Occupational Therapy Approach To Assessment And Intervention In Essential Tremor

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- [Fawn] Our course today is Occupational Therapy Approach to Assessment and Intervention in Essential Tremor. Our presenter today is Julia Wood. She received her master's degree in Occupational Therapy from the University of Minnesota and her Bachelor of Science in Exercise Science and Wellness from Boston University. She completed a clinical internship in neurological rehabilitation at the Mayo Clinic Hospital, St Mary's Campus. She serves as the Occupational Therapist at the Dan Aaron Parkinson's Rehabilitation Center and in Multidisciplinary Clinics for Neurological Movement Disorders at the University of Pennsylvania's Parkinson's Disease and Movement Disorders Center for Excellence. She serves as faculty for the Parkinson's Foundation, allied team training for Parkinson's program and is a clinical training and certification faculty member for LSVT BIG. She acts as a facilitator for the PD self program and as an ambassador for the Davis Phinney Foundation. Welcome Julia, so happy to have you back.

- [Julia] Thank you so much Fawn. I appreciate it. And thank you so much to everyone out there for joining us. So I always love doing these presentations and I'm excited to give today's on essential tremor because I find that something that people have a lot of questions about and feel of a huge lack of confidence often in approaching.

So our outcomes today or what I hope you gained from this presentation is I want you first to really understand the impact of the symptoms on function and participation. Because we know with tremor, it can affect the movement of the hands. We're gonna get into different things that affects but also the motor and non motor symptoms as well and how those can affect overall quality of life. And I hope you'll be able to identify and list appropriate screening and outcome measures that you're able to use to help you create a person centered approach. And so you can really hone in and see what you can do to help that person reach their goals and approach their participation in the

activities that are most meaningful for them. Also, I hope that you can describe task oriented occupation-based treatment strategies to really meet those challenges. So let's get started because I also wanna say recently a colleague of mine who's a physical therapist at another site she ended up doing the presentation for the tremor foundation, which when they're in this area, I typically do because she said the OTs and her setting weren't confident doing it. So I think that would be my other outcome that I wouldn't necessarily list is that you guys would have the confidence and feel that you understand how the scope of our practice can really help these individuals and promote their quality of life.

Okay, so what is essential tremor? This is really often misunderstood and confused. It is actually the most common form of tremor. And so it's estimated that there are 7 million people in the United States alone that suffer with essential tremor. It may be mild and non-progressive, or it may be slowly progressive and they don't really understand why, but around the age or near age 60, 65, it can accelerate and sometimes the symptom management becomes worse. Of course we mostly think of hand tremor, right? And that is the most common, but people may experience tremor in a variety of body parts from their head and neck to their arms, the voice may get shaky and tremulous. They may have tremor in the legs or trunk and even in the tongue and the tremors can be kinetic or postural. So they can be with movement or without, they can be intentional. So if they go to pick up a fork or write with a pen or they can be a rest tremor, which is typically more what we see in Parkinson's for the hands at rest and tremoring. So they can have a combination or variety of these presentations. And what's interesting is I'm not gonna be presenting really on the path of physiology because it's really not certain. There is not a consistency when you look in the research of a certain part of the brain that's affected consistently. So it's considered to be a clinical syndrome at this time.

Okay, so with essential tremor, I think we often think of these motor features, tremor being one of them, but there's another set of symptoms that may present as well. And when you look in the research, there's some not disagreement on these, but some studies will focus on one more than others, but postural instability is sometimes seen. So people may have some balance impairments or feel that they risk falling. They may have a mild ataxic gait with the feet a little bit wider, a part in a little bit more of a shuffle. You may see some changes to the eye movements, especially with some psychotic type movements and they may have some changes to their motor timing. So really in how they time and react to situations and pacing of activities, they might seem a little rushed, when they're walking or moving and sometimes in some of the literature they speak to Dystonia. Now it wasn't really clear a lot of the evidence on whether they feel that this was like a side in addition to the essential tremor or related to the essential tremor and it wasn't always mentioned. But dystonia is when people will have abnormal posturing or contraction of muscles. A lot of times it's in the neck muscles or even like a focal dystonia in the hand. So it's something to look out for and know that could present as well.

And then as far as other features, so you know, I think that for a long time, when you look at the literature, there was a research article that kind of talked about then versus now in our understanding of tremor. And we do know now that it's not simply motor features, it's not just tremor, that they may have some mild cognitive impairments and those may range all the way up to a dementia presentation. So there can be some cognitive changes. There can be mood or psychiatric features as well. People may be depressed or anxious, they may have apathy or loss of interest. And of course, it's kind of hard to tease out how much this is a mood or psychiatric issue compared to how much this is related to them having difficulty doing things that they want to do. And so maybe there's a subsequent loss of interest and they've even been some note of personality changes with the progression of the disease. Some articles spoke to sensory features, so some mild changes to smell or olfactory changes, some hearing

loss, but some studies really didn't seem to find that at all. So that was a little bit of a disagreement and sleep dysregulation seem to be spoken of as well. And we'll get into presentation of what these symptoms do, but the sleep dysregulation and fatigue can really exacerbate the tremor.

So when we look at it, when we think about these symptoms, kind of across the board and what they're gonna do to the person's daily function and how they're able to move in their life and participate in daily activities. Of course the hand tremor becomes very impactful to different movements. Writing is often reported as a really big problem, eating and using utensils, doing things like shaving or sewing. So a whole range, if you think of all the things that we do with our hands, basically if you imagine having a tremor with that, all of those activities could be impacted. The mild gait disturbance, often what is said is we'll see a fear of falling. So I have had some people that they'll come in and they don't necessarily report a history of falls, but they do fear falling or have times that they feel unsteady.

The mild cognitive problems that we see, what I found is people that start to feel a little more cloudy or foggy, they may have a little bit of difficulty with verbal fluency, remembering names, not really an aphasia type presentation, like looking at a picture and knowing the name of an animal, but more kind of a delayed recall of someone's name. A little bit of working memory issues. I've had reported by some, and it's really important to note that stress, emotions, fatigue or even if their blood sugar is low can really trigger or even increased tremors. So their overall health and wellbeing becomes very important to manage because you can't necessarily make the tremors go away, but we can try to control the triggers. And then the big one to keep an eye out for is because of the tremor, they may start to have some embarrassment and this can lead to social isolation and them avoiding different social situations.

All right so this article I found really, really interesting. So it really talks to or speaks to patient centered care. And what this group did is they sent out a survey to people with essential tremor and I believe they sent it out through the International Essential Tremor Foundation and they surveyed over 1400 people and they wanted to really look at the gaps in care. And so basically it was what essential tremor patients want that they are not getting. So they wanted to look at this tremor gap. And interestingly, only 11.8% of the 1400 people that they surveyed were satisfied with their care. So I think that really speaks to, there's some big gaps that were happening and highlighted here you'll see the things that they identified. So psychological services and I think that speaks to the social anxiety, possibly depression or anxiety that people are having and feeling that they want those services in place.

Physical and occupational therapy were mentioned and big in this. And a lot of times doctors may not refer because they feel like there's nothing we can do. We can't control the tremors. But I think as we know there's a lot we can do to help support someone in compensating around that. We're gonna get into all of those ideas as well today. Handling embarrassment. So really looking at if they're embarrassed in social situations what they can do about that. They really wanted alternative treatment options as well, not just medications. I did not get into it heavily today because of the time constraints but deep brain stimulation, which is the implantation of a pacemaker in the brain is one of the treatments for essential tremor. So as you can imagine, that's pretty invasive to have a pacemaker put in your brain. There are some medications as well, but they can give, but there's not a whole lot of treatment options. And so they really wanted to get some alternatives. They were looking for stigma reduction so how to really reduce kind of the stigma around these tremors and what people assume the tremors meant, they wanted their treatment to be individualized. And I think everyone wants that. So as occupational therapists, when we really look at the individual and the whole person, I think that we can go a long way in making our treatment very patient centered and satisfying that need. They wanted their anxiety and depression,

addressed. They wanted education too. And I think we can also give a lot of that education and we'll get into some resources at the end. And they were looking for support groups, in their area and people to talk with. And so I think that for me anyway, when I look across this spectrum of the things that people were missing, I think of how many of these as occupational therapists, we can really help with that at least support.

So let's get into assessment. We'll just kind of launch into it right off the bat here. And I'll talk about some assessments that I didn't go into detail about and why. And if you ever have questions, of course after any presentation you wanna reach out to me about an assessment, you're more than welcome to. So if we're gonna do that patient centered care, it's really important that we go back to our roots and do that client centered top-down approach. So we start with an occupational profile no matter what. I always say I don't treat tremor, I don't treat diseases, I treat people. So focus on their participation and their performance. What are their routines and roles and the patterns to their daily activities. What are their values and interests? What is most important to them, and I think it's important to really identify their areas of concern. So someone might come into me for example, maybe their handwriting with essential tremor or Parkinson's is just abysmal, but when I say, is that it's an important to you, is that something that you really wanna work on? And they say no, then I'm not gonna set one of their goals or really focused a lot of my time on handwriting because I wanted to be important to them. So we wanna make those outcomes.

Then when we start looking at our outcome tools, really meaningful and relevant to the client. And that kind of leads into why some of the assessments that I've left out that you can do and they're perfectly fine to do like the nine hole peg tests today, the Perdu pegboard, the box and blocks. I'm not really going to get into those 'cause I think we're all familiar with them. And if you feel it's relevant to test that on the client, absolutely do so. But I think, don't forget the other measures that we're gonna talk about that really get into selecting what's meaningful. And I put here with a couple of

stars more as a reminder to myself I'll be honest to remind myself and all of us here to establish realistic expectations. And what I mean by that is nine times out of 10, when a client comes to me with essential tremor, when they put on their intake form or when we're doing our interview, what they'll say is their goal is for me to control their tremors or make their tremors go away. And I feel it's really important that I'm honest with them. I use a lot of humor and that's not appropriate for everyone, but it will often I'll say, I just wanna make sure we're on the same page. If I could do that, I'd probably win the Nobel prize. And so unfortunately I'm not gonna be able to make your tremors go away, but what I can do is help you reduce the things that are going to trigger your tremor and give you strategies around that help you compensate around it and really helps support your participation. But I wanna make sure that in no way do they think that I'm going to be able to give them necessarily an exercise or activity that's going to make their tremors go away or control their tremors.

Okay so what assessments can we do? How do we get to those patient centered, directions where we wanna make sure that we get to the heart of the matter for them. So the Canadian Occupational Performance Measure is fantastic. I'm sure most of you are familiar with it because it really helps them select their activities that they want to target. You're measuring their perceived performance and satisfaction over time. So with something like essential tremor, you may not see changes to like a box and blocks or a nine hole peg test or Perdu pegboard. But if the person feels like they're able to eat better, to write better, to get dressed more independently, that's really what we want. I think most of us, that's what we're going for. You can also use this in collaborative goal setting. So really help you target in on what their goals are. What is it about dressing that you want to be able to do or gardening or cooking. I mean, you can also use this to address the care partner if needed. It has good established reliability and validity. So it's an excellent measure to use. It does require permission and purchase so it's not available always at every site. And so I put this up also the pass. So if you want to really get in and see what they're doing and see their self cares.

I've learned recently more about this assessment. I'm still really digging into it and learning more and more. It's quite complex. There's a lot to learning to use it. But I would encourage you to at least explore it and take a look at it. So it looks at functional mobility and all their activities of daily living. Each sub task, their rating from independence, you're looking at their safety, their adequacy. And then you can do parts of it. I didn't realize that in the beginning I thought you had to do the entire assessment. You can take out different sections and look at what you want to look at. So you can just look at the ones that are relevant for the patient and you can also use the template in the assessment to create your own items as well to kind of customize it to the patient. To do this, I would encourage you, you look it up, you reach out to the individuals who created the assessment and they send you a whole file of how to get started with it and how to learn it and how to administer it. So I would encourage you to take a look at it. It can be done and also important to mention in the home, there's a home base version or a clinic based version as well.

All right so the ABC scale. So if we're looking at balance maybe and the person's reporting, some fear of falling and limiting activity, the ABC scale is a quick way to really look at balance confidence. So basically you're testing how confident are you that you will not lose your balance or become unsteady when you, and it gives different scenarios like picking up a slipper from the closet floor, high reaching while reaching, getting on an escalator. It's pretty quick. It's something to watch out if the person has cognitive issues to where you feel like they really aren't understanding, and not comprehending the scale that it's not the best one to use, but you do get an idea of how confident they are and maybe where their areas around their steadiness lie with different daily task.

This, I put up the PSFS or the Patient Specific Functional Scale. I should have moved it earlier. I apologize 'cause it's a great, I think any way alternative to the Canadian Occupational Performance Measure and this is one that's free most sites have it. I

know some insurance companies I've heard are even requiring it or some sites anyway. And so if you don't have access to the COPM, this is a good thing to use in place. So you have them rate their perceived ability to complete an activity. Zero they're unable to perform it, at 10, they're able to perform at a prior level. They're selecting the rating that they feel best describes their ability and you can really use this as distal measure, a distal outcome measure to check their participation and also how they feel they're doing with the activities that they select.

Fatigue is a really big issue I've found. So I started using this more with my essential tremor patients. So the fatigue severity scale is just so quick. Nine item self report, you're looking not only at the severity of the fatigue but how it's impacting their activity and their lifestyle. It's on a Likert scale. So one they strongly disagree with the statement. Seven, they strongly agree. The minimum score would be nine then if they scored everything at a one of course. The highest is a 63. Anything a 36 or above suggests a significant level of fatigue to address. And you can really use this as outcome measure to determine if you need to use some fatigue management strategies to decrease the fatigue for the individual.

All right, so let's get into treatment then as well. And I just wanna say too, back in the assessment section, I'm sure you can all think of a lot more balance assessments you might look at or ADL assessments that was literally a brief snapshot. So use what you know use what you think is relevant and like I said, if you have any questions, please feel free to reach out. But I wanted to dedicate more of the bulk of the time today on getting into treatment. So as I mentioned earlier we may see a broad scoping impact of tremor across different daily tasks. So writing is a big one, of course, eating, but then also being able to hold a cup or carry a cup or glass to drink, preparing food, all of the personal care activities, grooming and bathing and hygiene using computers and technology and telephones, being able to text and dial phones. And then also that depression and social anxiety piece and the impact that has on participation as well.

So when we talk about a task oriented approach, I think it's important that whatever the person's having trouble with, you know I often hear, I had a gentleman recently that came in and he had seen a therapist somewhere and he was having trouble getting bills and coins and cards out of his wallet. And you know the therapists had him getting coins out of theraputty and I said, so did you do that preparing too? Did you work on getting the bills and coins out of your wallet? Well, no, I just did the coins and theraputty so that's a fine preparatory activity, right. But really take it back to the task especially something like that. I know sometimes we can't always get directly to the task. If it's like golfing on a golf course, then that's a little hard for us to do. But when it's something as simple as a thing that we can bring into the clinic and have them do the task and see it and practice it, select those activities and tools from their daily life and really collaborate with them to see what is most meaningful, what do they want to do. But then also think about not only the person aspects like the tremor, but what are the environmental aspects that they might be running into.

We're gonna get into some body positioning and body mechanics. And so looking at how that's going to affect the task. How can we structure the practice of that test or really help them facilitate motor learning? So how can we break it down into those simpler pieces? Like when we did our task analysis way back in school that we all remember and teach all those different components and kind of simplify the task and that 'cause we really ultimately wanna develop those optimal movement patterns so that they can do the task more efficiently. So in coping with tremor, these are some things we can really address, looking at their body positioning, resistance training, we're gonna get into some evidence for that. Compensatory techniques are often really necessary. Adaptive equipment we might need to work for them to really change or modify the task or the demands. As I mentioned with sleep and fatigue and stress, wellness strategies become very, very important and really helping reduce their triggers.

So when we talk about activity modification, it's important to help them find ways to maybe reduce the physical efforts. And the strain on the hands and arms. If it is a hand in arm tremor or if it's a tronc or more of a body tremor, how can we support their body more to help reduce the effort? Might need to see if they can eliminate some steps to the task. So for example, if it's, you know, difficulty with cooking and cleaning, maybe something as simple as as eliminating the step of having to really scrub a pan because I put foil down when they cook in the pan. Things like that can really take a huge effort off. Maybe spreading out the steps of a task. So over time to really help reduce the effort and the fatigue they might need to rearrange some activity stations, especially desk type work or things of that nature so that simplifies the load and maybe allows for more arm support. And if their medications really help with the tremor and for some folks they do maybe they're doing more difficult tasks or things that are harder for them when the medications are working well and their tremors more controlled.

So when we're thinking about body mechanics with this, often if people have some arm support that can really help a little bit, we're just reducing those degrees of freedom. So anything they can do in a seated posture, if we can think about the knees and hips being in line and the feet being flat on the floor and working on that tall posture that really helps the core support the body more and helps reduce the load. Getting some core stability in their seated posture or their standing posture to help give some arm control, making sure that they have some back support and support for the arm whenever possible. And if that's not possible, can we help them learn to support their elbows against the body or maybe on a different surface like a countertop. And then they can also use the other, the opposite hand to support that affected arm or the hand that's trying to do the task to kind of help give a little bit of steadiness and support. When we're talking about falls and looking at that and body positioning or them feeling more steady. These are some examples with different reaching strategies that might be helpful. So you'll notice the top part where it says incorrect technique at the top of the screen. If they're got the feet close together, they're standing in the

pathway of a door that's gonna make you more steady or have to take a step backward. And often that's when people really feel less confident. So at the bottom you'll notice standing out of the pathway of the doors with the feet a little wider or in what we call a power stance.

I'll kind of point that out, my Arrow here. So my arrow is not working. Funny. So down at the bottom where the feet are staggered in one foot's a little fort, there's my arrow. You can see here she's got a wider basis support and that's gonna help not only having those feet staggered with the side to side balance, but having one foot a little forward one a little back, will help feel a little more steady without retropulsion. So it protects against the falls for backward or forward. And so you can see here too, she's got that same stance reaching into the cabinet and also has that hand on the counter for support. So never take for granted that little things like that, you know, can make someone just feel a little bit more steady and improve their confidence when they're moving about doing things they need to do in their home or out in the community.

So also energy conservation. Fatigue is a problem, really using rest defensively can be helpful looking at their pacing and breaking up long duration or heavy tasks so that they can get a little recovery time. And I think that it's important to encourage, that they start to ask for help if necessary. And have conversations with people about things that are difficult. Often people want to help, but they may be, don't know if they should, so they avoid it. So I encourage and try to empower people to have those discussions for where they could use a little help. Excuse me. And then even though lastly, just simply alternating tasks that take more energy so I'm carrying laundry or loading a dishwasher, things like that compared to things that are more low energy like sitting and doing bill pay or folding laundry. So just kind of encouraging an alternating and pacing strategy for those tasks. This is not in, and it's important to say too, I don't think I noted earlier, there is not a wealth of literature on essential tremor. It is always one of the quickest lit reviews that I do. And that's unfortunate because there's such a huge

number of people affected by it, but it's not well researched. So this research and time pressure management actually comes more out of like brain injury. But I think that I've used it in dealing with these individuals and helping them because I think it does apply. If you think about, how long it took you to get ready to leave for work this morning, right. We all kind of have a set idea in our mind of how long those tasks take. And we need to be at a certain point by a certain time to get done. Kind of like me in this presentation, I was trying to get to slide halfway through the slides at the halfway point. But imagine that if all of a sudden things are taking longer, because now you've got tremor that's slowing down, manipulating buttons or getting your clothing on. So now you're still operating a lot of times the idea behind time pressure management is we naturally flow into that temporal organization of the time it took us to do the task and now it's taking longer. So it's like we have to regain and recalibrate that. So you're really trying to help the client, come up with some compensatory strategies to deal with that time pressure.

So you're gonna look at their decision making in these complex task and really look at their individual learning and cognitive skills also. But in saying, okay I had a gentleman recently, I'd like for you to time yourself the next time you're getting ready and he didn't have any where to go there wasn't a time constraint. So I just want you to set the stop watch and just see how long it actually takes. And he had an idea of how long it had always taken him and how long he had allotted for getting showered and dressed and groomed. And he was surprised that it was taking him, he said 17 minutes longer than it used to take. So we were able to look at that and go, okay, now what time do you need to start getting ready for work in the morning if we're recalibrating this and re-gauging this or do we maybe put showering the night before? And then we're doing grooming and dressing in the morning. So kind of giving options I think on how to manage those time changes and helping the individually aware of them and giving them some choices and what to do to make that easier. Because if you think about it, if stress and anxiety increases the tremor and now we're stressed and anxious trying to

get out the door, because it's taken us longer than it's gonna increase the tremor and slow them down even more.

Okay, so if you notice cognitive changes, this article that I'm citing here actually comes out of the research specific to Parkinson's, but I found it to be really useful with a lot of different individuals. So perspective memory just refers to the ability to remember to perform an action in an appropriate time. So you know, that can relate to taking your medications or paying your bills or turning off the stove or doing your exercises for therapy. But basically what they found with this study is they had people create what they called implementation intentions. So they asked them, what do you have to do and where or when do you have to do it? And they had them develop a statement, when the situation arises, I will do y. So when I eat my breakfast, I will take my medication is the example they gave. And they usually had them verbally kind of repeat the statement either aloud or to themselves. And I thought this part was really interesting. They had them visualize themselves in the future and countering that situation and executing it. So almost a type of mental rehearsal. I have a daughter who's a musician and that type of mental practice is really common for athletes and musicians. And I thought it was interesting that they found some improvement in the study for people being able to comply with those perspective memory task with use of that strategy.

Okay, so this one very, very interesting. So there is some research for resistance training to improve dexterity and fine motor coordination. So in this study they found that, there were actually three different studies. This is a systematic review that I site here. So they were able to show some improvements in their force steadiness and dexterity. So they variety of tests they did the Perdu Pegboard the Nine Hole peg, the Moberg, the Jebsen, and they were able to really show the improvements in the affected limb and the least affected. So even the hand that was tremor dominant showed improvement. Most of the studies were a relatively small sample signs

anywhere from around nine to 16 people. So I think it's important to keep that in mind as well. And on the next slide, I'll show you a little bit more of what they talked about protocol wise.

So they mentioned, typically run two sessions per week. And they talked about multiple exercises that targeted the finger, wrist and elbow. The one that was most predominant though looked at mainly bicep curls and then wrist flection and wrist extension exercises. And they did three sets of the exercise and it was a moderately heavy load. So they were in a doing an eight to 10 rep max per set. So they were finding after those eight to 10 repetitions that the person was pretty fatigued before they went onto the next set. So I think that this is important to know that you could try this. It does seem to be helpful and seems to promote not only strength improvement, but also dexterity and coordination.

And I think that if nothing else, what I found when I use this with individuals is it helps them feel like they're doing something, that they have some something in their toolbox to use to try to improve this. So writing, as I mentioned is a big issue. You know, there's not really any way to just fix the writing of course. But of course supporting the arm, all the body positioning and mechanics, things that we talked about early are very helpful. These are some different things that I've used with individuals. So the Pen Again is just an Ergonomic pen. It's not specific to tremor, but that's the one that you see first here that kind of is got a little loop around the finger almost. So it gives a little bit more support and dexterity. The steady ride I think a lot of us have seen and they show it being held both in kind of a pantry or in pinch between the knuckles position. And if handwriting really becomes a problem and people are concerned about their signature, they can have a signature stamp created from an older signature that they have on a check or something and then use that just to be able to sign documents. So that's another excellent alternative as well.

So then getting into eating, this is another area that really poses a problem. We're gonna get into some of the adaptive aids in a second, but a lot of time just raising the plate and providing some arm support to reduce those degrees of freedom can be helpful. Getting some stabilization to the disc with either dycern or some of that shelf liner that's a little sticky but not adhesive. I've had great success for people with plate guards, to have to help with scooping food. Of course there's all different types of utensils. We're gonna talk about those a little bit more. There is a device, I just wanna be really clear that I put some things in this presentation that there is not evidence for necessarily they don't have a research study. A lot of it is anecdotal. I want you to know what's out there and we're gonna talk about how to approach that with clients. But by no means am I endorsing certain products or am I saying that they work or I've seen great success. They are out there some individuals claim they help them steady rest as one of them. You could go online and take a look at it. I think I'll actually might have a picture of it in the next, nope. We'll see if I have a picture of it in a minute. But I'll describe it in a second if needed. This is one of the ideas for positioning for eating that I've used with people that's been pretty successful where we raise up the height of the plight, get support for the arm, and then it helps, reduce the motion and give them a little more control.

There's the steady rest. I thought I had it in here there we go. So get my points for back on. So the SteadyRest you'll see is clear plastic. It sits in the hand at cuffs to the wrist here. It's not weighted or anything like that. It has a way that you can support this spoon or even a pen to try to stabilize it. Like I said, I am not endorsing it. I haven't tried it, but I know it is something that some people claim benefit from. The other options that I've shown here are the Large Gop, bendable utensils, not weighted, but just large gripped is what I'm showing and we'll talk about that more in a moment. Also the sub spoon, which has kind of a hollow inside, so you're able to get the liquid in there and more pour. I haven't tried this one. I'm gonna be honest, but I've had I've encountered some therapists that felt that it was really helpful. So I wanted to let you

know it was out there. My personal favorite and the one that I find people select when I give them a chance to trial is this one. The super spoon. And you'll notice it has a deeper bowl. You can kind of see here. So the liquid is really more in it and it has just a large grip handle. It is bendable if you like. So I find people prefer that one often when I let them try different aids out. But then not to be ignored is the LiftWare steady. And so this, we're gonna see a video of a second and they claimed that there's a 70% reduction in the effect of the tremor on eating. It only works best though for certain frequencies or tremor. We're gonna talk about how to define that a little bit more. It's expensive. So there are some donation programs available I believe still through the International Essential Tremor Foundation. And you'll notice I've put a site with stint there so you can kind of go on as a clinician and take a look.

But we'll take a look at the video now and see what it looks like in action. See, you'll notice that's him with a regular fork eating. And so you see the base that's in the hand, right? So what that does is it's able to stabilize. It's actually got a mechanism in it. Google now and see the technology for this. So it's stabilizing the base of the spoon so that his hand might be shaking but the spoon doesn't shake. Okay. So then I guess we'll go forward to the next slide. You can also find that video online at the website if you like, and take a look for more information there as well.

Okay. So then this is the test that I mentioned. So if you go online, you can find a PDF of this that you can print out. So it shows which is the smallest circle that you can hover your pen in for five seconds. The top circle, that biggest one, they're optimistic that it might work, you know, on some days, depending on how severe the tremor is. The one in the center, you notice it says that it's its recommended lift where would work most of the time you notice in the bottom that that tiny little about nickel size one is the one that it would really help. So keep in mind that this device is around $300, I believe. So I think it's important to let someone try the test if they're going to try it. You can also reach out to the company and they do give some deals on getting one for you

to be able to try in your center. So that comes to this try before you buy it. So recently, this is a review that was done, by some individuals looking at different adapted devices and tremor both in Parkinson's and different types of tremor because there is still that urban legend of weighted utensils with tremor. There's not evidence for it. We can't say that it works or I mean the amount of weight it would take for us to stop a tremor in someone's hand, they wouldn't be able to lift it up and use it as a fork. And that doesn't mean that it might not help. So what they found with this was that different individuals had varied reactions. They tried them with weighted, they tried the lift where they tried a swivel spoon and they try to large grip, right? And they didn't feel that there was any conclusive evidence to support use of a specific adaptive utensil. So they recommended that you allow them to trial the devices both in the clinic and when you can provide them from home practice so they can really try them out and see how they work. But also they mentioned, and I think this is so important, I couldn't agree more to address postural strategies and stress management to really not forget that piece and think that we can just give them a magic utensil and make it better.

Drinking. So this is the spill, not that picture here that you see. So it uses centrifugal force to keep the cup from spilling. So if they're really having trouble carrying a cup of coffee from one room to the other, this is great. It's not gonna help them with drinking it. They still have to do that. So training them to avoid overfilling, using cups with maybe lids or straws or large handles and then there is, you can check this out online too. The hand steady has a rotatable handle to really help adjust where, the position of it is to provide better, mechanics or support. Once again, this is not an item that I'm endorsing, it's something that is out there that people believe could be helpful, but I would say check it out for yourself.

When we're looking at meal preparation, we all know about the adaptive cutting boards or using food processors. There's pre chopped foods, one touch can openers. I also recommend often the cut resistant gloves that you can find online there's different

brands. So if they do have problems with knife use and possibly might cut themselves, teaching that for safety.

Getting dressed. I mean I think one of the big ones is using a seated position in it with an arm chair, of course there's all the amazing adaptive fasteners now, magnets and Velcro. Zappos has its align now, Tommy Hilfiger, target, MagnaReady buck and buck has different fasteners. So all of these are are different resources you can give your clients. Look at the button aides, long handle shoe horns, things like that. I always encourage people, try them in the clinic when you can, don't just give someone a button aid and think that it's gonna help. Make sure they understand how to use it and make sure it doesn't make the task more difficult.

As far as hygiene and grooming once again, supporting the arms. I think we know all the electric aides that they could have or floss holders the suction nail clippers. One of the favorite ones though that I recommend that people really like and I still have to get one myself, is the blow dryer stands here. So you see the lady with the stand for the dryer and it really does help with not having to try to coordinate the movements so much and if maybe one hand is a little more tremulous, you can use that. Also permanent makeup. Sometimes if an eyeliner is a big deal and they're really having trouble with eyeliner, some people prefer to go that route and it's a great option.

Computer use. Of course key guards is in the picture. There's different settings you can look at. So setting up the accessibility options for filter keys or slowing down the mouse speed if that's maybe a problem. Dragon naturally speaking or any type of talk to tech software can be great. Specific to tremor there is what's called this steady mouse, which is a hand tremor accessibility software. And so it filters out the shaking motion and it also blocks unintentional mouse clicks. So I've even had some folks with Parkinson's that have liked this software a lot. Dragon mobile assist is a great speech to text command that you can get for android use. So if they're having trouble with

phone use, the Abilipad is another option as well. And then even sometimes just the pop socket if the person's having trouble holding onto the phone having that little support you know in the hand can make a world of difference.

So let's get into wellness strategies then and look at this. I mean sleep hygiene, this is just taken from the CDC website. But this is so important and you probably will not be amazed 'cause you're all therapists fine at the crazy bedtime habits that people have in the poor sleep hygiene. And maybe some of us out there have some too, but really encouraging that consistent bed and wake time trying to make sure that you set your clocks so you get at least seven hours of sleep getting that relaxing bedtime routine in a comfortable environment. The big one, the big, big, big one is removing the electronic devices. So many people have televisions in their bedrooms or they get up and they get on the computer in the middle of the night and we know that that blue light really stimulates parts of the brain that make us alert and aroused for up to a couple hours later. Regular exercise, reducing fluids at bedtime. I mean these are all just across the board recommendations, but don't, I think, just assume that they have good sleep hygiene, really take a look.

Mindfulness is fantastic, has not been researched specifically for essential tremor per se, but it does help, we know with reducing anxiety and depression and stress, remember that back to that study where people wanted resources for that. It helps improve the mood and I think if it helps cut down the stress, it's also hopefully gonna reduce some of those triggers on their tremor as well. These are some apps that I like that are recommended by the anxiety and depression association of America to kind of help with different strategies for anxiety at home. So I often educate people, you know, if they're looking for one simply for mindfulness Insight Timer is a great app and I'm sure you guys have ones that you all used 'cause as therapists we need them. But these are some that are recommended actually by a National Association.

Exercise, so important. So we're talking about cardiovascular exercise. There's nothing specific to essential tremor, but they're just recommend that they exercise according to the American Heart Association guidelines, which for adults, 18 to 65 is that 30 minutes of moderate intensity exercise five days a week, 20 minutes of high intensity, three days a week if they're going that route. We talked about the strength and resistance training, but then also Tai-chi Yoga, Qi Gong, those are all great for relaxation, for balance, for mental health and wellbeing. So I encourage people to find exercise that they enjoy 'cause that's the one you're most likely to do. I used to own an exercise studio many years ago and I had all these different things, pilates and yoga and people would say what's the absolute best? And I would always say the best exercise is the exercise that you're motivated to do because it doesn't matter if it's the best thing for you. Like I'm sure stationary biking is great for you, but it just bores me to tears. But I'm sure there's some of you out there that love it. So that's why there are different varieties. So we all find something we like.

All right, so let's look at a case study. I wanna kind of tie this together, look at some other outcomes in ways you can approach it. So this is an example of a woman who was fantastic. She came to me though, and I have to admit, I had a student at the time and I told my student, I said, you know, I don't, I don't know how much we'll be able to help her. We'll see. 'Cause she had a pretty good amount of tremor. She was 75 years old. She had a 20 year history of tremor. And she was having a lot of participation challenges, so difficulty with using utensils when she was eating and she was reporting a lot of social, kind of embarrassment and stigma around that and feeling like she didn't wanna go to dinner with friends. Having some difficulty with getting dressed, especially a manipulation of fasteners. Her writing was a challenge and she had very adorably a pen pal in another country that she liked to send letters to and she was having trouble writing out the address. It was really writing wrong address. She liked sewing and she'd pretty much given that up 'cause she just really didn't feel like she could so 'cause she was having trouble threading the needle. Once she got the needle

threaded it was okay. But she had a lot of trouble getting the thread inside the needle and playing piano. She'd given it up completely and really missed it a lot. And that was something that she highlighted that she wanted to make sure, we at least tried to address. So I took a stab at all them and I really didn't know it was like a shot in the dark what was gonna happen.

So here's what I did. I saw her, she lived a distance from our clinic. And so I saw her every other week and for one session a week, 'cause that's really all she could get to me. She didn't drive any more and she had a friend drive her to the clinic. Her husband was deceased. I don't know if I mentioned back here and this is very important. She had a very positive attitude and she was very adaptable and willing to adapt. Those are huge strengths when you're dealing with this population. So that really played in her favor. Okay sorry to jump back on that. So, I wanted to give her when I would see her as many things as I could, but then kind of things that she could work on, when the interim weeks until I was able to see her again. So we looked in her body position. For writing we focused on supporting the arm on the table. With eating I did the positioning that you saw in the picture earlier of raising the height of the plight and getting some support for her arm. With sewing we talked about positioning strategies, to enable, her to get some arm support when she was sewing and get her posture supported. And then for playing piano, the same thing, getting the feet flat on the floor, knees in line with the hips, trained her and really kind of feeling like she was anchoring her elbows against the sides of her bodies for support and really worked on her posture. So then to support the writing, I tried her with different pens. I do have a weighted pen, I have a steady right. I kind of let people try everything because as I said, there's no real evidence to support for or against anything. So I feel like why not let them take a shot at it. She liked the Pen Again and actually did quite well with it. She did find she had an activity tolerance with the writing. So she could write for kind of limited periods of time, but she was able to be successful. And also I think I have it further down. She ended up getting a signature stamp, and an address stamp for her pen pal correspondence.

So then when she went to mail the correspondence to her pen pal, she could just use the stamp and stamp it on there. And she used the signature stamp for checks and whatnot and then she just took her time and kind of spaced out writing the letter to the pen pal. And did some of it on the computer 'cause she could type better than she could write. We tried various utensils. I let her try the weighted utensils and take them home. I let her try the large grip bendable. She ended up picking the super spoon that was the one that she liked the most and was really happy with it. I provided a pin cushion and for the needle work. So she found that if she used a pin cushion to stabilize the needle and then supported her arm when she was trying to thread the needle, she was able to thread the needle okay. So I mean these are all really simple things. It wasn't like I really reinvented the wheel here. I did train her in the use of mindfulness and especially body scanning because she was having some social anxiety and she was aware and starting to note that her anxiety did exacerbate and increase her tremor. So she started using, I believe it was Insight Timer might've been calm, but she started using one of the mindfulness apps and doing a daily mindfulness exercise every day and really working on kind of scanning and feeling her body and the tension and the stress and she found that to be very helpful. She even got a couple of friends doing it with her, which was really awesome. And we talked a lot about energy conservation strategy, so all of the body mechanics and reducing load because she was having a lot of fatigue. We did practice some communication strategies to help with her social anxiety. So talking with her friends and family about her tremor and what it meant and that she really missed, having meals with them and dinner with them and doing things. But that she felt embarrassed and so then they were able to say, hey, we don't really think anything of it. So just having that conversation she said and noticing how her friends and family reacted and she's like, I actually thought it was a bigger problem than they did. So she's like, I'm glad that I talked to them about it. She liked the button aid. We tried the button aid out and practice sitting in a chair with arms that she could support both of her elbows, taking a few deep breaths. Actually, she used kind of a little bit of mindfulness or deep breathing before she would start to do a

difficult task and she found that to be really successful. So I kinda can show the results on the next slide. At our site, I'm able to use the Tetras, which is a tremor rating scale and it has different scales in it. I'm at a Movement Disorder Center, so we have the access and rights to use this scale. That's why I didn't put it in the outcomes earlier. It's great to use if you want but not everyone has it, so that's why I didn't wanna focus on it. But basically it goes through different, ADL task and their person rates it, on different levels, whether it's normal or moderately abnormal to where they feel like they are. So you'll notice here with feeding with a spoon, she started out, she felt like she was moderately abnormal. At the end she felt it was mildly abnormal. With her hygiene, she went from feeling moderately abnormal to slightly abnormal. With dressing she went from mildly abnormal. I thought this was interesting to completely normal. She felt like with the button age she could do what she needed to do. With her writing, she went from moderate to slight. And then with her social impact, she started out, she was avoiding participation. And in the end she felt like she was embarrassed in some situations. She said more when she was out in public around people that she didn't know that weren't in her immediate circle. I also did a PSFS on her 'cause I wanted to kind of see, how she felt these things improved. And this is a direct quote from her. She said, coming to OT has made my life so much better. And I thought that was just so sweet 'cause she was such a dear. You can see with her eating, she rated it a two when she started a nine, when she stopped. Her writing, this was interesting. Even though I didn't fix it, she started at a three and she rated it a 10. She felt like she had had the tremor for so long. If you think 20 years, she's like, I don't even remember really what I wrote like 20 years before. But she said, this to me is I'm able to do what I need to do, I'm happy with it. With her sewing, she rated it a half which was interesting to start. And she gave it a nine and the same thing with piano. She really felt like she was able to get back so much and these outcomes when I literally stopped her midway through the PSFS and said, look, if you're just trying to make me feel better, I want you to be honest. And she's like, no, this is true, this is how I feel. And so I gave you some resources here to look at as well. First is the International Essential Tremor Foundation.

There's a lot of great resources on that website. You'll notice I also highlighted the section that's for healthcare providers. So I encourage you to go on and peruse that site, look at what they have to offer. The Diann Shaddox Foundation For Tremor, has a great family assistance program. So if people are experiencing issues with their income based on their tremor, they even have resources there. So that's a great thing to know about. The Tremor Action Network and HopeNET are both just websites that really give more information and education about tremor. And I think it's important for you to know about these resources for yourself, but then also that you can recommend, what you think back to that slide earlier what people felt was missing the education piece. So often I'll go on, the IATF website and I might print things about their tremor, about stress or about whatever it is, and I'll give them information. Also on, I know the IATF and I believe there were a couple other ones as well if they're looking for neurologist who specialize in treating tremor and approaching tremor, they can find someone in their area, to address that as well. If they feel like maybe their doctor isn't quite as versed in tremor as they would like. Alright. So with that, thank you so much for your time and attention. If you have any questions, I'm happy to try to answer them now.

- [Fawn] Wow, thanks Julia for a great talk and great resources. Let's see, we will give it a few minutes for some questions to be posted here. So if you had, while I'll ask a question while we're waiting. You said, do you like that particular spoon, is there any other equipment that you, if you had another thing that you could add to your toolbox, what's your second favorite?

- [Julia] I think honestly the Pan Again, I use that pen so much and I recommend it for my Parkinson's patients, my ALS patients, some of them that still have some decent hand function, but maybe they're having issues with grip and grasp. They like the Pen Again and also it's just, it's Ergonomic so it's not anything that really looks like, calls attention to any disability.

- [Fawn] Great, I'm sorry, I was muted. I thought I was talking. What is, a question came in, what is the legal status of using a signature stamp?

- [Julia] As far as I know, there's not an issue with that because it is based on the person's signature, so it is taken from their signature. That is something though I think with signing any document, I encourage people to discuss that with whoever they're signing it with. They can get a letter from their doctor as well stating that they have a tremor that affects their ability to sign documents and they have that for backup. But I think any time like say if you're signing a, I dunno, I'm thinking like a mortgage or something like that or some kind of illegal document will and testament, I would discuss that with the attorney or with whoever is over that document to see how best to address the legal issue.

- [Fawn] Another question that came in, how do you talk to patients that don't want to acknowledge their tremors?

- [Julia] I mean I think that if I don't want to acknowledge the tremors at all and if they're basically, if you keep in mind that we're not treating the tremor, we're treating their participation issues. So for me, if they don't wanna address a tremor, that's fine, then I wanna know what they're having difficulty with it doesn't matter why. It doesn't matter if it's a tremor or why. Is it taking you longer to get dressed? Are you having difficulty writing? So I think that if they won't address the tremor, then address what their participation challenges are and how you can support around that.

- [Fawn] Okay, great. I don't see any more questions coming in, so I'm gonna close the session for today, but please jot down her email if you have any questions that you think of at a later time, please feel free to reach out. Thanks so much, Julia.

- [Julia] Alright, thanks Fawn. Thank you all. I hope everyone has a great rest of the day. You joined us again on Continued and occupationaltherapy.com. Thanks everyone.