

Mindfulness-based tinnitus therapy is an approach with ancient roots

By Jennifer J. Gans

Tinnitus is a term for acoustical perceptions heard in the ear(s) or head that are not produced by external sound. It can be experienced as a ringing, buzzing, whooshing, or hissing sound. Frustration, fatigue, depression, and anxiety are among the common physical/emotional symptoms that patients report when describing how their lives have been disrupted since the onset of their tinnitus.¹

There is no known cure for intractable tinnitus, leaving professionals baffled and millions of patients in search of relief. As the search continues for a treatment that will bring relief to millions of people suffering with tinnitus, some researchers are looking to an ancient form of therapy, dating back 2500 years, for answers.

Mindfulness-based meditation with its power to bring relief to troubling symptoms is a therapy that shows great promise in the present-day treatment of disease and management of health. Jon Kabat-Zinn, a biologist at the University of Massachusetts Medical Center, can be largely credited with bringing a mindfulness therapy, specifically an 8-week treatment program called Mindfulness Based Stress Reduction (MBSR), to modern medicine.

In a 2007 interview, he stated, “The idea was to actually... train medical patients in Buddhist meditative practices, but without the Buddhism.”² His mindfulness program has been well accepted in many clinics and hospitals throughout the nation as a treatment for stress related to illness.³

The widespread acceptance of MBSR stems from clinical trials demonstrating effectiveness for a range of illnesses. It has been successfully used for such conditions as depression,⁴ anxiety,⁵ stress,⁶ fibromyalgia,⁷ chronic fatigue,⁸ psoriasis,⁹ symptoms associated with cancer,¹⁰ and pain.¹¹ A research study with 63 rheumatoid arthritis patients found that after 2 months of mindfulness training, subjects reported feeling significantly better even though their physical symptoms did not necessarily disappear. Participant scores of psychological distress dropped 30%.¹²

THE LINK BETWEEN TINNITUS AND PAIN

Treatments used for pain management are of particular interest to those who study tinnitus because individuals with tinnitus share many similarities with those suffering pain. These include perceived lack of control over the symptom, problems with aspects of attention and

focus, maladaptive coping strategies, and catastrophic thinking. The use of similar treatments (e.g., cognitive coping strategies, CBT, relaxation techniques) are also common features of both chronic pain and tinnitus.^{13,14}

As with intractable pain, tinnitus has no single cause or consistently effective medical or surgical treatment; it has a wide range of psychological effects; and it significantly affects the lifestyle and general health of those afflicted.

In one of the first studies looking at mindfulness as a means of pain management, 90 patients with chronic pain were trained in a 10-week stress-reduction and relaxation program. The results demonstrated significant reductions in present-moment pain (58% reduction), negative body image (29% reduction), inhibition of activity by pain (30% reduction), and mood disturbance, such as anxiety and depression (55% reduction). Significant improvements in activity level and feelings of self-esteem were also reported. Even more impressive is that these reductions and improvements, with the exception of present-moment pain, were maintained for 15-months post-treatment for all subjects.¹¹

MINDFULNESS AND CBT APPROACHES

Cognitive-behavioral approaches to tinnitus treatment have been well researched and have shown promising results.^{1,15,16} Both Cognitive Behavioral Therapy (CBT) and mindfulness practices facilitate awareness of thoughts and feelings. But there are important differences in how these thoughts and feelings are approached.

CBT involves judging how rational, realistic, or logical these thoughts are with the goal of replacing thoughts that are deemed irrational, unrealistic, or illogical. In contrast, mindfulness practices accept all thoughts, feelings, and body sensations by simply observing them as they come and go. No judgment is placed and no efforts are made to modify these thoughts, feelings, and sensations.

The mechanisms of change resulting from CBT and mindfulness mirror the differences in the approaches outlined above. CBT is thought to increase realistic, logical, and rational thinking, which is thought to relieve distress and reduce maladaptive behaviors. However, mindfulness-based approaches attempt to alter the perception of experiences in a

kind, accepting, and non-judgmental manner. This change in perception is thought to facilitate coping flexibility, self-regulation, and clarification of values, and may even act as a form of exposure that results in reduction of stress.

for whatever discomfort arises as a temporary and passing momentary experience, a purposeful maintaining of attention on the present, an allowing of feelings to be just as they are, while observing experience with openness, curiosity, and acceptance. Following

approach should be tried. Rather than encouraging a person to actively try to avoid a distressing thought, sensation, or feeling, mindfulness-based approaches encourage participants to do just the opposite, to move *toward* the distressing symptom, thus unlocking the body's ability to habituate. While it may seem counterintuitive, staying *with* an unpleasant thought, sensation, or experience allows for a more accurate appraisal of the distress and, in the case of tinnitus, ultimately leads to a shift in perception and an end to the struggle. Once the habit of avoiding is unlearned, the habituation process can take place and one's perception of tinnitus can begin to shift.

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Mindfulness can be defined as “paying attention in a particular way, on purpose, in the present moment, and non-judgmentally.”¹⁷ Mindfulness is the skill of keeping sensation, emotions, and thoughts in moment-to-moment awareness without judgment. The practice of mindfulness trains the mind to be *with* whatever sensations, thoughts, and feelings arise without becoming too attached to whatever is perceived. There is recognition of what is happening now with a willful “letting go” of past and future sensations.

While challenging, mindfulness can certainly be learned. We humans often find our minds jumping from one thought to the next. Often these thoughts are about what has happened in the past or might happen in the future. Attachment to thoughts either in the past or the future distract us from what *is*, taking our minds out of the present. The mind's wanderings out of the present into the past or future often create struggle and unhappiness. A mindfulness practice simply trains the mind to notice the human tendency to allow the mind to wander and to gently, without judgment, guide the mind back to the only moment that *is*: the present.

An important principle of mindfulness is that sensations, thoughts, or feelings, be they perceived as pleasant, unpleasant, or neutral, are not actively ignored or avoided. Instead, there is a relaxation of efforts at control, a tolerance

these principles makes any sensation, thought, or feeling, less threatening and reduces its impact on a person's life.

The aim is not to change or judge the body, which may be difficult for people experiencing tinnitus. Patients are often told “don't think about it” or “just distract yourself.” But trying not to think about one's tinnitus usually doesn't work. In fact, avoiding and pushing away these thoughts can make the perception of tinnitus even worse.

UNBLOCKING HABITUATION

Regardless of the cause of tinnitus, the differentiation of the compensated versus the uncompensated patient is ultimately a function of how the patient *reacts* to the tinnitus. When a patient interprets the tinnitus as a potential threat, the limbic system may be activated and the natural ability to habituate to a benign source is reduced.¹⁸ Tinnitus distress arises through the misperception of a threat. A person's negative appraisal or perception of the symptoms often creates a roadblock to natural habituation. The steps taken to avoid the experience can similarly block habituation.

With habituation comes a gradual adaptation to a stimulus and decreasing response to that stimulus. Once habituation occurs, active avoidance of the sensation is no longer necessary. If pushing away from and avoiding one's experience of tinnitus blocks habituation or is counterproductive, a different

MINDFULNESS AND TINNITUS

To date only one pilot study has been published that incorporated mindfulness meditation to help manage tinnitus. In a study conducted in Wales, Sadlier et al. used a combination of cognitive behavioral therapy and mindfulness meditation to treat 25 people with chronic tinnitus.¹⁵ The subjects were split into two groups. The treatment group received four 1-hour sessions of CBT and Mindfulness Meditation, while the second group waited 3 months and was then treated with the same intervention. Significant reductions in tinnitus post-treatment were reported, as 80% of patients reported being better or much better at 4- and 6-month follow-ups. One weakness in this study is that the relative effects of CBT versus Mindfulness Meditation cannot be determined.

A MINDFULNESS-BASED TINNITUS-REDUCTION STUDY

A larger 2-year randomized investigation of Mindfulness-Based Tinnitus Reduction (MBTR) is under way at the University of California, San Francisco. The foundation and methodology of MBTR can be briefly outlined as a group program with a focus on cultivating mindfulness through instruction in “formal” and “informal” meditation practices.

MBTR seeks to help people with chronic tinnitus recognize the role of thoughts in provoking distress. It fosters

recognition of thoughts about tinnitus as merely thoughts and not facts. So, instead of avoiding or becoming stressed by these thoughts, people are encouraged to “move into” and meditate on their tinnitus. Participants are encouraged to be curious, open, accepting,

per week. An all-day session on a weekend between the sixth and seventh sessions is also required. The weekly sessions include training in mindfulness practices as well as group interaction and discussion of tinnitus. Class discussions focus on the challenges and

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and non-judgmental about whatever symptom they are experiencing at any moment. This program teaches participants to allow unpleasant thoughts, feelings, or sensations about tinnitus to simply go in and out of their awareness without having to do battle with them.

The formal meditation portion of the program involves practice in sitting meditation, body scan, and mindful yoga, whereas the informal meditation integrates these practices into everyday life as a coping tool for dealing with intense physical symptoms (such as tinnitus) and difficult emotions associated with tinnitus.

The body scan guides participants to focus attention sequentially on individual parts of the body, without judgment, while noticing any sensations in each area of the body. Hatha yoga postures are used to practice awareness of one's body while the body is in motion or stretching. Sitting meditation involves awareness of the sensation of breathing as a baseline of attentional focus. While maintaining a curious and open mind toward the sensations that come up through breathing, participants are simultaneously aware of sensations in the body, sounds in the environment, and/or cognitions or feeling states that may also be brought into awareness.

Participants are also encouraged to engage in informal meditation practice and record it in a daily log.

Participants attend an 8-week group session lasting 2½ hours one evening

successes participants experience while using mindfulness in everyday stressful situations when their tinnitus is particularly troublesome. To help guide their meditation practice, participants are given two instructional CDs. Participants are taught to use the formal meditation practices while at home for 45 minutes at least 6 days a week between group sessions.

For individuals with chronic tinnitus, an awareness of how they react or respond to what they experience allows for the development of strategies to change perception and decrease distress. In the 8-week MBTR treatment program, mindfulness is both taught and practiced with the intention of decreasing distress by teaching participants to relate differently to their symptoms. By incorporating mindful practice into day-to-day life, a person can learn to transform any moment when he or she feels a victim of circumstances into a moment of empowerment and hopefulness.

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REFERENCES

1. Sweetow R: Cognitive aspects of tinnitus patient management. *Ear Hear* 1986;7:390-396.
2. Kabat-Zinn J: www.buddhistchannel.tv/index.php?id=7,3786,0,0,1,0. March 1, 2007.
3. Williams M, Teasdale J, Zindel S, Kabat-Zinn J: *The Mindful Way Through Depression*. New York: Guilford Press, 2007.
4. Mason O, Hargreaves I: A qualitative study of mindfulness based cognitive therapy for depression. *Brit J Med Psychol* 2001;74,2:197-212.

5. Kabat-Zinn J, Massion AO, Kristeller J, et al.: Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *Am J Psych* 1992;149:936-43.
6. Grossman P, Tiefenthaler-Gilmer U, Raysz A, Kesper U: Mindfulness training as an intervention for fibromyalgia: Evidence of post-intervention and 3-year follow-up benefits in well-being. *Psychother Psychosomatics* 2007;76(4):226-233.
7. Surawy C, Roberts J, Silver A: The effect of mindfulness training on mood and measures of fatigue, activity, and quality of life in patients with chronic fatigue syndrome on a hospital waiting list: A series of exploratory studies. *Behav Cognit Psychother* 2005;33:103-109.
8. Kabat-Zinn J, Wheeler E, Light T, et al.: Influence of a mindfulness meditation-based stress reduction intervention on rates of skin clearing in patients with moderate to severe psoriasis undergoing phototherapy (UVB) and photochemo-therapy (PUVA). *Constructivism Human Sci* 2003;8(2):85-106.
9. Speca M, Carlson LE, Mackenzie MJ, Angen M: Mindfulness-based stress reduction (MBSR) as an intervention for cancer patients. In Baer RA, ed., *Mindfulness-Based Treatment Approaches: Clinician's Guide to Evidence Base and Applications* San Diego: Elsevier Academic Press, 2006: 239-261.
10. Kabat-Zinn J, Lipworth L, Burney R. The clinical use of mindfulness meditation for the self-regulation of chronic pain. *J Behav Med* 1985;8:163-90.
12. Pradhan EK, Baumgarten M, Langengerg P, et al.: Effect of mindfulness-based stress reduction in rheumatoid arthritis patients. *Arthritis & Rheumatism* 2007;57:1134-1142.
13. Möller AR: Similarities between severe tinnitus and chronic pain. *JAAA* 2000;11:115-124.
14. Tonndorf J: The analogy between tinnitus and pain: A suggestion for a physiological basis of chronic tinnitus. *Hear Res* 1987;28:271-275.
15. Andersson G: Psychological aspects of tinnitus and the application of cognitive-behavioral therapy. *Clin Psychol Rev* 2001;22(7):977-990.
16. Henry JL, Wilson PH: *The Psychological Management of Chronic Tinnitus*. Needham Heights, MA: Allyn & Bacon, 2001.
17. Kabat-Zinn J: *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. New York: Delacorte, 1990.
18. Sweetow R: Tinnitus, in Northern JL, ed., *Hearing Disorders*, 3rd ed., Allyn and Bacon, Boston, 1996: 299-309.
19. Sadlier M, Stephens S, Kennedy V: Tinnitus rehabilitation: A mindfulness meditation cognitive behavioural therapy approach. *J Laryngol Otol* 2008;122(1):31-37.

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