



# Mindfulness.

---

## *How It Can Help Patients, PTs, and Students*

*Physical therapists increasingly are  
using mindfulness in their interventions.  
New research supports its benefits.*



## By Michele Wojciechowski

A woman recovering from a mild stroke had problems with her balance. But they weren't solely physical.

"When we started working on balance, I noticed she would freeze up and become extremely anxious," says Karen Mueller, PT, DPT, PhD, a professor in the program in physical therapy at Northern Arizona University. Mueller talked with her patient to get at the root of the problem. The woman revealed a fear of falling that caused her to tense up, which made it more difficult to do what she physically needed to do to improve.

Mueller suggested that mindfulness meditation might help. "I explained that mindfulness would help her focus on her body and what is happening," she says. They began spending 10 minutes before each session on mindfulness meditation. "She'd begin the mindfulness exercises before her balance interventions. Bringing that more relaxed framework into her balance allowed her to be more comfortable with herself," says Mueller. "Her balance rapidly improved after that. Her fear of losing her balance had been locking her up."

Carolyn McManus, PT, MSPT, MA, picks up on that thought. "Generally, stress is a contributing factor when patients don't recover as expected," she says. "I've seen people who've gone through physical therapy, but no one has taught them the missing piece of awareness. It breaks my heart." McManus established the popular Mindfulness-Based Stress Reduction (MBSR) program at Swedish Medical Center in Seattle. She'll present a session on "Improving Pain Treatment With Mindfulness" at APTA's NEXT 2017 Conference in June.

## Mindfulness Defined

The American Mindfulness Research Association describes mindfulness as "the state, process, and practice of remembering to observe moment-to-moment experiences with openness and without automatic patterns of previously conditioned thoughts, emotions, or behaviors.

"Mindfulness," the organization continues, "can be cultivated through mind-body practices (such as focused attention and open-monitoring meditation, as well as other intrapsychic and sensory-based practices)

that are founded on a discerning mode of awareness that recognizes wholesome and unwholesome states of being."<sup>1</sup>

The concept of mindfulness received an initial wave of attention when Jon Kabat-Zinn, PhD, established the Stress Reduction Clinic at the University of Massachusetts Medical School in 1979. (He also was the founding executive director of the school's Center for Mindfulness in Medicine, Health Care, and Society, established in 1995, and remains a professor of medicine emeritus.)

Kabat-Zinn—who has a doctorate in molecular biology from the Massachusetts Institute of Technology and is internationally known for his work as a scientist, writer, and meditation teacher—has focused his work and research on the effects of MBSR, the relationship between the mind and the body, and the clinical applications of mindfulness meditation. His 1990 book *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress Pain and Illness* first addressed how people could use MBSR to promote their own health and healing.<sup>2</sup>

"MBSR took off because it was the missing link in the whole health care system," says Matthew J. Taylor, PT, PhD, director of the Matthew J. Taylor Institute, which takes a biopsychosocial approach to rehabilitation.

MBSR is described as comprising 3 different techniques:<sup>3</sup>

- **Body scan**, which involves gradually sweeping attention through the entire body from feet to head, focusing noncritically on any sensation or feeling and using periodic suggestions of breath awareness and relaxation.
- **Sitting meditation**, which involves mindful attention on breath or the rising and falling abdomen, as well as on other perceptions, and a state of nonjudgmental awareness of cognitions and the stream of thoughts and distractions that continuously flows through the mind.
- **Hatha yoga practice**, which includes breathing exercises, simple stretches, and posture, and is designed to strengthen and relax the musculoskeletal system.

What does a physical therapy session that incorporates mindfulness look like? McManus describes how she employs it: “The patient is sitting or lying down for breath instruction or the mindful body scan. As the PT, I offer guided awareness instruction. I might say, for example, ‘Bring your awareness now to your breath. Pay attention to the immediate sensory experience of the breath—how it actually feels in your body. As you breathe, pay attention with acceptance. Allow for your experience just as it is, without struggle or judgment. Observe your experience with self-kindness.’

“With people who are in pain, I tell them their experience of pain is a physical sensation combined with their reaction to that sensation. They can learn to calmly observe the sensation and separate out their physical reaction. Once they understand these different pieces that contribute to their experience, they can take control. They learn that pain is a physical sensation; it is not who they are,” McManus says.

One element of mindfulness is overcoming preconceived ideas. “I tell patients to let go of preconceived ideas and concepts about their body, and to listen as if for the first time,” McManus says. “I encourage them to appreciate that each breath is a new breath, each moment is a new moment.”

## The Evidence

Why should physical therapists consider incorporating body scans, sitting meditation, and/or yoga into their practice? Because research shows that it can help patients with everything from lessening pain to increasing flexibility.

While those interviewed for this article agree that further research is needed, published studies are promising, they say. “We’re beginning to see mindfulness being used for chronic pain management,” Taylor notes. “With patients who have chronic pain, we’ve also discovered the importance of patients not fearing or ‘catastrophizing.’ They make things worse when they have these thoughts.”

A study published last year in *JAMA* investigated the effectiveness of MBSR versus cognitive behavioral therapy (CBT) or usual care.<sup>4</sup> The results indicated that, compared with usual care, adults with chronic lower back pain who received MBSR or CBT experienced greater improvement in both their back pain and functional limitations. There were no significant differences in outcomes whether patients were treated with MBSR or CBT. The findings suggested that MBSR may be an effective option for treating patients who have chronic lower back pain.

In an ongoing study, David Morrisette, PT, PhD, and Steven George, PT, PhD, are researching interventions including mindfulness, CBT, and fear avoidance—collectively termed “psychologically informed physical therapy” or PIPT—to discover if its use can prevent acute episodes of low back pain from becoming chronic. Morrisette is director of the Division of Physical Therapy in the College of Health Professions at the Medical University of South Carolina. George is vice chair of clinical research in the Orthopedic Surgery Department at Duke University School of Medicine and director of musculoskeletal research for the Duke Clinical Research Institute.

“We’re trying to help patients become copers rather than averters—be more introspective, so that they can analyze their situations and make good decisions—and we’re giving them methods to reduce stress and relax so that they can be in a better place physically,” says Morrisette. “We’re not saying that the mind can cure cancer or, in this instance, can cure low back pain. We’re trying to help patients cope with this problem so that it doesn’t destroy their lives.”

“Physical therapists should use tools relevant to psychology and the thought processes of the patient, Morrisette says. “When I was in PT school, we learned CBT. Physical therapists need to understand that while patients with pain may be working with psychologists, this may not be enough. These techniques may need to be integrated with patients’ physical therapy as well. Whether we recognize it or not, we make our decisions

---

*“We’re beginning to see mindfulness being used for chronic pain management. We’ve also discovered the importance of patients not fearing or ‘catastrophizing.’ They make things worse when they have these thoughts.”*

— Matthew J. Taylor, PT, PhD





based on our belief system,” Morrisette notes. “Part of mindfulness is recognizing what your biases are, understanding how you look at things, and trying to be as objective as you can.”

“What makes physical therapists different from psychologists and others who do mindfulness approaches,” George adds, “is that we can touch our patients. I can’t tell you how many psychologists with whom I’ve worked think this combination is really powerful—the fact that we PTs can touch patients while using mindfulness techniques.”

Mary Lou Galantino, PT, PhD, distinguished professor of physical therapy and coordinator of the holistic health minor in the School of Health Sciences at Stockton University in New Jersey, led a study targeting joint pain in postmenopausal breast cancer survivors who are receiving aromatase inhibitors. It found that yoga may reduce pain and improve balance and flexibility in breast cancer survivors with AI-associated arthralgia.<sup>5</sup>

“We have results from other studies showing that mindfulness can help reduce cardiovascular risks and depression, and that it also helps patients with musculoskeletal issues and problems with asthma,” says Galantino.

If mindfulness can serve as a useful tool for PTs, the next question is, how can PTs implement mindfulness techniques with patients?

## Use with Patients

Galantino incorporates mindfulness into every patient session. She does this because, she explains, while patients typically tell the stories of what’s going on with their bodies, they aren’t describing how they *feel* at that particular moment.

*“Mindfulness can help reduce cardiovascular risks and depression, and that it also helps patients with musculoskeletal issues and problems with asthma.”*

— Mary Lou Galantino, PT, PhD



A large advertisement for TRI W-G medical equipment. The background is blue with a large red silhouette of a person in a military-style cap, with their hand to their chin in a thinking pose. The text "CHECK OUT TRIWG.COM FOR MORE INFORMATION" is written in large, bold, red, 3D-style letters at the top. Below this, there is a circular logo for "Veteran Owned Small Business VOSB cVE". To the right of the logo are images of a red manual table and a blue manual table. In the center, a blue manual table is shown with a person sitting on it. At the bottom left, a person is using a silver parallel bars. At the bottom, there are logos for "Foundation for Physical Therapy", "PLATINUM ISO 14971 RISK MANAGEMENT", and "ettainia". The TRI W-G logo is prominently displayed in the bottom right corner, along with the phone number 800.437.8011 and the website WWW.TRIWG.COM.



*“If we’re trying to create value in the health care system, we need to be changing patients’ lives so they can participate in society fully. We’re creating value with our interventions.”*

— Karen Mueller, PT, DPT, PhD

tell me how they feel in the moment. The first thing I do is a body scan. Then I ask them to breathe. Most of my patients are apical (upper chest) breathers, especially if they’ve experienced a devastating diagnosis like cancer or chronic pain.”

As her patients become aware of their breathing, Galantino notices a change. “Becoming aware of breath can start to shift their physiology,” she says. “The research shows that individuals in a hyper-aroused state typically are in sympathetic overdrive, and that’s why their breathing is shallow.”

Once Galantino is able to foster deeper breathing, she has her patients do the same with their thoughts. She encourages them to practice MBSR outside of treatment, as well, because, “I don’t want someone with a sympathetic overdrive coming in for a treatment that won’t be sustainable. If they go right back into the environment that’s stress-filled, that won’t help.”

McManus, for her part, has collected patient stories describing the effects of mindfulness. Here’s one from a woman with a 6-year history of undifferentiated connective tissue disease: “We were doing mindful movement, and after we had stretched 1 leg, you asked us to compare how it felt with the unstretched leg. I realized I liked the feeling of the stretched leg, which had sensation to it, rather than the unstretched leg, which I couldn’t feel much at all. I have spent so much energy running away from physical sensation that it was an epiphany that having it could feel good.”

If patients don’t acquire the skills of techniques such as MBSR, they won’t be able to self-navigate their chronic pain, Galantino says. “We are movement specialists, but if the internal autonomic nervous system is on overdrive and there’s little awareness of it to shift to the parasympathetic, then all the great manual therapy, all

the modalities, and all the therapeutic exercises in the world won’t be sustainable for long-term management,” she advises.

This aligns with APTA’s vision statement: “Transforming society by optimizing movement to improve the human experience.” “If we’re trying to create value in the health care system, we need to be changing patients’ lives so they can participate in society fully,” Mueller says. “We’re creating value with our interventions.”

She has found that using mindfulness body scans with patients who have multiple sclerosis has been especially beneficial in the neuro rehab clinic. These patients often have problems with fatigue. She has instructed her students to build in mindfulness breaks with their treatments. “While these are anecdotal examples, 1 patient was able to come home after treatment without being wiped out. Another patient was using it successfully for sleep issues,” Mueller says.

“If we can teach patients to sense and feel the early signs of fatigue from that moment-to-moment awareness, then adjust their behavior so that they don’t burn out, they can have better outcomes from a physical therapy standpoint,” Taylor states. “Mindfulness is a powerful tool.”

Staffan Elgelid, PT, PhD, an associate professor in physical therapy at Nazareth College in Rochester, New York, agrees that there’s value in incorporating mindfulness into physical therapy. “We’re so stressed today that the sympathetic nervous system is firing all the time, and when that happens, we can’t heal at a deeper level,” he says. “When we get patients to breathe, they slow down and focus on what they’re doing.”

McManus suggests that something beyond ordinary stress is heightening the need for mindfulness practice. “In school, we are taught how to think rationally and clearly, but we are not taught how to pay attention. I find so many young people are trained in distraction because of electronics. They really need coaching in body awareness in the era of technology. PTs can help build body awareness. That’s where PTs really are finding the value of mindfulness.”

## Words Matter

To encourage both patients and PTs to accept mindfulness, it’s important to use the proper terminology, George emphasizes. “I have been careful to call the



*“We’re so stressed today that the sympathetic nervous system is firing all the time, and when that happens, we can’t heal at a deeper level. When we get patients to breathe, they slow down and focus on what they’re doing.”*

– Staffan Elgelid, PT, PhD



## Resources

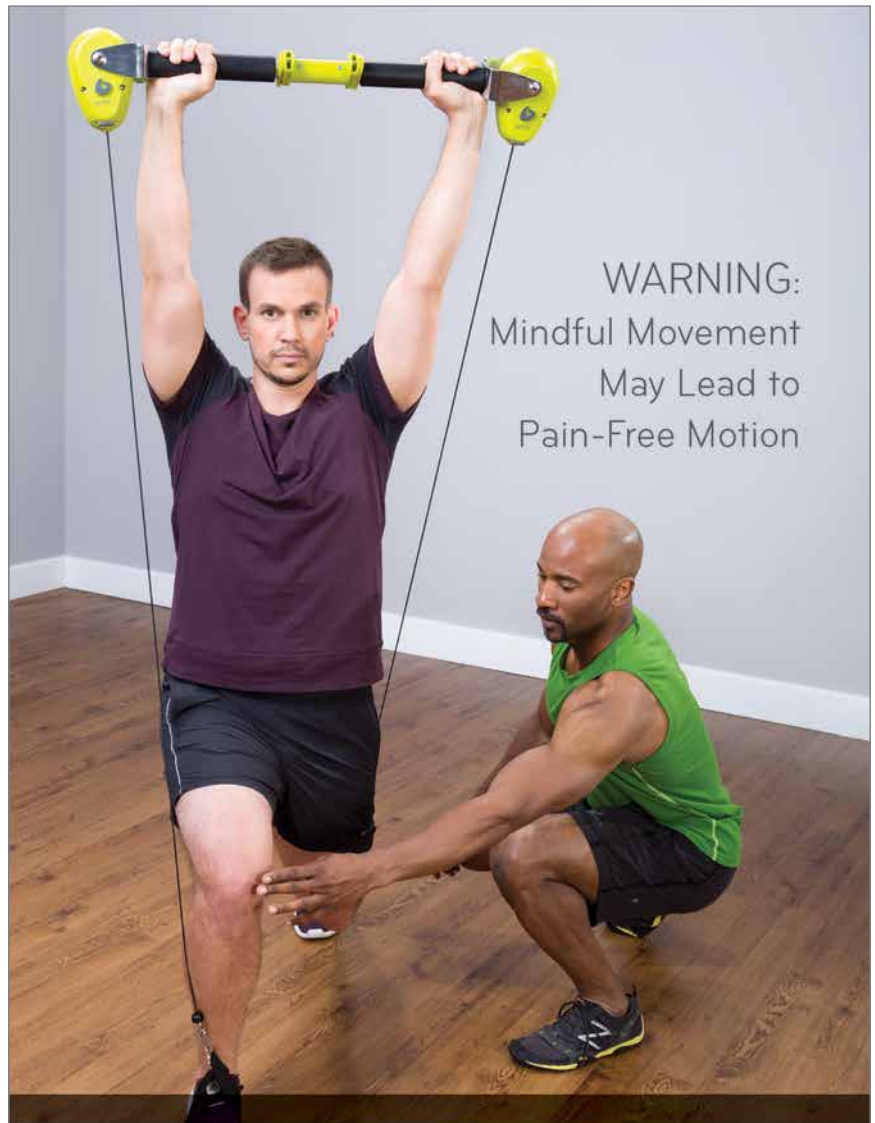
Where should a PT begin to learn more about mindfulness, and particularly how to incorporate it into practice or interventions?

Carolyn McManus, PT, MSPT, MA, gives this advice: PTs need personal experience practicing mindfulness before introducing it to patients or clients. For PTs who have little or no experience with it, a good talk on mindfulness by Jon Kabat-Zinn can be found on YouTube at [www.youtube.com/watch?v=dd6ktroFf8Q](http://www.youtube.com/watch?v=dd6ktroFf8Q).

Participating in a mindfulness-based stress-reduction course will provide PTs with the experience of mindfulness and enable them to witness its affects, McManus adds. The University of Massachusetts Center for Mindfulness maintains a directory of certified mindfulness-based stress reduction instructors at <http://www.umassmed.edu/cfm/stress-reduction/find-an-mbsr-program/>.

Finally, McManus recommends these 3 books on the subject:

- *You are Not Your Pain: Using Mindfulness to Relieve Pain, Reduce Stress, and Restore Well-being* by Vidyamala Burch and Danny Penman
- *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness* by Jon Kabat-Zinn
- *Real Happiness: The Power of Meditation: A 28-Day Program* by Sharon Salzberg



WARNING:  
Mindful Movement  
May Lead to  
Pain-Free Motion

Mindful movement options like MOTR® are changing the way clinicians practice. It is a smarter form of therapy.

 balanced body®

[balancedbody.com](http://balancedbody.com) | 1-800-745-2837



*“I have been careful to call the work I do either ‘behaviorally based’ or ‘psychologically informed’ physical therapy.”*

— Steven George, PT, PhD

work I do either ‘behaviorally based’ or ‘psychologically informed’ physical therapy,” he says.

“If someone is averse to the term ‘meditation’ because of a religious precept, it may not be seen as being as effective as prayer,” says Galantino. She gives the example of recruiting female cancer survivors from churches in Atlantic City for an MBSR and yoga study to look at chemotherapy-induced cognitive decline. Even though she had endorsements from pastors, few women showed up. “We have to be conscious of the context in which we use the term ‘mindfulness,’” Galantino cautions.

“What gives mindfulness a bad rap is saying things like, ‘Is your body in tune with the universe?’ and ‘Are you in harmony with the planets?’” says Morrisette. “Mindfulness grows out of psychology. It’s no more than thinking about what’s going on. One term that’s used to describe it is ‘metacognition.’ You’re getting out of automatic mode.”

McManus agrees. “There’s nothing ‘New Age’ about the mind being in the present moment. It’s just a fact of life that we’re always facing change. We might like to be comfortable, but that isn’t the way the world works. We need to be able to handle the difficult things in life and still be happy.”

“We’ve got really bright people in our profession who may still think of mindfulness as fringe or complementary medicine,” Mueller concedes, “but there are solid neurophysiologic correlates that suggest mindfulness not only improves calm and relaxation, but it actually can improve cognition, executive function, and decision making.”

## Mindfulness in School

“DPT students have anxiety,” Galantino says. “They’ve overwhelmed. The DPT curriculum is demanding, they have to meet a minimum GPA, and the costs of their education are high.” During class, she often tells her students to pause, take a breath, and be in the moment.

Research published in 2016 concluded that mindfulness meditation practiced over an 8-week period can help lower the blood pressure of physical therapy students and reduce their perception of stress.<sup>6</sup>

Besides using mindfulness techniques themselves, DPT students should be taught how to use these techniques with patients, say the PTs interviewed for this article. “Mindfulness is being taught in medical schools, but not in all physical therapy programs, and that’s a shame,” says Elgelid. “We spend more time with our patients than physicians do, so we should use it.”

Mueller teaches mindfulness techniques in her clinical communications class. Her reasons are twofold: to help students relieve their own stress and to teach skills to use with patients. After a first-year student told Mueller that she was thinking of dropping out because of stress, Mueller asked her other students how they felt. Many admitted they were feeling overwhelmed. As a result, Mueller may create a pilot mindfulness course.

“One of our program’s strategic plan initiatives is developing lifestyle intervention,” says Mueller. She cites similar classes taught in medical schools and hopes to offer the class to DPT students as an elective.

## Aligning With #ChoosePT

The goal of APTA’s #ChoosePT campaign is to educate consumers about the opioid epidemic and urge them to choose physical therapy to manage pain without the risks of opioids. Mindfulness aligns perfectly with the campaign, Galantino says. Some research already has shown, she notes, that mindfulness techniques can help alleviate pain, as well as how people perceive it. And research published in *JAMA* last year indicates that mindfulness meditation can offer pain relief.<sup>7</sup>

“PTs need to have the skillset to teach MBSR alongside other professionals. We need to work as a team to help people addicted to pain medication opioids,” says Galantino. “With mindfulness, we can give these people an alternative to pharmacologic agents.”

McManus cites preliminary research indicating that “if people have been on opioids for a while, they don’t have the same response to external stimuli—such as a beautiful sunset. So,” she says, “there’s an application for people coming off opioids to focus on pleasant experiences, and how it feels in the moment.”

## Ideally Suited for PTs

While other health care professions use mindfulness, McManus suggests that it and physical therapy are an ideal match.



*“I see mindfulness as another tool for our toolbox—as enhancing and improving our ability to help people respond to their illness or injury, move, and pace activity in a healthy way.”*

— Carolyn McManus, PT, MSPT, MA



“PTs are recognizing that, in order to effectively treat pain, we need to have basic skills that support the whole person to heal. PTs work with whole people,” she says. “We all know that the mind is not separate from the body. Psychologically informed physical therapy and cognitive behavioral strategies are being introduced into physical therapy so that we can better address the needs of patients with complex pain disorders. I see mindfulness as another tool for our toolbox—as enhancing and improving our ability to help people respond to their illness or injury, move, and pace activity in a healthy way.” ■

*Michele Wojciechowski is a freelance writer.*

#### REFERENCES

1. AMRA's Definition of Mindfulness. American Mindfulness Research Association. <https://goamra.org/about/> Accessed November 21, 2016.

- Center for Mindfulness in Medicine, Health Care, and Society. University of Massachusetts Medical School. <http://www.umassmed.edu/cfm/about-us/people/2-meet-our-faculty/kabat-zinn-profile/>. Accessed November 21, 2016.
- Chiesa A, Serretti, A. Mindfulness-based stress reduction for stress management in healthy people: a review and meta-analysis.” *J Alternative and Complementary Medicine*. 2009. 15(5):593-600.
- Cherkin DC, Sherman KJ, Balderson BH, et al. Effect of mindfulness-based stress reduction vs cognitive behavioral therapy or usual care on back pain and functional limitations in adults with chronic low back pain. *JAMA*. 2016; 315 (12):1240-1249.
- Galantino ML, Desai K, Greene L, et al. Impact of yoga on functional outcomes in breast cancer survivors with aromatase inhibitor-associated arthralgias. *Integrative Cancer Therapies*. 2012;11(4):313-320.
- Phillips BJ, Chambers JD, Burr M, et al. Effects of meditation on stress levels of physical therapist students. *J Phys Ther Educ*. 2016; 30(3):33-39.
- Jacob JA. As opioid prescribing guidelines tighten, mindfulness medication holds promise for pain relief. *JAMA*. 2016. E1-E3. Published online May 20, 2016.

## A roller for every patient.

Whatever the age or goals of your patients, we have a foam roller that fits. Our versatile PRO-ROLLER™ line offers a variety of solutions that provide tension relief, improved balance and greater mobility.

The full 36" rollers are available in two densities, while the soft 18" roller provides portable comfort on the go. The new half soft roller is ideal for supine exercise and stabilized massage.

View and shop the entire family of PRO-ROLLER products at [OPTP.com](http://OPTP.com).



NEW  
Half Soft 36"  
PRO-ROLLER™



Soft 36"  
PRO-ROLLER™



Standard 36"  
PRO-ROLLER™



Soft 18"  
PRO-ROLLER™

**OPTP**

TOOLS FOR FITNESS. KNOWLEDGE FOR HEALTH.

800.367.7393 | [OPTP.COM](http://OPTP.COM)