

Mindfulness: An Effective Strategy for Improving Physical and Mental Health

by Danielle Black, PhD

Jon Kabat-Zinn (2003) defines mindfulness as “The awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (p.145). Although mindfulness originated from Eastern meditation practices and is considered the heart of Buddhism, Western scientists began studying its usefulness for improving physical and mental health in the mid-1970s. The first mindfulness-based stress reduction program was introduced to the psychological field by Kabat-Zinn in 1997.

Kabat-Zinn’s mindfulness-based stress reduction program was developed to reduce suffering in medical patients. As empirical evidence accumulated supporting its effectiveness, experts began developing mindfulness-based treatments for a variety of physical and psychological problems. By the late 1990s, over 240 hospitals in the U.S. and Europe offered mindfulness-based stress reduction programs (Salmon, Santorelli, & Kabat-Zinn, 1998). Currently, mindfulness is the

cornerstone of several individual psychotherapy treatments, including dialectical behavior therapy for borderline personality disorder (DBT; Linehan, 1993a, 1993b), mindfulness-based cognitive therapy for depression (MBCT; Teasdale, Segal, & Williams, 1995), and acceptance and commitment therapy for a variety of conditions (ACT; Hayes, Strosahl & Wilson, 1999).

What is mindfulness?

There are many different definitions of mindfulness, but a commonality exists among all the definitions. Mindfulness, a form of meditation, contains three key ingredients: 1) focused attention on an object, 2) observing moment by moment, and 3) observing nonjudgmentally. First, concentrated attention can be focused on any object or phenomena. The most common mindfulness activity is to focus on breathing. However, attention can also be focused on a piece of art, bodily sensations, washing dishes, and so on. The key is to pick one object of attention.

The second ingredient of a mindfulness activity is observing the object of attention moment by moment. In other words, staying in the here-and-now. When the mind starts to wander to past memories, future worries, or to-do lists for the day, it is not in the present moment. It is common for beginners to find that their minds wander frequently during mindfulness practice. However, part of the practice of mindfulness is repeatedly bringing attention back to the object. It doesn’t matter if in five minutes of mindfulness practice, a person needs to bring his or her attention back 50 times. The point is to continually bring the focus of attention back to the present moment.

The final (and sometimes most difficult) component of mindfulness is to observe nonjudgmentally. When we focus attention on

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Mindfulness Exercise:

- Find a quiet place
- Make sure to wear comfortable clothing
- Get a pillow or something soft to sit on (e.g., a folded blanket)
- The simplest position for mindfulness meditation is the Burmese position. Sit on the pillow and cross your legs in front of you so that both feet rest flat on the floor.
- If you have a physical condition that does not allow you to sit in the typical meditative position then sit in a chair with a straight back. The idea is to sit in an active position that will prevent falling asleep while still being comfortable enough to focus your attention.
- Set some sort of timer (such as a kitchen timer) for 5 minutes
- Close your eyes
- Focus on your breathing
- If your mind starts to wander, just note that your mind is wandering and bring your attention back to the breath
- Keep in mind that it is normal for the mind to wander. The practice of mindfulness is to continue to bring your focus and attention back to the breath
- During your practice, try to be nonjudgmental of yourself and your thoughts
- Keep in mind there is only one goal: to continue to bring your focus back to your breath. Even if your mind wanders every 2 seconds, but you are able to bring your attention back to the breath, you are doing the exercise.
- Try to practice every day for 5 minutes. Once you feel that you are ready, you can extend the amount of time you do the exercise each day.

an object and observe moment by moment, an interesting byproduct is the fact that we become very aware of our thoughts. When we become aware of our thoughts, sometimes we don't like what we observe. It's important to be gentle with yourself. Your thoughts are just that — thoughts. When judgmental thoughts arise (which inevitably will happen), it is helpful to try to observe those thoughts without judgment. One useful technique to cultivate a nonjudgmental stance during mindfulness practice is to label such a thought (e.g., “that was a judgmental thought”) and then return one's attention back to the present moment.

How does mindfulness work?

Researchers are beginning to investigate how mindfulness works within the brain. It appears that mindfulness may work by shifting activity in the prefrontal cortex. Activity in the right hemisphere of the prefrontal cortex is associated with negative and sad moods. On the other hand, activation of the left hemisphere of the prefrontal cortex is associated with positive, happy, and calm states of mind.

Richard Davidson and his colleagues (2003) measured brain electrical activity of a treatment group before and immediately after an eight-week mindfulness meditation program. These researchers also included a control group that did not complete the mindfulness meditation program. Both groups' brains were scanned pre- and post-treatment, and both groups were vaccinated with a flu vaccine at the end of the eight-week period. The mindfulness group, compared to the control group, had a significant increase in left-sided anterior activation of the brain. This pattern of increased activation in the left-anterior is associated with greater levels of positive emotion.

Some researchers have speculated that mindfulness is another form of relaxation, but EEG studies show that the activity in the brain

during relaxation is different than activity during mindfulness. Researchers at the University of West Florida (Dunn, Hartigan, and Mikulus, 1999) investigated the differences between relaxation and mindfulness. Participants in the study received training in both meditation and relaxation. Participants were then connected to an EEG machine, and their brain waves were recorded separately, first during relaxation and then during a mindfulness exercise. The brainwaves of the participants differed significantly during the mindfulness exercise compared to the relaxation exercise.

What are the benefits of mindfulness?

Mindfulness interventions have been found to improve mental and physical health in many different patient populations. For example, mindfulness is an effective treatment for managing chronic pain. Chronic pain patients completed a ten-week mindfulness stress reduction program. After completing the program, patients had lower levels of self reported pain, pain medication use, depression, and anxiety (Kabat-Zinn, Lipworth, & Burney, 1985).

After several studies demonstrated that mindfulness improved chronic pain symptoms, Kabat-Zinn became interested in applying mindfulness to other medical conditions such as psoriasis. Kabat-Zinn and his colleagues (1998) compared two groups of psoriasis patients. One group of patients learned to meditate while receiving phototherapy, and the other group of patients received treatment as usual without any meditation instruction. Compared to those who received treatment as usual, skin healing occurred four times faster in the group of people who meditated (Kabat-Zinn et al., 1998).

Mindfulness interventions have also been investigated with cancer treatment. Prostate cancer patients who combined mindfulness-based

interventions with a low fat vegetarian diet had lower levels of prostate specific antigens (PSA; Saxe et al., 2001). Similarly, breast cancer patients completing an eight-week mindfulness program increased their anti-inflammatory cytokine levels that inhibit the growth of breast cancer cells (Carlson, Speca, Patel, & Goodey, 2003).

Mindfulness interventions may also boost immune functioning. Davidson and colleagues investigated the impact of mindfulness on a healthy sample of biotech workers (Davidson et al., 2003). The biotech workers were assigned to two different groups: one group completed an eight-week mindfulness-based program, and the other group was assigned to a waiting list. At the end of the treatment, both groups were given a flu vaccine. The group that completed the mindfulness program had higher levels of flu antibodies than the wait-list control group.

While research on mindfulness and immune functioning is still in its infancy, promising evidence suggests mindfulness can improve immune functioning for both chronic medical conditions and healthy individuals.

How is mindfulness used as an intervention for psychological disorders?

Mindfulness interventions have been used to treat a variety of psychological disorders. For example, mindfulness interventions have been found to be effective at reducing the risk of relapse for depression (Teasdale et al., 2000), decrease binge eating for people suffering from binge eating disorders, (Kristeller & Hallett, 1999), and reduce anxiety symptoms for people suffering from panic disorder, generalized anxiety disorder, and social phobia (Kabat-Zinn, et al., 1992; Koszycki, Benger, Jakov & Bradwejn, 2007). In addition, mindfulness interventions have reduced suicidal behaviors in individuals with borderline personality disorder (Linehan et al., 1991).

Conclusion

Research on the efficacy of mindfulness interventions has accelerated over the last ten years. Mindfulness-based interventions are becoming a valuable treatment approach for a variety of physical and psychological problems. In psychotherapy, mindfulness is quickly becoming a core treatment strategy for a range of mental health problems, including borderline personality disorder, bipolar disorder, anxiety, and depression. The full impact of mindfulness-based intervention on these disorders remains to be seen. However, preliminary evidence suggests mindfulness is a promising intervention for a range of physical and psychological disorders.



Author Biography

Danielle Black, PhD, is a staff psychologist at The Family Institute at Northwestern University. She completed the Madigan Family Postgraduate Research Fellowship at the

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