



# How to Exercise to Reduce Fatigue During the Holidays

Presented by:  
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## **Darion Banister:**

Darion Banister

Good evening. Welcome and thank you for joining our webinar, How to Exercise to Reduce Fatigue During the Holidays. Tonight, alongside Dr. Hawley, we'll learn how to properly exercise and make it a healthy habit for the new year. My name is Darion Banister, I am the new Director of Health Education and Equity here at MSAA, and I'm honored to be your host.

And next slide. Who are we? If this is your first time joining one of our programs, first I'd like to welcome you and thank you, and I'd like to share some information about MSAA and go over a few housekeeping items MSAA is a national nonprofit organization dedicated to improving lives through vital services and support for the MS community. Our programs and services include a national helpline, staffed with compassionate team members, available Monday through Friday, 8:30 a.m. to 8 p.m. Eastern Standard Time, equipment and cooling distribution programs with products designed to improve safety, mobility and heat sensitivity, education programs, award winning publications, self-management tools, an online community forum, and much, much more. For more information about our programs and services, please visit our website at [www.mymsaa.org](http://www.mymsaa.org).

Reminders. During tonight's program, you will have the opportunity to submit your questions by using the Q&A feature in your toolbar. As time permits, questions will be addressed during the Q&A portion of tonight's webinar. Also, please know that this program is currently being recorded and will be available as an on-demand video on our MSAA's video library within the next few weeks. At the end of the program, we ask that you please complete a brief survey. Your feedback is important and extremely important as we help to develop future content and programs A link to the survey will be included in the chat box.

Disclaimer as a friendly reminder, this program is for educational and informational purposes only and does not constitute formal recommendations. Please speak to your doctor for specific questions or concerns.

And now please help me welcome Dr. Gretchen Hawley. Dr. Gretchen Hawley is a doctor of physical therapy and a multiple sclerosis certified specialist. Her work focuses on MS-specific

exercises to help her clients improve strength, walking, and independence by strengthening the connection between our muscles and brain via neuroplasticity. Dr. Gretchen shares her expertise in her online MS wellness program, The MSing Link, uses social media to create more awareness around neuroplasticity exercises that can help individuals living with MS worldwide feel more confident and empowered. Welcome, Dr. Hawley. Thank you for educating us on this critical topic. We look forward to your presentation.

**Dr. Gretchen Hawley:**

Awesome! Thank you so much for having me. I'm really excited about our conversation today because I feel like this time of year in particular is so great for discussing fatigue. So we're going to be talking about what fatigue is and what we can do about it, because while MS fatigue is completely different than the fatigue that people without MS experience, there are some things that we can do. And so often when fatigue is at play, someone might assume that exercise is the last thing that you should do. But in reality, if you're exercising in the right way, research shows that it actually can reduce your fatigue. So I'm going to start off by sharing a few slides. And this is recorded, as Darian mentioned, so you can always come back to it. But we are going to be ending with an exercise demonstration. If you feel safe to do so at home you can do these exercises with us. Or you can just watch it for today and then come back and do the recording at a different time. So I'm going to go ahead and share my screen, and we will dive in.

All right. So how to exercise to reduce fatigue around the holidays and any time. So we're going to discuss the different types of fatigue treatment options and focusing more heavily on the specific exercise guidelines for fatigue, because it is different, it's not the same as regular physical therapy or traditional physical therapy or regular or traditional exercise. There are specific strategies that you should be implementing. So we're going to review those.

So diving right in. When you have MS, there are two different types of fatigue. The first type is Primary Fatigue. Primary Fatigue means that the cause or the reason that you're experiencing this is purely due to the disease process of MS. Whereas Secondary Fatigue, there's lots of reasons that you might be experiencing it. Primary Fatigue will often feel more severe and heavier. So if you ever feel like your eyelids are just so heavy that it's hard to open them, that might be more of a Primary Fatigue sensation. Whereas Secondary Fatigue, as I mentioned, it can be caused from so many things - medication, temperature changes, pain, weakness, any nutrition; if you notice that when you have a higher salt intake, your fatigue is worse. Or maybe you didn't get a great night's sleep, or you were... you're preoccupied, you're stressed. So Secondary Fatigue means there's a reason for it beyond MS.

Now, everyone in life experiences Secondary Fatigue. But when you have MS, it typically is worse than someone who doesn't have MS. So when we're talking about what to do about these MS specific types of fatigue, primary and secondary, we want to think about a wholesome and holistic approach. Usually there's more than just one form of treatment. So we like to target it in three different ways. Some people use all three. Some people use two. Some just use one. And really, this would be a discussion for you and your neurologist to discuss what is best for you. But the first type is medical. So this might be medication, supplements, etc. The second is psychosocial or behavioral. So this might be cognitive behavioral therapy or mindfulness based stress reduction, energy conservation, things of this sort.

And I just wanted to share a quick story with you that I learned at one of the recent MS conferences that was looking into fatigue, and what they, what these researchers observed is that their clients that they were working with noticed more fatigue when they were doing a task that they didn't enjoy versus when they were doing a task that they did enjoy. So the example

that they gave was that, in this study, everyone was standing and vacuuming in place, just moving your arm, or standing and doing pottery. And across the board, what they found was that even though the task was the same, it was still just standing, those that were vacuuming had higher levels of fatigue versus those that were doing pottery. And their conclusion was that this is a psychosocial effect on fatigue, that if we're enjoying what we're doing, fatigue might not hit us as hard as if we're doing something that we don't enjoy. So I just thought that was an interesting look at fatigue, because it can give us some treatment options and possibilities as well.

And the third type is physical. So that means exercise. And today we're focusing mostly on exercise. But I do just want to touch on some behavioral and energy conservation strategies first, because so often the best form of fatigue treatment and management is a combination of these two. And so it would be unfair to only focus on the exercise. So when we're talking about behavioral, as I mentioned earlier, there are things like cognitive behavioral therapy, which is something that an occupational therapist might do. Or there are actual cognitive behavioral therapists. There are different therapies and therapists that your neurologist can refer you to who would specialize in that. Same with mindfulness based stress reduction. But these are things that we're reviewing tonight. These are things that everyone can do right now.

So number one is check your core temperature. So it... especially if you have heat or cold intolerance, checking your core temperature can play a huge role in your fatigue. If you have heat intolerance, that means that when your core temperature rises by at least half of a degree, so that's very little, it can affect any of your symptoms, including fatigue. So you want to make sure that if you know you're prone to heat intolerance, even if it's winter time, if you're bundled up in clothes, or if someone turned the heat in the house up high, those things can affect your core temperature. It only has to shift by half of a degree. So check in with yourself. Is there the possibility that you could be getting too warm? If so, sip some cooler water or are you getting too chilly? So making sure that you're checking your core temperature because that can play a big factor.

What are your stress levels like? Again around the holidays, stress levels can get really high. Stress affects fatigue like no other. So making sure that you are finding some ways to manage stress, that could be coloring in the coloring book, it could be focusing on your breath work. or mindfulness. There's lots of different stress reduction strategies that can play an effect on your fatigue. So looking at that exercise levels again we're going to get more into this in a bit here. Looking at your sleep. If your sleep isn't great that of course could be affecting your fatigue. Making sure you have a good sleep hygiene, meaning getting ready for sleep and once you wake up, both ends of sleep are equally important. Nutrition. So many of my patients with MS have a higher rate of fatigue and higher severity of fatigue when they are not focusing on their nutrition, and it's usually just basic things. It's not being hydrated and their fatigue worsens. Or they had too much salt mistakenly, because they went out to eat and their fatigue is worse. So nothing's specific to a diet, just generally speaking. And then lastly, medication could also be affecting your fatigue and your energy levels. So just looking at this list, go through them any time you're feeling intense fatigue. Go through these one by one and see is there something in this area that I could do to help my fatigue? One thing we know from research is that one of the best ways to manage fatigue is not necessarily to treat the fatigue, but to treat the things that are causing it, which is where this list comes into play.

And then we want to talk about energy conservation. So what this means is conserving your energy throughout the day or even throughout a specific task. So here's a bunch of different ideas for you. So number one, splitting up activities or chores throughout the week or

throughout the day, but splitting them up. Meaning if you want to clean the bathroom today, maybe you don't clean the whole bathroom. Maybe you just do the counters today, and then maybe tomorrow you'll do the mirror, and the next day maybe you'll mop the floor or something. So you split it up instead of doing it all at once. Or if you're making your bed, maybe in the morning, you pull the sheets up. in the afternoon you fluff the pillows, so you separate it out. Making a schedule or organizing your day in a way that speaks to when your energy levels are. If you have the most energy in the morning, making sure you're organizing your day where the things you need to have energy for are in the morning. This doesn't always occur for every person, but usually there is a specific time of day where you do feel a bit more energized. So being smart about what you're doing in that time.

Using assistive devices and gadgets to help. This could mean mobility aids. I'm a huge fan of mobility aids for fatigue and energy conservation. It could mean devices to help with opening pill bottles. It could mean... I should have brought some out for examples... It could mean using a shower scrubber so that instead of washing your hair with your hand up here, if that's too challenging for your arm, you just use this scrubber where you hold on to it down here and you're able to wash your hair. So using different gadgets, button fasteners, so that you're not wasting your energy doing things that there's tools to help with.

Meditation and mindfulness. Again, my favorite way currently of calming my stress is coloring in a coloring book or doing mindful walking or just seated mindfulness. And what that might look like is just sitting right where you are, but look at something around you. I have a light right here. So I could just look at the light and think about where is the light shining, what is it hitting, what on the wall is it hitting, and how bright is it? What's the design of the lamp? And you just get really specific about that one thing. And focusing on one thing calms other things away. If you are able to sit near a window or go for a walk, or even just sit anywhere in your home, you can do this by listening for sounds. So when I go for a walk, I will specifically try to focus on what my feet sound like as they hit the ground. The cars driving by, the wind blowing. If leaves are rustling around. We now have snow, we got a snowstorm last night, so that wouldn't be happening. But what are all these sounds? Can you smell anything? What are you seeing? And just focusing on those things instead of everything else that is in your mind.

Avoiding unnecessary tasks; don't dry the dishes, sit down as you're cooking, don't do more than you have to. One of my patients a while ago told me that she loves her terrycloth robe because it dries her body for her. So, she doesn't have to towel off, she just puts that robe on and she's good to go. And then monitoring exercise, as well. So, a lot of the times we don't know we're overdoing it until the next day or until a few hours later. We felt fine while we were exercising, but afterwards we were like, oh, now I can't move for a day or two days, like that was too much. So keeping track of your exercise: How long did you exercise for? How many exercises did you do? How many repetitions did you do of each exercise? Keeping track of all of that so then you can go back and reduce those and see how did that affect you this next time. And that's a really great way to monitor your exercise so that it's serving you versus working against you.

So, a big category of energy conservation is rest. But, I know I'm not the only one, usually when we rest we're feeling guilty. We're feeling like we should be doing something else. And, or if anything, we shouldn't be resting. And that does not feel as restful versus if you're resting and you are telling yourself rest is good for me, rest is productive, my body needs rest. Your body will feel more rested after that versus resting while thinking, I shouldn't be doing this, I've got this, this and this to do. So when you are resting, trying your best to rest guilt free. So again, this could be napping, resting. I have so many patients who don't like to nap and so it doesn't need

to mean napping, it could be coloring in a coloring book, the walking meditation I mentioned, focusing on breathing in through your nose, out through your mouth. There's so many different types of breathing specifically to rest and calm. So any one of those could be good. Anything that makes you feel calm. It could be reading, you name it.

Okay. So, now getting to our exercise component. So, research shows that light exercise is great for multiple sclerosis fatigue, specifically aerobic exercise, and I'll demonstrate all of this for you so you don't need to guess at all. So, aerobic exercise, resistance exercise, so if you have resistance bands, that has been found to help with fatigue, aquatic therapy or even just walking in a pool, it doesn't have to mean swimming, but getting in a pool, practicing some balance exercises, walking exercises, those have been found to be helpful for fatigue, arm movements, which we're going to do demonstrations of, and seated exercises. So, often, when we think of exercise, we think of standing based exercises. We think of walking, just moving around, squats, lots of standing based exercises. And if you can't stand or if you're just fatigued and you don't want to use your energy to stand, that's okay. Research shows that seated exercises are fantastic to reduce MS related fatigue.

And then we also want to talk about rest breaks. How long are you resting? This really goes... it's important to think about your personality, because for some people you like to get your exercises done right away. And so you're going, going, going, taking really short rest breaks, if any rest breaks, and then you're ending up feeling fatigued. So you want to think: How many rest breaks am I taking and how long are they? Some days your rest breaks might only need to be 30 seconds. So, what I mean by a rest break is you're doing an exercise, and then you stop and rest and you don't do anything. And then you do another exercise and you stop and rest. Other days that might need to be five minutes in between. So that's really going to drag out the length of time that you're exercising. But it might reduce your fatigue more because you're taking longer breaks.

So exercising throughout the day has been found to be just as effective as exercising all at once. So as we're thinking of fatigue, if exercising all at once is not great for your fatigue, then exercising throughout the day is a better option for you. So maybe that means one exercise, and I'm about to give you a whole bunch of examples. Maybe you do one of those examples in the morning after you have breakfast, and then you can do another one, maybe mid-morning or late morning, another one before lunch, one after lunch. And you're spreading them out throughout the day. When we have MS, what is most important is accumulation of exercise. Not necessarily... by the end of the day, not necessarily if you did it all at once, but by the end of the day, how much did you do? That's more so what is important when we're talking about neuroplasticity, strengthening our brain, our muscles, and the connection between the two, and reducing fatigue. So split it up throughout the day.

Also, remember that general movement is also exercise. So often I'll have patients say, oh, Dr. Gretchen, I didn't get my exercise in today or I didn't get it in at all this week, I'm so disappointed in myself. But, remember that moving counts. So almost every time someone tells me that, I will respond with saying, that's fine, what did you do? And, nine times out of ten, they'll say, well, you know, my daughter was sick. I was taking care of her, so she was staying upstairs. I had to do the stairs. Or, you know, I had company over and I was trying to help with the dinner. And so, it was things where they were moving around their home. And that counts, too. That requires standing. It requires that you're moving around. Even showering, getting out of bed, moving into the living room, going to the bathroom, all these things count. And then "move slow and move less" is going to be important to just have that as an affirmation in your mind. Just do less.

So when we're thinking about ways to modify, because oftentimes when we're exercising, our exercise routine that we have for a normal day probably isn't as doable for you on the days or times when you're experiencing fatigue. So what do we do? We modify. And here's a bunch of ways to modify. You can choose just one of these or multiple. But, number one, do fewer repetitions or fewer sets. So if you're doing an exercise, let's just say bicep curls, if you're doing bicep curls and you normally do ten times three rounds or three sets, maybe you do seven times two rounds, so you can lessen one or both, but just do less.

Moving faster. The majority of the time we're exercising, moving faster requires less energy because it doesn't require that you use your muscle for as long. If I am slowly bending, my bicep is working for potentially, maybe... if we if I were to take five seconds to bend, my bicep has to work for five seconds versus if I take half a second to bend, my bicep is only working for half a second. So by moving faster, I don't have to use my muscle as much. But I'm still using it. And so moving faster with any exercise oftentimes can be a better way to exercise with fatigue and modify.

Don't hold as long. if you're, just with the bicep curl, if I could bicep curl, hold for a few seconds and then lower, or if I'm doing a squat, I can squat low, hold for a few seconds and come back up. But when we have fatigue at play, don't hold as long, or don't hold at all. Don't lift as high or don't put as much effort in. So with the bicep curl, if I normally try to do this, on a fatigue day, I might only try to do this, and that's fantastic. I'm still using my bicep, I'm just not moving it as much. Or if you're doing a leg exercise, don't try to lift your leg as high, it's still worth it to exercise. You're still activating those neural pathways. You're still activating those muscles, but in a way where you're not going to worsen your fatigue. And then lastly, if you are using weight or resistance bands, use less or none. Nine times, if not 9.9 times, I'll say, out of ten, I don't use weights with any of my patients, because when we're talking about functional exercise, it's just not required. But, it's worth mentioning because so often we think exercise means weight lifting or it means resistance bands. And if we're not using weights or resistance bands, it's not effective as much. And that's just not true.

So, the types of exercises, and we're going to be doing some of these together in a second here, are stretching, seated strengthening, seated mobility, and balance. There's newer MS research suggesting that balance, in particular, might actually be the best form of exercise to reduce fatigue in multiple sclerosis. Where can you exercise? And this goes for any time, not just when you're fatigued but especially when you're fatigued, you can exercise in bed, you can exercise on your couch, you can exercise on a kitchen chair. I wanted to make this a specific slide so that you can see, and maybe even open your mind to the idea of exercising in these places. So often we think we need to go to a gym or even go to a specific place in our home, but you can exercise anywhere, it doesn't have to be in any one area. And all the exercises we're about to do together could be done sitting at the edge of your bed, or even in bed, sitting on your couch.

So these are the exercises that we're going to do. So again, you'll have the recording of this so you can come back and see. But we're going to do these together right now if you choose to join me. If not, that's okay as well. But I'm just going to demonstrate what these might look like for you if you're doing them on a fatigue day. A general rule of thumb, as we're talking about exercise for fatigue, is that two hours after you exercise is a normal range to feel fatigue. So, if you exercise and you're feeling fatigued for about two hours or so, that's considered normal. If it's over two hours, that's considered abnormal. So that's when you would really want to monitor, as we talked about earlier, monitor your exercises. How long were you exercising? Reduce that time. How many exercises did you do? Reduce that next time. Things like that.

Okay. So I'm going to stop sharing my screen. And then we're going to jump into a Q&A. And remember, for these exercises, listen to your body. That is the number one thing we should always be doing, but especially when we are feeling fatigued. So I'm going to stop sharing. And I'm going to scoot back here. I am in a wheeled chair right now just because it's my office chair. But when exercising any time, especially at home, you don't need to... please, never use a wheeled chair or a swivel chair. It should be a sturdy chair that won't move. Okay, so go ahead and shake everything out. And what we're going to do, if you can, sit up tall away from the back of your chair. If that's not possible for you, you absolutely can do these exercises like this. But try to make sure that you're having a good posture, even if you are sitting at the back of the chair.

Okay, so we're going to start with some arm movements. So, you're going to close your fist. Don't squeeze. Just close them and just punch forward, nice and slow. Now, I'm punching at shoulder height, but if that's too much on a fatigue day, you can always punch down here. That's going to be a little bit less work. If you want to use more muscles, like your core muscles, add a twist as you're doing these. So, when the one arm comes forward, you're twisting towards the opposite side. And remember, we're just doing a demonstration right now. So you could do this exercise for a few minutes, if that's what feels good to you, or you could just do it for a few seconds, rest, relax those muscles and then do it again. But this is one of my favorite arm movements. Another favorite arm movement is arms... I call these arms swings. I feel something on my arm. So arm swings like this, again, just moving in whatever feels good for you. You can move more, you can move less. You can add a twist of your upper body. You cannot add a twist. Whatever feels good for you. So this is another great exercise for fatigue. When we're exercising with fatigue, the goal is just get our body moving, wake those muscles up. Another one that I'll share for arm movements, this one is can be harder, is out to a "T" and then down. And down. If you want to add more movement, you could come all the way up, like a jumping jack, but just for your arms. If you want to add less movement, you can just come here. But again, we're just focusing on moving those muscles.

So those are some of my favorite arm movements. When we're thinking about balance, as I mentioned, balance is, according to research, one of the best forms of exercise for fatigue. So, we can do seated balance. One exercise is what we're doing right now, sitting away from the back of our chair. This is seated balance. To make it a little bit more of an exercise, we can add some reaching, just anywhere, reaching diagonally forward, reaching directly forward, reaching down towards the ground, maybe towards your foot, your other foot. It could be reaching here, but just slow reaching. If that's too hard, do some faster reaching, faster might feel a little bit easier for you, as we discussed already. So, reaching. If you can stand, then you could do that same exercise, but standing. So, feet nice and wide. That's going to help with balance. And you're just going to reach and reach. Any direction. There's no right or wrong. You don't have to get too picky. You can come down to the floor, overhead, but you're just reaching outside of what your normal base of support is.

Another exercise that you can do, I'll demonstrate standing first, since I'm already standing, is side to side or staggered stance weight shifting. So, this is another balance one. So you're just going to shift as much weight as you can over to this leg and then shift as much weight as you can over to this leg. And you can use a mobility aid for this, absolutely, whether it's a rollator, a cane, trekking poles. But, shifting, one, your weight over to this side and this side, if it's really hard, then just shift less weight. So maybe you can only shift 60% of your weight over to this side. Maybe this is your stronger side, so you can do 80%. So it might not look even, that's okay. But, getting this weight shifting exercise in, and you can do this same thing but standing in

a staggered stance. So it's shifting your weight forward, shifting your weight back. And again, just however much weight you can, take all expectations off the table when we're thinking about exercising with fatigue. If you can put 50% of your weight on this leg, fantastic, amazing, great. Do that. If it's 60%, great, it doesn't have to be 90% or 100%. Just do what you can. That's the key to exercising with fatigue to actually reducing your fatigue. And of course, you would always want to do the other side as well. So you would shift your weight forward and backwards on the other side.

If you were sitting, the way that you can do this is having your feet out nice and wide, and you're doing... it's kind of similar to the reaching exercise, but you're shifting your weight over towards this leg and then come back to the center, and then you're shifting your weight towards this leg. And as you're sitting, you're thinking about reaching and pushing your leg down and then coming back to the center, reach and push down and then the center. Then you would do the staggered stance, similar idea, still a staggered stance, and you're going to put weight through that leg, push it down and come back, forward and push it down, and come back. And of course we do the same thing on the other side, as well. So, both balance exercises, one is seated, one is standing, both are great options. One is not better than the other.

Then we want to think about stretching. Stretching is a great thing to do when you're fatigued. When we're fatigued, our muscles can get really tight. So there's a million stretches we could do. Some of my favorites are seated. One of my favorites is a hamstring stretch for the back of our thigh. So you'd straighten one leg. Get your knee as straight as possible. Hands go on your opposite lower thigh, sit up tall and hinge forward, and ideally you'd feel that stretch somewhere in the back of your thigh. And we would probably hold this for about 30 to 90 seconds, depending on what feels good to you. And then we would do the same thing on the other side. Again, this is just a demo and I'm trying to give you lots of ideas. So we're going quickly right now, but when you're doing this on your own, you would go much slower. So that's a great one.

A great stretch to reduce fatigue in our body is a figure four stretch. The modified version, you're crossing one ankle over the opposite ankle, sitting up tall and hinging forward. If that doesn't feel like much, and if you can, you can grab your leg, sit up tall and hinge. Either way, hopefully you'd feel the stretch somewhere on the outer part of your hip and thigh. And of course, we would do the same thing on the other side. Whether you just cross or grab and hinge. That's my favorite. I could do this one all day, every day. So that's going to be a good one. And the last thing I want to discuss as an example is breathing. And I'm going to come a little closer to the screen so you can see this. There's lots of great breathing exercises for fatigue. One of my favorites is belly breathing, because belly breathing has been shown to activate the vagus nerve. And when that nerve is activated, it reduces and turns off fight or flight mode. With MS, you're in fight or flight mode all day every day. So if we can reduce that, it can truly calm our bodies and reduce inflammation. So the way to do belly breathing would be to... you can relax. I'm going to keep my hands out of the way just so you can see what I'm doing. But your hands would go on your belly and as you breathe in through your nose, your belly comes out. And then you exhale through your mouth and your belly comes in. So I'll do two more of those. And we'll stop there for the demo. That can be very tricky, especially if you're not used to breathing in that way. So give yourself some grace. But hopefully that's lots of ideas for you. And I'm open for any and all questions that you guys have.

### **Darion Banister:**

Thank you so much, Dr. Hawley, for that amazing, amazing webinar, for this amazing information. Thank you for all those wonderful slides, for explaining everything. And then thank you for showing us all those simple, easy moves that we can do throughout the day, whether



we're sitting down, whether we're at work, whether we're watching television. This is really amazing. So now we're going to take a few moments and we're going to answer some questions. You have gotten several questions. This has been an extremely popular webinar through registration. And so I'm going to go ahead and just share a few with you. One, do you believe that PMF devices help reduce the impacts of stress and fatigue, and assist in re-energizing someone? How about frequency therapy?

**Dr. Gretchen Hawley:**

You know, I don't have a ton of patients that I've worked with using PMF, enough where I would have my own opinions on "yes, it works" or "no, it doesn't." So much, though, I will say, of any type of therapy is, if you feel it works for you, even if there's research showing, oh, this thing doesn't actually work, if you feel like it does, keep doing it. So much of it is just checking in with your body, and if you feel like it helps, great, keep doing it. If you feel like it's not, even if research shows this is super effective, then don't do it and try something else. A lot of it is trial and error. And then was the second part frequency, or...

**Darion Banister:**

Yes, how about frequency therapy?

**Dr. Gretchen Hawley:**

So frequency therapy is a form of vibration therapy. Vibration has been found to be helpful for fatigue and, of course, balance and strength. What I'll share about vibration therapy is that the specific type of vibration that, according to research, has been found to be beneficial is the type that goes up and down. So there's a few different types of vibration. There's, like, side to side, back and forth. But you want the ones that go up and down. So, that's the one specifically that has been found to have the benefits of strength, balance, and fatigue reduction.

**Darion Banister:**

Thank you. We have another one here. How do you reduce muscle fatigue with severe spasticity for a wheelchair user?

**Dr. Gretchen Hawley:**

So, the only change, I would say, everything that we did today would be an effective form of exercise, but if you're spasticity is so high that it's getting in the way, I would more heavily focus on the stretches. But there's two things important about that. Number one, stretch the muscles that are spastic. And if you don't know which ones they are, work with a physical therapist who can tell you. I have worked with so many patients, and they'll say, Dr. Gretchen, my spasticity is not getting any better, but I stretch all day, every day, and I watch their stretches and they do a ton of stretches, but not one of them was for the specific muscle that they are saying is spastic. And so making sure you're stretching the right muscles. And then the second thing is hold your stretches longer. Research shows that holding stretches for even up to 3 to 7 minutes can be a more effective way to reduce spasticity versus regular muscle tightness. So you can hold them longer.

**Darion Banister:**

Okay. I didn't know that. Wow. So okay. There was another really great question here. So, you know, I'm sure you hear this often, but, you know, how often should we exercise per week, what's a safe amount, a safe recommendation?

**Dr. Gretchen Hawley:**

So generally speaking, the goal is 150 minutes of exercise per week. But the beautiful thing is that you get to determine what that looks like. That can be seven days, if you want, and then it'd be much shorter sessions. I believe it could also be, if you do five days, I think it's 30 minutes a day for five days. But you can split it up. Whatever works for you. And then taking it a step further, as we discussed tonight, you can also do it throughout the day. So even if you are doing 30 minutes, it doesn't all have to be at the same time. It can be throughout the day. So, general recommendation is 150 minutes per week. Other research shows that 5 to 6 days a week of exercise is best, not doing that seventh day. And oftentimes when I do have patients who are improving but they hit a plateau, I'll ask them how many days a week they're exercising, and they're usually big go-getters, and they'll say seven days. So all we change is saying, okay, stop with seven, bump it down to six, and they'll actually see more improvements then.

**Darion Banister:**

Oh wow. That's awesome. That's really interesting to hear. So, first, someone wants to say, you know, thank you for the informative session, but you know, what do you know about PoNS therapy, which has been approved by CMS?

**Dr. Gretchen Hawley:**

Yes. I know quite a bit about it. I have, as you can see on this screen, I have a podcast and I actually interviewed, it was a really interesting interview, because I interviewed someone from the PoNS team and a physical therapist that works with PoNS, so we kind of get both approaches there. So PoNS, if you don't know, is a form of electrical stimulation that you put on your tongue and it activates specific nerves that can help, the idea is that it can help, activate neuroplasticity. I have some patients who have used it and some felt great benefit. Others noticed very minimal benefit. So it's one of those things where it's... I always think everything is worth trying. If it's feasible for you to try something, try it and see if you do feel like it helps you or not. The only thing about PoNS is that it hasn't been around long enough for us to know the long term benefits. Like, is it only helpful if you continuously use it for the rest of your life, or will you be able to hit a point where you can stop? It's a pretty aggressive exercise or physical therapy routine that you're supposed to do with PoNS, so you have to have the energy levels and the time to commit to that, too, when you're doing PoNS.

**Darion Banister:**

Okay. Wow. That's really interesting. You know, so for those folks that are out there that are having issues with movement, you know, someone had asked us, they're saying that they can barely move. So you know, how are they supposed to exercise? What are some things that they can do if they're having some issues with movement?

**Dr. Gretchen Hawley:**

Great question. I have two answers for this. So, first answer would be, is there any body part you can move, even if it's your head? Can you do some neck stretches? That's a phenomenal exercise. Maybe you look down. There's lots of different neck stretches. But can you move your neck? Can you move your fingers? Maybe not. That can be a hard one. Can you move your shoulders? Basically, can you move anything? And if so, move that thing. Doesn't matter what you're doing with it. Just can you move it up or down or forward, backwards, rolling? Any form of movement can be beneficial, and it can tell your brain that you want to move. And so doing something, even if it's minimal, is better than nothing. And the second part to my answer is what we know about neuroplasticity in getting stronger is that even if you are doing an exercise right now and you don't see any movement, it's still possible for your brain to find a different neural

pathway to eventually get that muscle to work. It takes time, it takes consistency, but it takes you doing that movement even when you don't see any movement happening. And so anytime I'm working with the patient and I'm doing an exercise that is one of my non-negotiable exercises that I give all of my patients, if they say, I can't do it, nothing's happening, what's next? I reiterate, you need to do that, like even more so, because you're not seeing any movement. So that's the second part to my answer.

**Darion Banister:**

So, I have I have a two parter here with that. You know, we talked about 150 minutes of exercise. Does that mean specifically aerobic exercise or are we talking about strength training? What exactly would you recommend for that 150 minutes of exercise a week? You know, do you break that down into certain sections? You talked about certain minutes. And then the other part here, how do we know when to stop? How do you know you're about to overdo it? How do you stop that from happening?

**Dr. Gretchen Hawley:**

Okay. Great question. So in terms of what to do in those 150 minutes, what I will say, it's of course different for everyone, but variety is your friend. You wouldn't necessarily only want to do strengthening exercises. Strengthening exercises are amazing, but you would also want to incorporate maybe some stretching. We're talking about balance being effective for fatigue. So maybe some balance exercises. In terms of how much strengthening versus how much balance or stretching, it's really dependent on your symptoms and your goals and your energy levels. So it's going to be very different for everyone. Maybe on one day you mostly do strengthening and stretching, on a different day you do balance and stretching, on a different day you go back to strengthening. So mixing it up is going to be helpful. But if you're very spastic, someone earlier talked about spasticity, you might want to do stretching every day, but then you also do strength one day, balance a different day. So your focuses would be a bit different based on what you're going through.

How to tell if you're overdoing it? So if you are lucky then you're one of the people who you can tell you're overdoing it in the moment. So while you're exercising, you're feeling like, oh, I'm feeling fatigued. And if you're feeling that, stop, you should never exercise to the point of fatigue, because it's going to train your brain that exercise should result in fatigue, and it shouldn't. But also, if you're exercising to the point of fatigue, more likely than not, the quality of your movements won't be as good, which isn't great for neuroplasticity. So if you're one of the lucky ones, you'll feel fatigue while you're exercising. Stop, ideally, before you get to that point. If you're in the majority and not one of the lucky ones, you won't know that you overdid it until afterwards. And so if that's the case, that's when tracking what you did is so immensely helpful. So writing down from start to finish, how long did you exercise? 30 minutes? 45? 60? 20? How long was it? How many exercises did you do? Did you do 5 exercises or 10 or 2? What was it? How many repetitions of those exercises did you do? 10 repetitions? 5? 30? Because keeping track of those specifics gives you a starting point. So if you look back and you said, okay, I exercised for 30 minutes, I did 5 exercises and I did 10 repetitions of each one. Then next time you exercise, maybe you still do those same 5 exercises, still do 10 repetitions, but you take longer rest breaks in between, so the total time is no longer 30 minutes. It might be 40 minutes or 45, or keep the same 30 minutes, but only do 4 exercises or 5 repetitions. So there's lots of ways that you can work around it, but keep track of what you're doing so that you can look back and see. With that said, MS is so different for everyone, and even for one person, it differs every time you experience it. But that's the closest that we can get to trying to find a routine that would not make you overdo it.

**Darion Banister:**

Thank you. We had another question that I think this refers back to the PoNS therapy. They want to know, do you know, does it really help with drop foot? I guess it's that, how are you familiar with that?

**Dr. Gretchen Hawley:**

Yeah. So, to my knowledge, and what I'm remembering is PoNS, the biggest outcome, because there were some studies done with PoNS, if I'm remembering correctly, the biggest outcome that it improved, I believe, was balance, not specifically strength or foot drop, if I'm remembering correctly. It's mentioned in my podcast episodes, so you can listen to that. With that said, it's really dependent on what exercises you're doing while you're using PoNS. So if you're doing, it's called ankle dorsiflexion, where you're lifting your ankle up and down, up and down, then it's likely that you can notice improved strength with that. But in terms of what research shows, I believe it was more so focused on balance.

**Darion Banister:**

Great. Do you have any tips for exercising without overheating? Because we know we tend to sweat when you're really exercising in there.

**Dr. Gretchen Hawley:**

Yeah, absolutely. And as I mentioned in the presentation, heat intolerance is when... any symptom can worsen, including fatigue, when your core temperature rises by at least half of a degree, and exercise can make our core temperature rise by more than half of a degree. Being in a warm house, even in the winter time, can make your core temperature rise. A warm or hot shower, so much more than the temperature outside, can make our core temperature rise. So what you want to do if you know that you are affected by heat, especially when exercising, be proactive. If you have a cooling vest, put that on. If you have cooling wristbands, which are some of my favorite products, put those on before. If you have a neck fan, or if you have a fan that you can just put in front of you, put that on. If you have ice cold water, take small sips before, during, and after. So, taking those proactive measures to ideally get ahead of it. Then, when you are exercising, take your time, add more rest breaks, do fewer repetitions. You can still cumulatively do the same amount, but just moving slower can reduce that heat intolerance, too.

**Darion Banister:**

Thank you so much, Dr. Gretchen Hawley. And before, you know, as we close up, would you like to share, you know, you have a lot of different links right here, if you'd like to just share a little bit about where we can find you, and just a little bit more about the MSing link, and I will wrap things up. And thank you all for all of your amazing questions.

**Dr. Gretchen Hawley:**

Absolutely. Yes. You know, it's always hard to, for this slide that you're seeing, in particular, because there's so many places that I share information, but I never want to overwhelm anyone too much. But, yeah. So I'm a physical therapist specializing in multiple sclerosis. So everything that I share, whether it's YouTube, Facebook, Instagram, my podcast, my online program, The MSing Link, my book, which I always forget to mention, everything is based on physical therapy, MS specific exercise, neuroplasticity, and functional exercise, because when you have MS, it does require a different approach. Traditional physical therapy or traditional exercise often doesn't cut it. So these are all the places you can find me. I also do have a book or audio book, and the best way to work with me is in my online program called The MSing Link. And in this

program, it's a self-paced program where we have all of the best MS specific exercises and calendars that tell you exactly what exercises to do each day. So there's no guesswork. There's a guide for if you have certain symptoms, what exercises are best, or for certain goals what exercises are best. So again, you won't have to wonder what to do. It's all laid out for you. And then there's also the opportunity to ask me your questions, very similar to what we just did tonight. We bring guest experts in like MS neurologists, so your questions can get answered from them as well. And I think, more than anything, it's just a one stop shop for your exercise and goals, in general, of making movement feel easier. So that's my program called The MSing Link. But my website, you can find that and all of my other resources as well.

**Darion Banister:**

Well, thank you once again, Dr. Hawley, for your informative presentation on exercise help. And it's so important on battling fatigue. Thank you for sharing practical exercises that will help us improve our movement and rest. We appreciate your time and expertise. To our friends at home, we thank you all for joining us today. We hope you enjoyed this session and gained valuable insights into improving your exercise routine. This program was recorded and will be archived on our MSAA's website in the upcoming weeks. Please don't forget to take a few minutes to complete the brief survey that was just put into the chat. On behalf of all of us at MSAA, we thank you and everyone, we want you all to have a wonderful evening and a wonderful holiday season, and a happy New Year. Bye now! Thanks again.

**Dr. Gretchen Hawley:**

Thanks for having me.