The Difference Between Essential Tremor & Parkinson's Transcript

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Introduction to Essential Tremor

Welcome to The Parkinson's Solutions Summit 2.0. I'm your host, Dr. Ken Sharlin. Today I have a special guest, Dr. Drew Christensen. He and I have known each other for a few years.

Dr. Christensen has had his own Summit, and I'm sure he'll tell us more about what's going on in his professional world. We're going to talk about a really important topic today, and that is essential tremor and understanding the difference between the Essential Tremor and the tremor associated with Parkinson's disease.

Dr. Christensen is a family medicine physician, and he founded the Living Health Functional Medicine. And we're going to talk a lot more about what he does and all the important information he has to share.

So without further ado, Dr. Drew Christensen welcome to The Parkinson's Solutions Summit. Thank you. Good to be here. I'm excited to be here. I think it's a great thing you're doing.

And I'd like to get the message of essential tremor out there because sometimes, you know, they get it gets confused with Parkinson's disease. Well. What is the difference?

Tell me a little bit about essential tremor versus the tremor in Parkinson's. So essential tremor is just what it sounds like. So tremor is basically an involuntary movement and an essential tremor.

It's very rhythmic and usually will be seen, in the hands. but it can also be seen in other parts of the body. So the head, tongue, voice, even legs. it's different than, Parkinson's disease in that essential tremor is what we call an action tremor.

And so it takes place when the person is moving. I've had the essential tremor for over 45 years. And so I know intimately, the battles, that people face with that.

but that action tremor, people will notice it, for example, when they're trying to eat, use utensils when they're trying to grab a glass and move it to their mouth to take a drink.

How Essential Tremor Differs from Parkinson's

We can also have what's called a postural tremor. And that's when we're holding like our arms or our body parts up against gravity, that the tremor will manifest in those situations as well.

And then the other distinct part of essential tremor usually that we see is something called intention tremor. And that's when we're moving towards a target.

So like if I move my finger towards the camera the tremor starts amplifying because I'm moving with intention or moving towards that target. That's another place where we see essential tremor really manifest.

Essential tremor usually will be bilateral, meaning it's on both sides of the body. and in Parkinson's we usually see a tremor that is at rest and not an action tremor, not an intention tremor.

And with Parkinson's will usually usually we'll see it start on one side of the body. And, and usually with essential tremor. We'll see it on both sides of the body.

Other one side typically will be a little bit worse than the other. And then in essential tremor we don't see some of the other things we see with Parkinson's disease, like the rigidity or the stiffness of the limbs or the body, the postural changes that we see with, Parkinson's disease, the change in how someone walks or their gait, cadence,

is we see that shuffling a lot of times with Parkinson's disease, and we don't see that with essential tremor.

and a lot of times with, Parkinson's disease, we'll see something called micrographia where the writing seems to over time, get smaller and smaller. We really don't see that in essential tremor.

and although if a. Although if I might say Dr. Christensen it is true that would you agree that people with essential tremor may notice a significant impairment in the quality of their handwriting?

definitely. Yeah, absolutely. You know, those of us that were taught to write in cursive, cursive becomes a huge problem with essential tremor. One of the ways that we like to look at essential tremor is we'll have patients draw a spiral.

And it's and it's very typical to see that spiral. we'll get we'll see wavy lines in the spiral roll. And, and it usually shows up in a pattern. And we see that same pattern when someone's trying to write especially curved letters.

and so we see a lot of people with tremor will migrate from writing in cursive to printing because they can just use short little strokes, in their writing.

So you said some really great things before we started recording the interview, and I do want to circle back to that. Excuse me if you, step back from the clinical, expression of essential tremor versus Parkinson's, the Parkinson's folks, in the brain and in other tissues, in the body, in the skin, spinal fluid.

We'll have accumulation of this abnormally folded, insoluble protein known as alpha synuclein. And it's what composes the Lewy bodies of Parkinson's, of Lewy body dementia, and the multiple system atrophy.

And the folks with essential tremor don't have Lewy bodies, don't have alpha synuclein. But I think, there's a point that is really important here that you you can expand on, which is that, we talked about the expression benign essential tremor.

Benign tremor and Parkinson's disease is thought of as a degenerative disorder. But in fact, are there dimensions to essential tremor that have sort of a degenerative component.

So it's it not as benign as, as the word might, lead us to believe. Yeah, absolutely. When I was diagnosed with essential tremor, I was told, by the physician, I said, look, this is called benign essential tremor.

Essential Tremor Is Not Benign

You have it because your dad had it, and you don't need to worry about it. just live your life and good luck. he gave me a medicine to try. I didn't really like that.

But as I, started really diving into the research over the last 20 years, the research has really expanded over the last ten years. and what we found by studying cadaver brains of people with essential tremor is that there's actual degeneration of the cerebellum, a part of the brain.

the Purkinje cells, are diminished and they have decreased connections. and there's also some thought that there might be some atrophy in the thalamus, part of the brain in people with essential tremor.

So I think one of my main messages is, really to try and get across to people with essential tremor is that it's not benign. If you have a central tremor, it's not just shaky hands, it's not a shaky hand problem, it's a brain problem.

And and I really view that as one of the dangers of essential tremor, that it is associated with, degeneration. And we actually see, an increased incidence of things like cognitive impairment, even dementia.

there's increased incidence of Parkinson's disease in people with essential tremor compared to the general population. we also see hearing loss, balance issues.

and then there's increased depression, anxiety, things like that as well. So there are some there's a degenerative component to essential tremor. And for most people it's a progressive disease.

So it gets worse with time. which also kind of fits into to that degeneration. classification. you know, so I wear multiple hats in my clinic in the sense that, I try to we have this very patient centered approach.

Some people see me, in the capacity as being a, general neurologist, as you might any neurologist in the country. They come in, they have some tremor.

They associate tremor with Parkinson's disease. We go through a history of physical exam. So you pointed out very often a family history. Not always. I think if I'm not wrong, maybe 70% or so of people with, essential tremor have a family history of tremor.

But in the end, in those, encounters, it's true that I may say, look, you don't have Parkinson's. at least now. And this appears to be essential tremor.

And from what you're showing me and telling me, right now, maybe the tremor is more of a social issue, less of a, functional issue in the sense that it's, you know, you can still do everything you want to do.

So while there are medicines that can reduce the severity of the tremor, it's not absolutely critical to take the medicine unless sort of the bark is worse than the bite or, you know, in other words, that you deem it severe enough that it's worth the cost, the inconvenience, the potential for side effects, and that medicine is always available.

So if we don't do it today and a year from now, your tremor is worse, well, then we can do it at that time. And then often in my clinic, in my general neurology clinic, that's really what people want to hear.

and they're reassured and they go home. But what I'm hearing now, from you is that, in fact, there are this is sort of like the shot over the bow, right?

And we're both functional medicine oriented doctors. So we're interested in root causes, but we're also interested in what are the perpetuates are mediators.

And ultimately those mediators determine a particular trajectory for a disease. And our goal is functional medicine providers in that patient centered approach.

And people are really looking for root causes as well as, you know, they're saying, well, how is ultimately how is this going to affect me? what you're saying is that we need to really dig in, even if it's relatively benign, even if it doesn't right now interfere with quality of life, because that just the if I understand you correctly, just the presence of essential tremor has a certain implication for the future.

Potentially. Yeah, absolutely. I think that's that's an important message for us to get out. in the past it's been just what you described. people come in, they're worried about it.

They get reassured that it's not something super bad, and then they get sent on their way.

Living with Tremor and Tremor Trauma

but but really, I think that we should be educating them that look, when you've got shaky hands, that's a sign that the brain is in danger. And the more proactive we are at taking care of your brain and your overall health, the better off this is going to be for you in the future.

And if people understand that there's increased risk of dementia, cognitive decline, other things like that, then hopefully they can, you know, grasp that maybe there's a little bit more seriousness about this, even though, you know, it's not as quote unquote serious as some other neurological diseases.

The brain is still compromised and could potentially set up for further problems. Other dangers that that I see with essential tremor and really neurological disease, in general, is what, what I call, emotional and social disturbance.

So one thing that I see with essential tremor is that these people, me personally, we learn how to hide our tremor. And by hiding our tremor, we end up hiding, socially, that leads to social isolation.

Essential tremor has increased incidence of anxiety, depression, embarrassment. And so there's really something that I call in my community. Tremor, trauma.

where, where we go through these experiences of being embarrassed, or being ridiculed, even bullied because of our shaky hands. and that teaches us how to hide, basically.

And and that I think is, is really tragic as well. me personally, I had the experience of getting kicked out of med school and residency because of my tremor and that that really taught me in an indirect way that I need to hide my tremor.

and so I found myself, over time, avoiding, situations where the tremor might be seen avoiding opportunities like this to seek and educate people because I was embarrassed, with my tremor.

So one of the other messages is, is really to help people, realize that tremor or their neurological diagnosis is not their identity. And really teach them how to teach them about the disease and the disease process so that they feel comfortable, talking about it out in public and, and really helping them get to the point where they can stop hiding and share their gifts with the world.

Right. so you did ultimately go on to complete your medical school and residency training. How did you overcome all of that? Yeah. So, I got I got accepted into the med school that I wanted to.

And part of their process was to go through a physical exam, right before entrance. And when I did that, and they saw my tremor, they said, hey, we're going to reverse your acceptance.

you need to go somewhere else. And it it was the military med school. And so they, they can just be more exclusive when it comes to physical finding. So I ended up going to a different medical school, fell in love with O. B., love delivering babies and and so I chose to go into obstetrics.

And six months into my obstetrics, residency, my residency director said, hey, I noticed you've got a little bit of a shake in your hands. I want you to go see neurology.

I went and saw neurology again, diagnosed with essential tremor. and my residency director said, look, I'm not going to let you go on. You need to pick a new, field of medicine to go into.

and it was it was devastating. I ended up moving to family medicine because I could still do o.b, and and so that's that's kind of what I did. And, you know, I really relied on some medicine, during those early years in my career to keep my tremor at bay so that I could do the procedures and all of those things that I love to do.

but but with time, I found that the medicine was just causing a lot of side effects that I didn't like.

Dr. Christensen's Medical Journey

and so, and about at that time is when I discovered integrative and functional medicine, and when I saw how that really changed my own health, I decided, to then that's when I opened up the functional medicine practice and still pursued, ways of trying to help the tremor, and really didn't find good answers.

And then during Covid, my practice, totally died. and I took the opportunity at that point to really dive into all the research over the past 20 years on Essential Tremor and really looking at the research through functional medicine eyes and looking at the degeneration, and other things that were in the science, I started to see how we could use

functional medicine to actually help the brain and help the tremor, to get better.

And, and so that's kind of what moved me in this direction. That really is fantastic. And I wanted to make sure we carved out the time to talk about some specific strategies that folks can use.

I know you founded the titled Shake Free, and that's a program that's dedicated to find alternative solutions for people with essential tremor. one of the things I have to admit, I actually I learned this from you a few years ago when we did your, essential tremor summit.

the term tremor plus or essential tremor plus. And that's, you know, it definitely is a term that's used in the literature. I don't, I don't know, let's say yet because I think it's sort of inevitable as, neuroscientists and the thought leaders that sort of set up these, ways of understanding illness, if they fully if, like the American Academy of Neurology has fully adopted the term, but it is quite present and used.

and I think it's really an important term to understand, as you bring in these ideas that balance, cognition changes and emotional, changes can coexist.

And people who have essential tremor. Yeah, I think I think it is important. It's there's, there's kind of this constant, ongoing debate as to whether that, you know, nomenclature is going to be accepted or not, but what essential tremor plus really means is that you you have essential tremor.

But in addition to the typical or what we usually see as far as the action tremor, the postural tremor, the tension tremor, there's other neurological findings, that we're finding that don't qualify that patient for a different diagnosis, such as Parkinson's disease.

And so I, I actually my, my, my mode of thinking, after looking at all of this for the last few years and then looking at patients and clients, is I think that what I'm seeing personally in the people that I see is that, essential tremor in most people evolves and progresses and they develop these other findings, in their neurological exams such as balance is super common.

I see it really common where balance is off, and become and for some people becomes a problem. I, I see cognitive changes start to set in as well. difficulties with speech, difficulty finding words.

is is really common. And then I'm also seeing things like hearing compromise or hearing loss, things like that. And we don't really the literature doesn't really show that this happens in everybody with essential tremor.

But I'm seeing that quite frequently.

Tremor Plus and Coexisting Symptoms

And so it it just kind of, in my mind convinces me more that that this really is a neurodegenerative process and that we really, really need to pay attention to the brain and, and take care of the brain so that things don't progress and become a problem.

And it's something that essential tremor can coexist with, Parkinson's disease. And so I think it's also important to all the people with Parkinson's that may be listening to this, part of their difficulty might actually be explained by essential tremor.

And that's important to identify because the approaches different, we can do different things to help that part of of their tremor, if they happen to have both. Yes.

So let's kind of dive in to maybe, how tremor can be approached from an integrative perspective. And when I use that term in my practice, I use it because I, I do accept or embrace the idea that, for some people, medication is helpful or appropriate, but it doesn't mean that we should necessarily stop there.

so there are three or 4 or 5 different drugs that are commonly used. Propranolol. Historically, I don't tend to use a lot of it, especially in men, as they get older, too often associated with, erectile dysfunction or even, issues where there's comorbidity like diabetes and or blocking beta receptors in the pancreas and making people more insulin resistant.

so I tend to use misalign or pyrimidine, as it's called, but gabapentin, topiramate also sometimes use occasionally, zenith's amide. But what I observe, and I know what you've seen, is that these drugs never get rid of the tremor entirely.

And when they do impact tremor in a meaningful way, they generally are improving the tremor involving the hands. Not the head, not the trunk, not the voice.

and usually when people say they're satisfied with the treatment, it's because they can do more with their hands that they couldn't do before. But if I look at them, I still see tremor.

So there's a lot of limitations with the medication. Yeah. And and again for, for me the the message with treating with medication is we are treating the symptom by giving the medicine.

And we're not necessarily treating the brain. and so I think that's, that's still, for me, the big message is that the medicine may help me calm down the shaky hands.

but in the long run, we really need to dive deeper than that and and really take care of the brain. and and so I think that's the medicine is great. I used it for a long time.

It helped me to do things that I loved in my career. but like you said, I ended up with a lot of side effects, and and decided to to stop the treatment.

but but, yeah, medicine is a nice option because it can increase function. but we're not taking care of the brain when we just take the medicine now. So then if we move on beyond medicine or say, what can we do besides medicine?

Of course, there's, surgical option that would. And it can be quite effective in ameliorating the symptoms, as you put it, that would be deep brain stimulation primarily, or, in a very limited capacity.

And I would admit, I have no experience with this largely. Well, in part due to the availability, insurance coverage, you know, Medicare CMS, positions on what is the reimbursement like.

Medication and Surgical Treatment Options

And then in private insurance follows this. But many people are enamored with this, focused ultrasound treatment, essentially like, knife less surgery because they can use sound waves to target the same region of the brain as deep brain stimulation.

But there's no incision. There's no wire. and I do tell patients I can understand how attractive that might be. But on the other hand, when you burn a hole in the brain, which is essentially what you're doing, you get what you get, right, and there's no turning back and there's no adjustment.

And if we're going to go in the surgical route, even if the treatment was available widely, which it's not, I would still probably if there was a if the surgical option was seriously being considered, still generally recommend deep brain stimulation.

So I do think that maybe the focused ultrasound is appropriate for the person who is not a good surgical candidate and extremely disabled by the tremor.

but in my days back at Emory, when they were doing palate optimize for Parkinson's disease, you know, part of the

concern was that it tended to be associated with an increased risk of depression and sometimes even cognitive decline.

So here we have essential tremor being associated with depression and cognitive decline. And so again, I'm not a big fan, of that. so now we have to have some, some more holistic functional medicine oriented strategies that really can get at root causes and truly help people to change that trajectory, that tell me a little bit about what you're doing in that arena.

Yes. So really, we, focus on kind of a three strategy approach and the and the first strategy is what I call reframe. And what that is, is where we it's really a lot of helping the patient reframe how they think about essential tremor, and really reframe their identity, and, and really take their identity away from their diagnosis.

It's a lot of times in medicine when we give people a diagnosis, they take it on as an identity. And even in medicine, we make the mistake of saying, oh, yeah, we had a Parkinson's disease patient come in today instead of saying, Mr.

Jones came in today. and so part of that is our fault as a medical community. So really reframing the person's identity, how they look at essential tremor, understanding that it's a disease, disease of the brain and, and also giving them help if they've experienced that tremor trauma that I described earlier, if they if they've experienced some trauma from bullying or being excluded, things like that, then we will help them.

do things to help with processing that. So in the clinic we do things like neurofeedback, things like that to help, with anxiety, the trauma that can be associated with, tremor and other neurological diseases, the kind of the the second prong of these, of these three strategies is, is what I call restore.

And that's basically where we restore, the lifestyle factors that someone needs to take care of their brain, and then restoring what I call the ecosystem of the body and the brain.

And so this, this involves really looking at someone's lifestyle, their overall health, their laboratory markers and seeing where the, the ecosystem of the body is in balance and restoring balance to that.

So when we take care of the brain, we need to take care of the whole ecosystem of the body. So the the heart and the blood vessels need to be working.

The immune system needs to be working. The gut or digestive system needs to be working. Hormones need to be balanced. All of these things contribute to the overall ecosystem of the body, but also the ecosystem of the brain.

And then the the lifestyle is really important. How someone is sleeping. are they moving their body with exercise? What kind of diet are they, eating?

Functional Medicine Strategies for Tremor

And how are they managing stress and things like that in their in their life are really key to in the long run, preventing further degeneration and optimizing brain health.

And I'd really say it part of that ecosystem that I find really key is, is the energy system of the body. So really paying attention to mitochondria, which is the part of the cell that produces energy for the cell and really nurturing, the mitochondria helps so that the body can produce energy that the brain can use.

I find that that's really important. And then kind of the, the other part of, of this is what I call renewing the brain. And, and that's doing things like retraining the brain.

We know that essential tremor involves the cerebellum, and the cerebellum is involved in coordination and things like that. So helping patients to incorporate great, training in, in their daily activities that help challenge the cerebellum.

Yeah. Can can actually help reduce, tremor. And, and our hope is that that can also help, you know, get new connections starting in the brain. And hopefully we can slow down or stop the progression of tremor by doing all of those things.

What are some examples of that cerebellar retraining that you would recommend. So we work a lot with balance. we have people do complex movements which would be like drawing figure of eights with, with their arms.

And we find that if our patients will take on new to, learning new skills such as dancing, pickleball, things like that, that involve a lot of coordination, moving of their lower extremity and upper extremity.

I hand coordination, all of those things, together can help. And then part of the, the renew part is also using other therapies to just try and enhance, brain, performance and activity.

So, so we use some laser therapy. we'll use some vibration therapy as an input into the brain. We use hyperbaric oxygen to oxygenate the brain, and provide an opportunity for more, energy production by oxygenate that oxygenating the body in the brain.

So, so therapies like that can also be helpful. I want to circle back around to the neurofeedback because and we, mentioned it's not that important, but actually I have essential tremor as well.

And I know and I'm sure most people agree, even those with Parkinson's who are watching this, that when we're more in that fight or flight or tremor tends to be worse.

And so that neurofeedback calming the the brain, calming the body not only improves the tremor, but when it puts the body back into that sort of rest digest, parasympathetic mode, it opens the door for healing and regeneration.

Yeah, absolutely. I've found that part of helping tremor A do better is really trying to enhance that parasympathetic tone. So the neurofeedback is great for that.

But also doing things like meditation and deep breathing, other modes of like stimulating the vagus nerve to enhance that. parasympathetic tone and decreasing.

I find that when people are really anxious or nervous and we get a rise in like adrenaline and those neurotransmitters, associated with like norepinephrine, we see that the tremor gets worse.

And so if we can calm down those neurotransmitters and calm down the nervous system, that goes a long ways in helping the tremor. That's excellent. You, have a sort of a tagline which is living an unshakable life.

And I love that. And I think it's so important for the folks with the essential tremor, but also really the folks with Parkinson's as well. That sounds like what you're saying is, you know, and you mentioned it earlier that we don't necessarily want to identify ourselves as the disease itself, that we're unshakable, that, yes, I have Parkinson's.

I may have essential tremor, may have both, in fact, but I'm not shake the bowl. I'm still me. And I'm going to work on these things, but I'm not going to let them define me.

Yeah, absolutely. I think it's really important that those of us that have neurological disease, like I mentioned before, we tend to hide.

Calming the Nervous System and Living Unshakably

And I think it's really important that we stop hiding and we get out into the world. And so to live the unshakable life is to be able to Shake Free from the neurological disease or anything else for that matter, that's holding us back.

And to be able to give our gifts to the world. And I think that's really important because every body has something to give. So you have a newsletter as well as a website.

Yeah. So people can find us at ShakeFree.org. And if they go there, they can sign up for the newsletter. There's other things there that they can opt in to to get extra help.

so we'd love to help them. That would be wonderful. Dr. Drew Christensen, it's been such a pleasure to reconnect with you to learn about Essential Tremor.

Tremor plus the differences between Parkinson's and essential tremor and how they overlap. What are the similarities? What are the differences? And realize that even folks with Parkinson's can still be affected by essential tremor.

And it's important to be able to distinguish that, because you may say, well, I don't understand my leave a dopa therapy is calming. That tremor that's present when my hands are just resting on my lap.

But when I go to reach for something, my hand is still shaking. Why isn't the leave a dope and fixing that? So we have to look at other dimensions of what's going on.

Yeah, absolutely. Thanks for having me. It's been a pleasure. It's good to reconnect as well. Thank you so much, folks. Stay tuned for more fantastic interviews in The Parkinson's Solutions Summit.

We'll have, much more to come. Thank you again.