

Seán Collins (00:01):

Right at the beginning, I want to say I think we've accomplished something because we have to give each episode of this podcast a name, a title that gets sent out to Apple and Spotify and Google, and all the other apps people use to keep track of their podcast subscriptions. And a lot hangs on that title. If we choose a crummy title, chances are fewer people will hit play and listen to the episode. And that idea has haunted me this whole week. We've put together a really interesting group of people to talk about a topic my colleagues and I think is important, but it runs the risk of not being taken seriously. There's a chance that some folks, some clinical folks will read the title and decide, eh, to take a pass too —I don't know— woo woo, perhaps. But not you. You hit play. And that just made our day.

Meditation Coach (01:05):

Hello. Welcome back. Let's begin your Midday Reset.

Seán Collins (01:10):

As the Covid Pandemic took hold of our lives, something became clear to us. More people were meditating

Meditation Coach (01:18):

To settle in. See if you can consciously relax any areas of tension in your body, letting your shoulders soften and drop down away from your ears.

Seán Collins (01:29):

That's an excerpt from an app called Balance, and they offered a full year of free meditation coaching to help people through the beginning of the pandemic. Meditation helps with stress and anxiety, and it can help you focus on what's important in your life, and it can help give you a break from the externals that pace your day, often a little faster than you want to be paced. On today's program, three takes from three people who know a thing or two about meditation. And we'll give you a little practical advice along the way to help you if you're interested in building your own meditation practice. I'm Sean Collins, and you're listening to the Hear Me Now podcast, which comes to you from the Providence Health System and its family of organizations. Glad you're listening. Stay with us.

Meditation Coach (02:22):

And now take one last full deep breath.

Seán Collins (02:29):

Okay. A physician who helps his colleagues deal with stress, a founder of an afterschool program for at-risk kids who are taught to meditate, or a guy who scans living brains for kicks. That's where we're gonna start. Michael Posner is a brain researcher. He's a distinguished emeritus professor in the Department of Psychology at the University of Oregon in Eugene, and a pioneer in the use of PET scanners and fMRIs to study how brain tissue responds to experience. He's been studying the brains of people who are meditating for decades now. Full disclosure, this is our first defense of the woo-woo argument. I asked Dr. Posner, in light of all that research that he's done, the hundreds and hundreds of hours of brain scans, I asked him to tell us what he believes is going on in the brains of people who meditate.

Michael I. Posner, Ph.D. (03:33):

There are a number of things that go on during meditation. One of the most important is the generation of a signal over the midline of the frontal lobe, which we call the theta rhythm. As one learns to meditate, the theta rhythm builds up and produces a four to eight cycle per second rhythm that we believe has important effects on brain processing. We studied mindfulness meditation. That is the ability of people to focus their current attention on the current situation without letting it wonder this sounds a lot easier than it really is. We tend to

think about ourselves. We judge objects in the environment, other people and so on. But we avoid all that by having the person concentrate sometimes on the breath, other times on other current things in the visual field, so that they do not allow their attention to wander, don't think about themselves or their needs and so on. That behavioral effect seems to produce a strong rhythmic effect in the brain, which we think has many influences that result in some of the things we find after training meditation.

Seán Collins (05:08):

And what are those, what are some examples of the effects of this theta rhythm?

Michael I. Posner, Ph.D. (05:14):

In the papers that Yuan Tang and I developed, we showed that after five days of training a person on mindfulness meditation, they showed strong effects on attention as measured by behavioral tasks. They showed reduction in the stress hormone cortisol when given a cognitive challenge, in our case, mental arithmetic. They showed stronger positive emotions like happiness and weaker negative emotions. So quite a variety of changes occurred within five days of training.

Seán Collins (05:59):

It really is remarkable that you saw a significant difference after just five days of training. That surprises me.

Michael I. Posner, Ph.D. (06:07):

It surprised me too.

Seán Collins (06:09):

<Laugh>, the effects that you described, the, the reduction in cortisol, the stress hormone stronger positive emotions like happiness, weaker negative emotions, those are all congruent with the stereotypical notion of the person who meditates. And that seems to be cross-cultural. It it's remarkable that we as humans have stumbled upon this technique.

Michael I. Posner, Ph.D. (06:36):

Well, the basic techniques are as much as 5,000 years old. So of course we've had a lot of time to practice for people to examine various techniques, but there was a lot of effort to develop various meditation techniques over many, many centuries. And the particular method that we use is just one of many methods for producing mindfulness. I think they have in common the keeping attention focused in the present, away from all judgment, away from distraction. And that focus, surprisingly, I think, has strong effects on the brain. Our most surprising effect was after two to four weeks of training, we were able to show changes in the white matter surrounding the area of the brain that we found most affected by meditation training, namely the anterior cingulate, which is a deep structure, well known to be part of our ability to control our attention. And we found that after two to four weeks, all the white matter around the anterior cingulate seem to show improved connectivity as measured by what's called diffusion tensor imaging. It's a type of MRI in which one tries to image the white matter rather than the actual activity of neurons. And we found the areas around the anterior cingulate, it showed improved FA that is improved conductivity following training in meditation over and above anything that was changed by the relaxation training control.

Seán Collins (08:37):

That's fascinating. Dr. Posner I used to be a Benedictine monk, and as a young man, I learned in the monastery a technique for meditation that I've used ever since. And when I was learning, I was told to expect your mind to wander. And when it does, you know, acknowledge the little trip that you've taken in your head, perhaps with bemusement and just return your focus to your breath. And the expectation was that all throughout your practice, there are gonna be

things that distract you. And it sounds like in your experimental description, you've really put a premium on that continued focus rather than allowing your head to go on a little journey and then return to the focus at hand.

Michael I. Posner, Ph.D. (09:25):

The training really helps the person to maintain focus, but of course, it's never perfect and everyone wanders off at times, and we, they're trained to gently bring their attention back. So it's not a hundred percent effective that you're never wander mind wander, but the mind wandering, as you say in your experience, it's you're taught to resist that mind wandering and should it occur, return your attention to the focus. Most of the studies in meditation have really been of monks who meditated for many years like you did. And that's a very good way to get hints as to what meditation actually does. But it's impossible to have a control condition for a monk who spent 45 years learning meditation. So for a neuroscience approach, you must have a convenient way to compare randomly assigned people to meditation and to some non meditative training that's has many of the same aspects.

(10:43):

And that's what we did in order to overcome the scientific skepticism. Still, when we published our work on white matter changes as measured from diffusion tensor imaging, there was a lot of skepticism. And we tried to take care of this skepticism by developing the theory or hypothesis that the change in white matter dependent in part about by this frontal theta rhythm, which increases with meditation. And what we did was to take mice and impose the theta rhythm half hour a day for, for a month, just like we did with meditation in the humans. Obviously, we couldn't teach the mice to meditate, but we could impose a theta rhythm within the anterior cingulate. And we found in accord with our original hypothesis that the cells that produce the myelin insulation around the axone axons are, it's a called white matter because there's a white protein myelin that surrounds the axone.

(12:06):

And we were able to image in the mice using electron microscopy, the axons themselves and measure the inner diameter of the axone divided by the axone plus myelin. And we found that in the area around the anterior cingulate, there was one, an increase in dormant cells that were dormant normally in adults to become active and begin, begin to myelinate again. And we found increased myelination in the white matter around the anterior cingulate over and above anything that were found at a more remote side away from the anterior cingulate. So we have direct observation, more or less direct observation of the cha of what the changes are caused for in the mice. And we assume that in the humans, this is one of, at least one of the mechanisms that meditation has to change brain connectivity.

Seán Collins (13:16):

Dr. Posner, do you meditate?

Michael I. Posner, Ph.D. (13:19):

I'm not a practitioner, no. I have done some in, in conjunction with my colleague when he was doing the training, but I am, haven't persisted on the training. I've been retired for many years while conducting these experiments, so I'm not under high stress as many professors are when they're in their active career.

Seán Collins (13:42):

Well, I wish you well, and I think this is fascinating research, and I'm really grateful that you took the time to talk with us about it today.

Michael I. Posner, Ph.D. (13:51):

Well, you're, you're most welcome. Thank you very much for having me.

Seán Collins (13:55):

Dr. Michael Posner is emeritus professor in the Department of Psychology at the University of Oregon in Eugene. You'll find links to some of his recent research on our website, [www.hearmenowpodcast.org](http://www.hearmenowpodcast.org) Still to come how folks in the Los Angeles area are helping at risk youth learn meditation techniques and the results they're seeing.

Patricia Jones (14:17):

When I first walk into the room, I'm going to teach our Love for Life program in, and we're starting with the meditation. It's pretty busy. There's a lot going on. Kids are talking, they're getting settled in their spots. The lights are around, it's loud, there's laughing. They love it when we come in and then we flick the lights on and off, and they stay off the room's a little darker. Now their right hand goes to their heart, their left hand's on their abdomen. You can hear their breath when they're taking their deep breath in, when they're doing their sigh out. We have approval to go around and touch the shoulders of each child to get them grounded. We could be the only positive energy and touch. They felt all weak. And they sink to, there is this community connection that all the kids have that they know, they're all in this together. And in that moment where that classroom is in sync, it's a pretty peaceful, beautiful time

Seán Collins (15:36):

That's coming up. But first I want us to check in with Dr. Glen Komatsu, a palliative care physician and the Chief Medical Officer, a Providence Hospice Los Angeles County. I've been following Dr. Komatsu's work for a couple years now. He's made a name for himself by combining clinical excellence with empathy. His work with pediatric hospice has been groundbreaking and quite frankly, astonishing. So when I heard that he's been coaching fellow caregivers in mindfulness meditation techniques, I wanted to ask him just how he uses meditation in his own clinical practice.

Glen Komatsu, M.D. (16:20):

I use it actually in multiple ways. I use it for patients who are open to the concept, especially patients with chronic pain, chronic anxiety, depression because that there are medical studies to show the benefit in those conditions. I also use it with family members trying to cope with the stress of dealing with a loved one who's sick or, or terminally ill. But mostly I focused on my fellow colleagues and caregivers and trying to help them have a way to cope with the stresses of this very challenging work.

Seán Collins (17:04):

Yeah. You know, we've heard a lot about the challenges of hospice and palliative care during the pandemic, but really before the pandemic ever came, you all were living a really stressful, emotionally stressful professional life in that you were very close to families who were going through real loss, real pain. And having to witness that day in and day out has gotta take its toll on those of you who do that work. And I would think meditation could very well help just provide a little bit of a cushion.

Glen Komatsu, M.D. (17:41):

Absolutely. You know, dealing with dying children is pretty much the worst nightmare that any human being can, can go through, right? Worse than death of a parent, death of a spouse, really, death of a child is at the top of everyone's lists. And so, well, we cannot prevent these children from dying. What we can do is be present with them, be present to our own feelings, as well as the feelings and emotions of the child and the family. And that requires being mindful, being aware of not only their emotions and feelings, but our own emotions and feelings. You know, really especially it, the work with children has, has really brought this out to me is that I can't really fix anything. You know, I can't take away the pain. I can't make things better, but what I can do is keep showing up. And we know that being together and connected

as human beings makes it easier than we're when we're apart. And that's really the heart of what we do in hospice and palliative care. Of course, there's the medicine and medications and things that we we're pretty good at that too. But our presence is so therapeutic and makes a difference and makes people feel like they're not going through this alone.

Seán Collins (19:20):

And I'm, I'm gonna go out on a limb here and say that hospice and palliative medicine is a, is a rarefied experience of humanity, but it's not unique. I think that presence in people's lives is true across the board.

Glen Komatsu, M.D. (19:40):

That's correct. No, that's true. It's like any, the people you feel connected to are the people that are more present with you. Right. Whether they're leaders, whether they're colleagues, whether they're people you meet in their grocery store that are helping you, you know, it's a privilege to do this work and to accompany people at this most vulnerable time. What we found to be very helpful in coping with the stresses is acknowledging the stress and then letting it pass, acknowledging the stress and knowing that you have teammates, you have colleagues that are there for us that will support you. And together we will get through this.

Seán Collins (20:24):

I love the image of acknowledging and then letting it pass because it's so much at least in my experience, part of the technique of many meditative practices. And to translate that into your day-to-day clinical response to what you're experiencing seems really wise.

Glen Komatsu, M.D. (20:49):

Thanks. No, I, when I lead meditations, I talk about mind wandering. I said, your mind will wander because that's what minds do. And then just notice that it's wandering and then bring it back to the breath or whatever your anchor is, your breath, your body, whatever anchor is comfortable for you.

Seán Collins (21:11):

Can you tell me a little bit about how you begin to teach the practice to a group of clinicians who are interested in learning more about it?

Glen Komatsu, M.D. (21:22):

It depends on the audience. Are you different techniques, but for my team, for instance, I have a team meeting with my hospice team every week. And so we begin the meeting with a moment to arrive. And so what I invite people to do, and they don't have to do this, it's not mandatory, but settle in their chairs, put their feet on the floor, and just focus on an anchor like your breath. And take a deep breath in and take a deep breath out and just bring yourselves to this present moment to do this work this day. And we just sit with that moment for like 60 seconds, not a long time, but it just sort of separates the meeting, the work we're going to do from the busyness of the morning, the driving, the commute, getting the family out the door, you know, breakfast, all of that. And so it just creates a different space for us to focus.

Seán Collins (22:29):

And do you find that a 60 second period of time is sufficient to do any, like a real reset in sort of neurologically, do you think?

Glen Komatsu, M.D. (22:40):

I don't know that 60 seconds will change your brain structure, but it, it creates a different feeling. And like people then say, well, I really needed that, or now feel different after that minute if I have more time in a formal setting. I have a course that I teach that was developed at Google called Search Inside Yourself that combines mindfulness with emotional intelligence

and also talks about the neuroscience that you highlighted in your first segment, all the science that supports this practice.

Seán Collins (23:20):

Yeah, I think one of the most surprising things about the research that Dr. Posner talked about is how few sessions of meditation are required to actually achieve some sort of structural change, but actually to achieve some sense that things are better. That there's a, there's a feeling of wellbeing that wasn't there at the beginning of the session.

Glen Komatsu, M.D. (23:46):

Yep, that's absolutely correct. But to have ongoing effect, it's just like going to the gym or exercising, you know, you'll feel better if you exercise four or five times, but to maintain that feeling, that sense of wellbeing and that sense of health, you have to continue the practice.

Seán Collins (24:07):

Yeah. Have you ever used this mindfulness technique with parents of children who are in your care or with children who are in your care?

Glen Komatsu, M.D. (24:22):

I have used it when I saw that they might be open to that. You know, it takes a certain type of personality and openness, you know, because there's, they're very emotional, they're very frightened, they're very anxious, they're very sad. So I try to, in my, the course of my conversation, you know, sort of explore with them, how are you coping? You know, what's helpful? And so if they open up a space that I think mindfulness might fit in, they maybe dabbled in it, maybe they've heard about it. Maybe they have what I think is a more open sort of mind to that kind of practice, then I introduce it. If not, it's just one more thing that, you know, is something on their list to check off. And I don't wanna add to their burden. I don't want to add to their sense of guilt, like one more thing they should be doing that they're not doing.

Seán Collins (25:27):

Yeah. I'm curious how you stumbled across the practice. How did you come to it?

Glen Komatsu, M.D. (25:35):

There was an increasing amount of literature, and also I was seeing in palliative care conferences, there was more lectures about mindfulness. This was back in like 2012, 2013. And I haven't been practicing that long, really only the past 10 years. But what I saw was this evidence being brought forward that it would really help those of us that do this very stressful work. It would help us to you know, cope with the stresses of the work. And also, I was in my first career, a neonatologist ta, and I worked as a head of a neonatal intensive care unit, also very stressful work babies that are very sick, babies that are dying. And I, when I reflected back on my, the ways I cope with stress working in the NICU, I realized that I was using mindfulness practice back then. I just didn't call it that.

(26:39):

I would, I would, like, when I was called to the NICU, a baby who was in crisis, I would just take some deep breaths and I would walk a little bit slower before I got to the intensive care unit. I was just, I would arrive maybe 10 or 15 seconds later than I would've, not a long time, but it just gave me a chance to gather myself and to, for what I was going to walk into. Another example was when I get called in the middle of the night to evaluate a baby and I was sound asleep, I'd stumble down the hallway and I'd go into the regular nursery where there was a baby that the nurse was worried about. And, you know, I would fight the urge to, you know, curse and say, why, why did, why did I have to be woken up at three in the morning? And so what I would do though is focus on the baby and I would just stare at the baby for first thing to

just get awake and gather my wi. But then I would take a moment to remind myself, this baby is the most important baby to those parents. Yeah. This baby deserves your full attention and your best effort. And so that helped me then say, okay, you know, I need to do my best here. And, you know, being angry about being woken up is not helpful. Yeah.

Seán Collins (28:22):

I'm hearing practical advice for a hedge against being overly reactive to the world around us.

Glen Komatsu, M.D. (28:31):

Yeah, absolutely. Yeah. That's one of the things that mindfulness does, is it helps you from being overly reactive. That's a great way to put it. Because we are so triggered emotionally by many situations, what mindfulness does and what has been shown to do is less triggered. And one of the practices that I teach is, when you're triggered, take like three breaths. The first breath is to connect to your breath and body. The second breath is to say, wow, I'm feeling triggered. I'm feeling angrier, I'm feeling frustrated. And then the third breath is, okay, what would be the most constructive way to respond now?

Seán Collins (29:15):

So Dr. Komatsu, imagine someone is listening and is willing to give this a try, but doesn't quite know where to begin. Can you take us through the first steps in coaching someone in a meditation practice?

Glen Komatsu, M.D. (29:31):

Okay. Yeah. Thank you for the opportunity. Thank you all for joining us. I'd like to invite you to a brief practice. So let me invite you to settle in your chairs. If you're sitting with your feet on the floor, you're sitting up straight with your shoulders upright, but relaxed. And just focus on something that's easy and anchor like your breath or someplace in your body, or another ambient noise in the room. And just take a deep breath in through your nose and a deep breath out, deep breath in and deep breath out. I invite you to then lower your gaze or close your eyes, whatever feels comfortable, and just bring yourselves to this moment, this present moment. Breathing in and breathing out. Breathing in and breathing out. Notice how your mind will wander. That's okay. That's what minds do. Just notice that your mind is wandering and go, oh, my mind's wandering. I'll bring it back to the breath. Breathing in and breathing out. And one last time, take a deep breath in. Deep breath out. Open your eyes. Thank you for your practice.

Seán Collins (31:38):

Thanks Glen, how your Glen Komatsu is the Chief Medical Officer of Providence Hospice Los Angeles County, which cares for both adult and pediatric patients. The latter, under the aegis of Providence Kids Care, you'll find links to his work on our website. [HearMeNowPodcast.org](http://HearMeNowPodcast.org). Glen, thanks so much for being part of this episode today. I am really grateful.

Glen Komatsu, M.D. (32:03):

Thank you so much, Sean.

Seán Collins (32:05):

Now let's meet Patricia Jones. She's the founder of the P.S. I Love You Foundation, and they've been making a difference in the lives of young people in the Los Angeles area for more than 20 years. They've developed a curriculum for effective social and emotional learning for school-aged kids, elementary school through high school. And that curriculum includes meditation.

Patricia Jones (32:31):

The beginning of all of our classes start with like five to seven minutes of breathing. And at the time we started 23 years ago, you couldn't call it meditation, you know, we just called it breathing. And the forward thinking principles were the ones who were like, oh my God, this is a great idea. And we'd go into the classrooms and, you know, your right hand on your heart, left hand on your abdomen, closing your eyes, feet grounded on the ground. And it brought the students very quickly to a space of being calm and centered during that class time, in, in that moment where that classroom is in sync. But it's, it's a pretty peaceful, beautiful time. Without a phone, without talking, without looking, anybody, just kind of that internal look into themselves with, you know, whatever power they have around them, above them, you know, drawing into whatever energy that they need to feel good about themselves is it's spiritual. Is it family? Is it, you know, just having your power. So it gives 'em that space to gather themselves to be the best person they can be.

Seán Collins (33:50):

And what happens at the end of a session? What, how does it end?

Patricia Jones (33:54):

We like it to end again with at least three minutes of breathing. But truthfully, it's such a crazy cool class that at the end, basic, all the hands go up in the air, they're taking a deep breath, their hands are coming down all the way under their chin. They're bending down, they're saying, Nama, stay. Honor is spared in my self. And I respected on spirit in you. And that's how it ends. We'd like to give it more time, but you know, the, the activities that we're doing and the, the journaling that we're writing just takes up. There's just not enough time in the class. So we're just doing, at the end, a deep breath. And it's a connection. The class asks, usually they're disconnected. There could be different, you know, gang groups, friendships don't get along. And at the end of the 12th weeks, it's a very connected, cohesive group of kids.

Seán Collins (34:48):

That's really great. Congratulations. What great work.

Patricia Jones (34:52):

Thank you. Thank you. We, we can't do without great people like you come in and make it happen.

Seán Collins (34:57):

Patricia Jones is the founder of the P.S. I Love You Foundation, dedicated to the development and implementation of effective social and emotional learning and resilience programs for at-risk youth from elementary school to high school. There's a link to the foundation on our website at [HearMeNowPodcast.org](http://HearMeNowPodcast.org) Earlier we heard from Dr. Glen Komatsu of Providence Hospice, Los Angeles County, and Dr. Michael Posner, professor Emeritus in the Department of Psychology at the University of Oregon.

(35:34):

This has been an important topic for me today. I've been building a meditation practice for close to 50 years now. I learned as a school boy from a group of English monks who punctuated their day with frequent short sessions of communal prayer and with meditation. The space between meditation and prayer for me is thin. But I see the difference, and I appreciate the close coexistence and the places of overlap.

(36:08):

And as I've aged and my health has faced challenges, I've noticed that my meditation practice has taken on a wellness perspective. I recognize the health benefits of 20 minutes of meditation in the morning and another 20 minutes or so, as my workday ends with two short sessions, just three or four minutes mid-morning and early afternoon. And one last brief



session focused on gratitude before sleep. I think of these as being a chance to rinse out my brain and reset things, to recharge, to relax, and to recalibrate. And the best thing about using your breath as your focus, you always have the tools you need for meditation. Right there with you.

(37:02):

The Hear Me Now Podcast is a production of the Providence Health System and its family of organizations. Find us on the web at [www.hearmenowpodcast.org](http://www.hearmenowpodcast.org). Our program is produced by Scott Acord and Melody Fawcett. We have research help from medical librarians, Carrie Grinstead, Basia Delawska-Elliott, Sarah Viscuso, and Heather Martin. .

(37:27):

Our theme music was written by Roger Neill. The executive producer is Michael Drummond.

(37:33):

I invite you to join us in two weeks when we'll mark the anniversary of the outbreak of renewed violence in Ukraine with a discussion of the long-term toll, the atrocities of warfare take on civilians subjected to war trauma. It's a sobering topic, but it's an important one, and I hope you'll join us.

(37:56):

I'm Sean Collins. Thanks so much for listening today. Be well.