Listening to mindfulness audios during radiation found to improve physical, emotional side effects

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Men with prostate cancer who are treated with radiation therapy experience significant side effects such as fatigue, sleep problems,

anxiety and depressive symptoms. But listening to mindfulness audio recordings significantly eased those symptoms, a new Northwestern Medicine study has found.

While reclining and receiving their daily 5-to-15-minute radiation treatment, men in the study listened to short (3-to-6 minute) audio-based mindfulness recordings that asked them to focus on their breath, posture, sounds and environment.

To the authors' knowledge, this is the first study to deliver a brief mindfulness intervention during actual radiation treatment versus suggesting patients seek it out in their own time outside the treatment facility, said principal investigator David Victorson.

The study was published on April 30 in the journal *Global Advances in Integrative Medicine and Health*.

"We were really leveraging the fact that they were a captive audience," said Victorson, professor of medical social sciences at Northwestern University Feinberg School of Medicine. "We're optimizing their treatment to not just treat their cancer but also get a jump on managing physical and emotional side effects."

The findings have implications for how best to engage men with cancer, who are known to not participate in needed oncology supportive care, Victorson said.

"Men with cancer—no matter the age—are a hard group to help because they don't tend to engage in supportive care activities like their women counterparts. You build it and they don't come," Victorson said. "The fact that this intervention is passive—they don't have to go to a support group, and they can be getting their treatment while we layer on symptom support—is a twofer."

Side effects in men who received the mindfulness intervention significantly decreased compared to men in the control group, who listened to relaxing music during treatment, the study found. For example, the mindfulness group showed a 2.65-point score decrease in fatigue and a 4.5-point score decrease in sleep disturbance, which suggests a clinically meaningful improvement, Victorson said. The control group's scores worsened by 7.46 points (fatigue) and 6.15 points (sleep disturbance), the study found.

While this was only a small pilot study (27 participants), the research resulted in important discoveries about whether an intervention like this is feasible and when it can and should be implemented, Victorson said.

"Our primary goal was to determine the point we should start the intervention in someone's radiation treatment," Victorson said. "Then, we don't freak them out the first day but get them early enough to see their symptoms improve."

'Bring attention to the breath and the body'

Mindfulness is known to help people in two ways, Victorson said. One is through the parasympathetic nervous system by inducing a relaxation response. For instance, one audio clip played during the intervention said, "Let's start by just lying for a few moments to ground yourself, paying attention to your posture, and bringing attention to the breath and the body."

The second way mindfulness helps is through emotion regulation, Victorson said. For example, the same audio clip goes on to compare thoughts to clouds passing by in the sky. The voice instructs the listener to focus on their breathing, which "offers you a place to stand from which to view thoughts and feelings coming and going in the mind. And as you learn to see your thoughts as mental events arising and falling, you

are cultivating underneath them a sense of deep stillness and peace."

"Listen to this enough and you start to notice thoughts come up. The goal is to see if you can observe them without reacting to them. That's how to regulate our constantly thinking, ruminating and reacting minds," Victorson said. "It can be very helpful in managing anxiety, pain and fatigue."

More information: Implementation Readiness and Initial Effects of a Brief Mindfulness Audio Intervention Compared with a Brief Music Control During Daily Radiation Therapy for Prostate Cancer: A Randomized Pilot Study, *Global Advances in Integrative Medicine and Health* (2024). doi.org/10.1177/27536130241249140

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