Introduction and HeartMath background

Hello again. I'm Dr. Ken Sharlin, neurologist, president and CEO of Sharlin Health in Neurology, and you are viewing the Parkinson's Solutions Summit.

I have a very special guest today, Dr. Deborah Rozman, founder and CEO of HeartMath. She's president of HeartMath, Inc.. I may I hope I'm saying it correct.

This is very important technology and very a very important concept or a conceptual framework that I hope as many of the participants in the summit are viewing today.

We have used HeartMath for years at Sharlin Health in Neurology, and there are many practitioners around the world who have been trained and utilize HeartMath into their practice.

So without further ado, welcome. Dr. Deborah Rozman. Well, thank you so much, Dr. Sharlin I'm really honored to be here. First of all, I'm not the founder of Heart Math.

I am the President and co-CEO, and I have been with HeartMath since its inception. And I coauthored the book with the founder, Dr. Qadri, who is the chairman.

And we coauthored a whole series of books called the Transforming Series based upon some breakthrough research, which I am happy to tell you about, which is transformed anger, transforming stress, transforming anxiety, transforming depression.

And they're all akin, although they're different, as we all know. But the communication between the heart and the brain and the disc communication are they synchronization is at the heart of a lot of those issues.

So my background is as a behavioral psychologist for the last 50 years. And actually I stopped actually working with patients when I began to work with HeartMath and actually found the HeartMath Research Lab where we really wanted to research because he anticipated this huge increase in stress that we're seeing research how the heart brain nervous system talk to each other.

What were the mechanisms of the stress response and from our perception and feeling so that we could develop a series of training tools, technologies, programs like Dr.

Sharlin uses to help people really manage and transform their stress response. So that's a little background on myself that's authored a dozen books and I'll be happy to share that with you.

Will Definitely. And to be absolutely clear, this is the Parkinson's Solutions Summit. And so what we are saying in part is that building stress, resilience or understanding the biology of our stress response system and how we can really become champions of that is really one of the cornerstones of changing the trajectory of Parkinson's.

It both acts as a trigger, if you will, but also as a mediator. And what we want to do is mediate this disease process in a way that ultimately puts us back in the driver's seat and allows us to serve and to live our lives in the way we ultimately want to live.

So it is so critical to address this piece as an overall or holistic plan for Parkinson's disease. I totally agree. My mother passed away from Parkinson's and when I watched her initially get a she had unusual type of Parkinson's, meaning she didn't have the the the motor shakes.

She She would be unbalanced walking at times when she lost her voice, she lost her ability talk and it went sort of

gradually. And what was fascinating was to see how the gift of that or the learning of it, if you can't make enough to really go deeper into her own body and heart and listen deeper.

And she really released a lot of stress that she didn't even know she had it had built up and accumulated in her system.

Heart rate variability and autonomic balance

And I was able to watch this in my own on wakening, watching my mother go through this process and what she learned from it, but also seeing how much the stress and the worry and the over care that had been personality traits of hers may have actually contributed to some of her symptoms.

Because these things really have a a energetic and a biochemical, even a structural and a cellular basis to them. It's so important that we understand we're using this word stress that has many manifestations really all at once.

We were just talking to Dr. Miles Nichols, who's going to be in the summit, and he was sharing the story of a patient with Parkinson's who would get into a meditative state and the patient's tremor would go away.

And then when they weren't meditating, the tremor would come back that he was modulating the expression of that disease and how his brain worked just by meditating.

Right. That doesn't surprise me at all, because we hear that for other diseases, how meditation helps. And from our research at HeartMath, we were looking underneath that.

How does the autonomic nervous system behaving as if there's a lot of autonomic imbalance between the parasympathetic and the sympathetic and the traffic and the vagal nerve communication back to the brain is is erratic.

Then you're it's going to trigger more of that stress habit, stress, reactions, anxiety reactions, and who knows what over time those habits due to imbalances in brain chemistry.

But in time if you can start to get more autonomic balance and of course meditation is certain breathing exercises are geared to bring more of that harmony between the parasympathetic and synthetic.

It's only natural that the nervous system might fall down. It's so interesting to me because we were recently talking about a test, and I have to admit I had never used in my practice, but it is sort of hardwired into the movement disorder society criteria for the diagnosis of Parkinson's disease, which is called a MIBG, MIBG scenography of the heart.

The principle of this test is that there is a nuclear medicine tracer that's given to the patient, and this tracer has a high affinity for nor adrenergic neurons, basically your sympathetic nervous system of the heart.

But people who have Parkinson's disease also have some degeneration of the sympathetic nervous system of the heart, of course, probably also of the brain.

But this test will have decreased uptake to support the diagnosis. We often talk about sort of bringing strength or enhancing that parasympathetic that rest digest and repair.

But it's interesting to me too, that there are issues even on the other side of that autonomic nervous system with the sympathetic nervous system and that it involves the heart.

Yes, well, the autonomic nervous system is so connected to the heart. You know, when we teach in our health professional training that you you have to use HeartMath.

It's all about learning to bring your heart rhythm pattern measured by heart rate variability, to beat, to make

changes in heart rate, which are reflective of what's going on in the sympathetic and parasympathetic nervous systems and their interaction and being able to bring that heart rate variability into a more of a synchronized pattern as you measure HRV over times ends a whole different signal to the brain then when we're stressed or frustrated. And that creates a very incoherent, imbalanced, jagged interaction between the two parts of the autonomic nervous system.

So that window into the heart, the window into heart rate and heart rhythm has a lot of information that we can use. So that is at the core of what HeartMath actually is.

Now, if you don't mind, Dr. Rozman, not everyone will be familiar with heart rate variability. Could you just take a moment to explain that term? Sure.

Well, people used to think that it was healthy for your heart to just be like a metronome. But when you say your heart rate is, say, 50 beats per minute or 60 beats per minute or whatever, that's an average over a minute with every single heartbeat, your heart rate is actually changing.

And that's what heart rate variability means. The beat to beat to beat, changes in heart rate. So, for example, your heart rate average over a minute could be, say, 70 beats per minute.

But in that 70 beats per minute average, it could be 80 beats 50, 60, 90 beats down to 60 beats. And over time, if you plot that beat to beat change, you see a pattern and you can have an average heart rate of 70 beats per minute and have that pattern be really chaotic, reflective of really stressful emotions like anxiety or stress or frustration or anger.

The more stressful you feel, the more angry, anxious, the more jagged and irregular that heart rate variable pattern is. And then if you're feeling grateful, loving, kind, caring, compassionate, that autonomic nervous system the beat to be changes the heart rate become very smooth.

So they're like a sine wave like that up and down in a very harmonious way. And that's called a coherent waveform. So we call that heart rate variability coherence or heart rhythm coherence.

And it's a core of heart math training is how do we help people recognize what they're feeling and use the heart rate variability, biofeedback to see what it's doing in their heart rhythm, and then be able to have simple techniques to change that, to change it to a smooth, coherent rhythm, which changes how you feel.

And it changes the communication from the heart to the brain, because the heart is actually talking to the brain in four different ways. Most of us haven't been taught that, and there's actually more nervous system signals after and signals going through the vagus nerve from the heart to the brain, telling the brain what the body feels.

Then there is signals going from the brain to the heart. And I always taught the brain controls the heart and it's not true. It's just a two way dialog going on.

And for optimal health and wellness, we really want to get that traffic moving smoothly. The new details, some of those, there's four different ways. Sure. One way is the blood pressure way.

We all know that you know, so that blood pressure wave is actually conveying information to the brain about the chemistry of the body and how the body feels.

Then another way is the vagal nerve track that I just mentioned.

Heart communication, intuition, and inflammation

A third way is energetic, meaning every heartbeat is putting out 2.5 watts of power. Now that can be measured by a magnetometer. 3 to 5 feet from the body probably goes are sensitive as a magnetometer.

So that's how we often pick up on each other's vibes. You know, we can guess when your room and don't see any faces, but we feel that tension in the air.

And that's from the radiation of the emotional state of the people. And it's being broadcast just like an electromagnetic field. Every power source is producing an electromagnetic field.

The brain, you can only measure in a few inches, even though there's a lot of electricity, the field is largest in the body and we pick up on each other's feelings as they're broadcast, like radio waves through the electromagnetic field.

That's where we can go into a cathedral. And then you feel a And because there have been so many radiating hearts over time feeling uplifted. And we feel that and we talk about picking up on each other's vibrations.

And so much of that is communicated through this heart's feel. So the heart's field is also communicating and bathing our brain in our cells with every heartbeat.

So that information. So if you're angry a lot, you are radiating that in coherent, parasympathetic sympathetic interaction to every cell. Hear about it.

You're radiating that radio transmission of anger through your heart's electromagnetic field and to your brain. So how we feel, our stress reactions really do impact us through energetics, through that electromagnetic field as well as biochemistry.

And that's another way the heart communicates to the brain is hormonally. It was only in the 1990s that it was really discovered that the heart contains as much oxytocin as the brain.

The heart is a lot of other brain chemicals. The heart contains a peptide of your own natural peptide, which is often called a balancing hormone with receptors in the brain.

So it's fascinating all the new information we've been discovering about the heart, including and this was also in the 1990s, as the heart has its own intrinsic nervous system, about 40,000 neurons that are sensory neurons that can learn, feel, sense and remember.

And these sensory neurons are independent of the brain. There is no connection between the brain in the head and the brain and little brain in the heart, but the little brain in the heart will send information through the vagal nerve to the brain in the head.

And but they're not the brain in the head is not controlling the brain in the heart. So it's just fascinating, all this new discoveries in the last 50 years that the heart is so much more than a blood and it's producing hormones, it's producing electromagnetic field, it's producing information about how the body feels, sending it to the brain upstairs.

So it's a very important part of any intervention. Well, so HeartMath, folks, that's it. It's a company, but it's also a nonprofit organization. And they can perhaps touch on that toward the end.

HeartMath is technology and it's sort of a belief system. It sounds like it's an embracing of a wide variety of factors that look at the interaction between the heart and the brain and human health.

But if I want to engage in HeartMath, how can I specifically do that? Sure. Well, we like to say we're not about belief, because belief can be based upon something that isn't validated.

Whereas her math started off as a 523 nonprofit Heart institute, which is still exists, still does research to research all the heart brain nervous system, talk to each other.

And what we discovered, what was published in the American Journal of Cardiology in 1995 is the first time they

saw a critical link between emotional state and the rhythms of the heart, the physical heart.

That was a big breakthrough. And so then we began to develop tools, techniques, technology, training programs to help people self-regulate emotionally regulate, self-regulate, how they feel and how the physiology and power of that up so we can change mood, change that neural traffic and change habits as a result.

So a lot of pre and post assessments, there's now over 500 independent peer reviewed studies based upon Hartman's work. So training tools, technology that shows your heart rate, variability pattern.

All of this is part of what we call the Hartman's system. And we were starting stress management programs in companies to help them understand this and learn the techniques for in the moment stress management rather than just waiting till you took a hot bath or you had time to meditate, you can actually shift that heart rhythm pattern right in the moment.

And that is so key to stopping the energy drains. We were helping companies reduce health care costs, helping hospitals reduce turnover. And our nonprofit attorney said at that time, if you really want to develop a training business or a technology business, start in a for profit company, you know, have them work together.

So you productize the research that comes out of the nonprofit. So that's how Dartmouth Inc. started where I'm am. I moved over from the nonprofit to to the for profit businesses.

The president to be able to really take an investment and expand this to the world. So again, it's really turning a lot of what we thought upside down, that the brain is in charge of everything.

We live from here up. We live as a whole system, body, our mind, emotions, brain, and we want to get them all in sync and working together creatively.

That's optimal performance in optimal health. And the key to that we found was in this heart rhythm coherence waveform that actually helps the autonomic nervous system, which controls 90% of the body's involuntary functions from digestion.

The elimination and immune response are all in response. Get everything, they're in sync, and it helps get the brain and the cells and the whole system in sync.

So that's basically what our our purpose has been, is to really awaken people to this intelligence of the heart, this power of the heart, and how we can harness it.

So we often talk in functional medicine about when you have a gut feeling about things, it's really true because the have we have the enteric nervous system of the digestive tract.

Now we're healing. Hearing that we have the cardiac nervous system, the heart nervous system, and that our heart feelings are our heart energetic impulses, if you will, are equally perhaps if not more powerful, but things that really work in symphony in concert with one another.

Yeah, you know, it's fascinating research. This is published in two back to back issues of the alternative therapies Journal and this was research we did and replicate It's someone else's research some years ago but it was we call it intuition research.

And what we found was in randomly showing pictures, either gory ones or beautiful ones on a computer to subjects who are all wired up that before the computer even chose which type of picture it was going to select, the heart knew it, responded consistently, and then through heartbeat evoked potentials.

It would send the signal to the brain and the brain would send it to the body, to the gut. So intuitive knowing gut feeling is actually a tertiary response.

The first response is in the heart rhythm. It's totally unconscious and then it's signal to the brain and the brain even before the picture was selected.

This is really a quantum kind of effect stuff. And then once there was recognition, sensory recognition, the brain told the gut. So I think there's so much information in that study.

It's been replicated since now that we don't know enough about how intuition that's what we call our newest books called Heart Intelligence Connecting with the Hearts Intuitive Guidance for Effective Choices and Solutions.

But the whole saying, Listen to your heart. Go deep into your heart, or announce or follow your heart has physiological parlance, and we're just uncovering it.

So, yes, gut feelings are important, but even more sensitive in a priority are your heart feelings. Yeah. And I tell people sometimes, you know, you really can die from a broken heart.

Well, yeah. You know, heart attack. Attacking back on the heart, too. And very often stress creates that. Because think of all that incoherence in the heart rhythm pattern accumulates over time till there is a breakdown.

So we often talk in functional medicine about chronic inflammation is playing a major role and the diseases that that, you know, afflict our society, the complex chronic diseases, whether it's, you know, diabetes and high blood pressure or Parkinson's and Alzheimer's.

And so forth. And I'm thinking now how as we learn more about these diseases as well, there's yet another component where we're seeing the accumulation of proteins, say, in the brain we called the protein alpha synuclein is the major protein that composes the Lewy bodies in Parkinson's.

And yet the presence of alpha synuclein is an entirely normal thing in the human brain, but very much in parallel with Alzheimer's disease, where we have the accumulation of the beta amyloid protein, where it can serve normal purposes or in some cases be a response to inflammatory signals and become this insoluble amyloid and Parkinson's disease.

We have the insoluble alpha synuclein probably responding to inflammatory signals in the body. We know that doesn't just have to be in the brain, can be in the digestive tract and Parkinson's disease.

So what I'm doing, I'm thinking through this, but I'm trying, I'm collecting this idea that by utilizing heart, math, technology and the principles and the science that underlies HeartMath, we can ultimately address this thing we call chronic inflammation.

HeartMath tools, devices, and training programs

And there is the theoretical potential, at least I think there's at least one or two papers out there that suggest that this is in fact the case. We may be able to influence some of the protein biomarkers of Parkinson's itself through that modulation of inflammation.

I think as studies need to be done that directly, look at that, just like there are studies being done now for heart rate variability, cell regulation and Alzheimer's.

And I think that there have been others with other types of inflammatory diseases. You know, every time we have an anger reaction or anxiety reaction, which we're all going to have, it's just how long we let it run in our system is how debilitating it can be over time.

But there's 1400 biochemicals that are released. So again, if you include in a lot of cortisol and adrenaline and if you can just imagine that building up and building up, how could it not create a inflammatory reaction in the system or other types of debilitating imbalances?

And so 90% of primary care physician visits are estimated to be by the American Institute of Stress for stress related complaints. And yet the the advice to how to reduce stress is mostly conceptual.

Don't worry, you know, relax or go on vacations. Work, love, sleep, eat, right. All these things are important. Get it? But they're not addressing this chronic reaction in the moment with a little stress as throughout the day and the impatience, the frustrations, the things that build up, the regrets of having pressed go on the email when you should when you wish you could take it, you think we all experience.

And yet in our modern society, the way everything's sped up, it happens over and over. So need to learn how. At least that's what we discovered in the Hartman's research.

How do we make these shifts in the moment before it really imbalances our system? How do we learn to we're all going to trigger? How do you come back to ease, to balance?

How do you take charge of that? How do you regulate your emotional reactions? Basically, because that is at the source is so much if you ask me where people could learn more, obviously there's research papers all over the math website, but we developed a program called The Heart Mental Experience, which is an hour and a half interactive film, or you can watch it and ten minute video segments and it gives an overview of the research.

Since their inception, it gives five heart valve techniques that you can use throughout your day that can help you regret, reset, rebalance or prep for.

Your. Stressful situation. And we we're giving that away. We just feel the world that saying that to heart Malcolm and download that or free or heart record in order for you to learn some of these basic tools and tested on yourself, be your own citizen scientist or self scientist, See if it makes you feel different or perceive things differently.

Now there's actual technology as well that it is possible to purchase from your company. We use the inner balance mostly, but is the Mmwave device as well.

Can you talk about those? Yes, sure. Well, the Mmwave device is a handheld, doesn't need your phone and is also studied. So it can be by itself where it shows you a pattern of your heart rhythm in real time.

And then it connects to software that is a training tool that has different little visualizations and games that operate on your heart rhythm, coherence level to train you into a new baseline of heart rate variability coherence.

It has a coherence breathing pacer, and that's the handheld. And then the wave, pro or pro plus has HIV assessments in it for health professionals to use.

And you can have multi users on there. So you can have all your patients have their own file on that and track progress. And we have a stress and wellbeing assessment that you can use to help reveal what some of the underlying unconscious stresses are and how people focus on that.

And then within six weeks use the heart, math tools and techniques and HIV feedback. You usually see a baseline shift. I mean, just phenomenal results at the end of six weeks tends to be like a 40% reduction in anxiety, 60% reduction in depression and more than that, better sleep, less exhaustion.

And that comes from regulating the heart rate variability pattern and using these techniques to come back into autonomic balance more frequently. And so that's a phenomenal results.

And these are people who said that they felt depressed or anxious often always from like results through learning that self-regulation. And then the inner balance that Dr.

Sharlin was talking about is the mobile phone app and sensor clips, your ear plugs into your mobile phone and that way you can or the Bluetooth sensor which works on Android or iOS devices and clips to your ear, but you don't have to plug it into the phone.

And there's a free app. The inner balance app that you can use to track your progress. And we have a thing called Heart Cloud that stores all your dad and you can send it to your health professional so they can progress with you.

But these are very powerful tools because in real time you see your heart rate, your ability pattern changes. And as the heart rate technique, you see a change in real time into more coherence.

And you see when you started feel frustrated, it gets real jagged and irregular again. So it's a wonderful emotional awareness and emotional skill development, technology.

Immediate objective feedback. So sometimes we say, you know, there's a difference between information and implementation session and so some. And I think, you know, many of us really do struggle with that implementation, especially making it a long term habit, making it, you know, part of who we are.

And that has been so instrumental in training other practitioners to teach and train in HeartMath. Can you talk a little bit about that and how that could be very helpful for the viewers of the summit?

Absolutely. Well, we you know, all of us sort of evolved out of the need, you know, and we now have probably about 25,000 health professionals in various mental health, physical health, various, you know, specialties who use HeartMath in some way.

We have the heart math intervention program, How to use the Mmwave Pro with your patients. It's totally online. We have the Heartbeat clinical certification and will see credits, and that's a six week online program of the basic understanding of how this works.

And then some simple heart rate techniques you can use for yourself and then guide your patients. We find so many health professionals, frontline workers and hospitals are so stressed out themselves and really important.

The care for the caregivers is very important. And there's you see what it does for you. You more capable of advising your your patients as well. So we have certification programs for health coaches building personal resilience is one.

And then we have a whole program for workshop presenters. The Coherence Advantage and all of these came from the pull of the, you know, in demand. How do we change, how do I better teach my patients?

How do I care for myself? With respect 150 now certified HeartMath chief nurse is in the Kaiser Northern California health system. And then they teach the other nurses and now they're looking to how do we bring this to the patients?

It just shortens the recovery time of a lot of challenges, health challenges, and it prevents the acceleration of a lot of diseases, you know, heart rate variability is greatest.

It's healthiest. It's the most dynamic when you're born and used to be that they just used HRV for fetal monitoring. And now HRV is being used for sports recovery for looking at what happens during your sleep.

But her math is probably one of the few organizations looking at the pattern of HRV over time, which directly reflects your emotional state and how you can begin to develop real emotional self regulation power, which is key to changing our habits and neural habits.

Change can happen in about six weeks. It's just pretty phenomenal if people practice regularly. So again. Was that brain, would you say? Yeah, it's amazing.

And again, we all have a heart. We all can do this. So we teach children some of these skills from a young age because nobody teaches how to manage your emotions to children that I know it's repressed then to them, but the transform them is a whole nother thing.

This is going to be important for both really. Let me just put it this way for people of all ages so that children, young adults, and as we get older and our bodies start to wear down for a variety of reasons and we get into an age where some of these complex chronic diseases may appear, this is going to be an important tool in your toolbox.

Both to help prevent and potentially theoretically to mediate or modulate the expression and the experience of these difficult diseases like Parkinson's that affect people.

Dr. Rozman, I wonder if we I want to do things slightly out of order. We just have a few left, and I would ask that if people want to connect with the HeartMath company or the nonprofit, how they can do that.

Closing HeartMath coherence exercise

You touched on the video series and so forth, but just to be absolutely clear on what they need to do, but I do want to end, I hope if it's okay with a brief HeartMath experience and we can kind of end our interview today in that kind of quiet.

Well, I just want to say, if you go to heartmath.com and click on Health Professionals, you'll see all the programs for health professionals there. You can contact some of our people who work directly with health professionals, like people work with Dr.

Sharlin. And if you want to look at the research and all the research papers or heartmath.org just explore a little bit, I mean, one thing that's really struck my heart, I just found this out of, you know, maybe a month ago, about 40% of teenagers in the United States are reporting that they're depressed and depressed, that it's like an epidemic.

And that is going and that's not dealt with. They are given tools for how to lift that or see a new perspective that's going to lead to more chronic diseases and as they age.

So the tools are simple. We have a program for teens called Smart Brain Wise Heart And we're just trying to reach everybody with tools that people can use.

So, yes, just go to HeartMath.com, get the HeartMath experience, click, get your health professional, your interest area, and someone will will be in touch with you. And let's close with one of the HeartMath techniques.

Let's we call this quick coherence because it quickly shifts your heart rhythm pattern to heart rate variability. You do that sine wave form. So you were hooked up to our inner balance sensor right now.

You had you would see that. So step one is focus your attention in the area of the heart and you surprise how hard this is for a lot of people. Shift your focus from your mind or emotions to the area around your heart expands putting your hand on your heart or closing your eyes and just letting your mind rest in your heart area can help.

And as you focus on the heart, pretend like your breath is flying in and out. Excuse me of the heart or just area breathing a little slower, a little deeper than normal.

That's fine. An easy rhythm that's comfortable. We'll do this for about five breaths in here. The area of the heart and out. Maybe do kind of five or so.

But you really want to stay focused in the now as you continue this heart focused breathing recall or activate a genuine feeling of appreciation or care that you have for someone or something in your life.

Something is easy for you to feel or evoke that feeling of appreciation, care, kindness, heart, quality could be a time in nature to be a connection with someone you love, a connection with your pet.

Whatever evokes that. And if you can't feel an appreciation or care, just feel a calm. Our calm, an attitude of appreciation, then you just do that for about another ten breaths, but in the heart, and really evoking a feeling that our quality and that'll shift your heart rhythms and new coherence.

And that's just first HeartMath technique. It goes on from there. Dr. Deborah Rozman, president of HeartMath, CEO, HeartMath, thank you so much for, joining us today on the Parkinson's Solutions Summit. Well, thank you so much for having me.

And again, my mother passed away from it, but she really learned some of these tools before then and she gained so much value from it. So please do share. Thank you.