen, tizanidine. Their mode of action is relaxing the muscle and allowing the patient to move easier.

So that we've seen it to be very effective. However, many patients cannot tolerate these medication because they cause sedation and weakness, the paradox. You want to relax the spasticity and the stiffness and you become weak and so lethargic throughout the day and sleepy that it's really not doing the trick. So, some patients cannot tolerate.

In those cases, we try sometimes combination of these two drugs, or sometimes even combine it with gabapentin, and the name is Neurontin, to see if we can do it with oral medication. If that is not doing the trick, we sometimes discuss with patients injections, like Botox injections, and that goes directly into the muscle. This is something new method that we use in MS. We haven't used it in the past. I'm learning as I go along to see if it helps some patients. Again, exciting to see more and more medication.

Another extreme method to control spasticity in MS is being done by a baclofen pump. It's a pump that is inserted in the abdomen and you have a tube that goes directly to the spinal cord. And you get the medication directly going underneath the cord, so you get the effect. Usually it's for lower extremity spasticity for legs. It doesn't affect the arms most of the time because it's low in the spinal track.

>>Kate Milliken: How about the role of rehab in managing spasticity? Is that something you recommend?

>>Aliza Ben-Zacharia: Always. I think rehabilitation is critical in managing spasticity. Important to refer patient not only to physical therapy, to occupational therapy, because you want to promote range of motion of your uppers, lower extremity, stretching exercise, how to walk safely. Make sure that you go over all these with your therapist.

>> Kate Milliken: Dr. Bennett what are your thoughts on this?

>>Dr. Susan Bennett: Management can be something as simple as aggressive stretching, identifying the muscles that are spastic, get the individual into a routine stretching program. And we really recommend stretching at least two to three times a day. But there are simple exercises, simple stretches you can do at work, you can do at home, you can do just about anywhere.

That calf muscle is one of the muscles that really becomes a factor. But if you think about the runner's stretch, when you see somebody run and then they lean against a tree or a building and one leg is back and the other leg is forward, and they learn forward with their hips, that's one of the effective muscles in managing this calf muscle that gets spastic.

So, I teach people how to stretch at work. I say when you're at your desk, here are some things that you can do, or go into the restroom. Here are some other things that you can do. It just takes you two to three minutes to stretch and get those muscles to relax. The stretching and then addition strengthening the muscles, the opposing muscles that are weak. That's the key to management.

>>Kate Milliken: So, outside of stretching, teaching the stretching exercises to patients, what else do you do in rehab to manage those types of symptoms?

>>Dr. Susan Bennett: In spasticity, when we can't manage it enough, and I'll say one other thing that we would offer, and this was kind of an interesting find. If you think about it, if a muscle was spastic and it's contracting all the time, it doesn't get

adequate blood supply. So, it's not getting oxygen and glucose to continue to fire normally, and henceforth you start to make the muscle weak and it could become sore. It becomes sore because lactic acid starts to accumulate in the muscle, just like you'd get, remember the runner's shin splints. So, that would be the combination there.

Biking, stationary bike seems to be, for the lower extremities, the most effective because you're causing the muscles to shorten and lengthen, shorten and lengthen, and it's a great way to restore the blood supply, the oxygen glucose that the muscles need to fire, and get that lactic acid out of there.

And then certainly in rehabilitation, when the exercise is not doing it, we need to be very proactive in speaking with a neurologist, the nurse practitioner, whoever is managing the patient, and start to say could you take a look at the patient and maybe now is the time that we might need to look at starting some type of oral medication, and starting to manage that spasticity pharmaceutically, in addition to the exercise program.

>>Kate Milliken: Outside of assessing a patient given instructing exercises, teaching them how to stretch, are there also actual devices that can be helpful to a patient that is dealing with spasticity?

>>Dr. Susan Bennett: Yes, that's a real good question. Interestingly enough, the only thing we used to be able to offer was what's called the ankle-foot orthosis, so this is the plastic brace that comes up the back of the calf, fits inside the shoe, and it does help to pick the toes up when you're walking forward. So, if the patient has a tendency to catch their toe during what we call swing phase, advancing the leg forward, this brace would help to pick the foot up. Now, there are some individuals that have so much weakness in those muscles opposite the spastic muscles that even this light brace that is only two pounds, prevents them from flexing their hip and their knee.

But we have other options. We have an assistive band that goes around the ankle. You almost can't even see it if the individual is wearing slacks. And there is a rubber tubing that attaches to the top of the shoe, and this little band, it's almost like surgical tubing, helps to pick the toes up. This thing doesn't weigh even half a pound.

And then, of course, we now have the functional electric stimulators. I'm sure most people with multiple sclerosis are aware there has been a lot of advertisement about the WalkAide and the Bioness, or the Ness 300. These are other devices that we can look at as a means to help pick the foot up.

>> Kate Milliken: Nurse Practioner Ben-Zacharia do you have anything else you'd like to add to that?

>>Aliza Ben-Zacharia: So, there is no question there is a major role for rehabilitation in managing spasticity. So, important to do that even along with medication. You can do it first. If it's not working, you add to it, the medication.

>>Kate Milliken: We'd like to thank Dr. Susan Bennett, Dr. Stephen Krieger and Dr. Aliza Ben-Zacharia for sharing their insights. If you would like to learn more about spasticity or any other information about MS go to nationalmssociety.org. For MS Learn Online, I'm Kate Milliken, thanks for joining us.