

# THE ROLE OF MINDFULNESS IN HEALTH BEHAVIOR CHANGE

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## LEARNING OBJECTIVE

- To increase awareness of mindfulness-based treatments and how these approaches can be beneficial for individuals engaged in weight loss, dietary modification, and physical activity programs.

### Key words:

Meditation, Stress Management, Relaxation, Attention, Psychological Treatment

## WHAT IS MINDFULNESS?

Although rooted in Buddhist and eastern traditions, practices, and philosophies, the contemporary clinical concept of mindfulness is most often described in the words of Jon Kabat-Zinn, Ph.D., as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (1[p4]). As this definition implies, mindfulness involves learning to increase one’s awareness of moment-to-moment experiences. In particular, mindfulness focuses on increased awareness of one’s environment and external events as well as internal states, including thoughts, emotions, and physical sensations. Mindfulness is not simply about becoming more aware of one’s experience, but this approach also underscores the importance of not reacting in a judgmental way to internal or external events. This involves an acceptance of one’s thoughts, feelings, and physical sensations without any effort to react, evaluate, or change them (Table 1). Therefore, mindfulness includes becoming more aware of one’s experiences and more accepting of these experiences. In recent years, innova-

tive approaches to psychological treatment and stress management have been developed to incorporate the concept of mindfulness to address a variety of symptoms and conditions.

## WHAT’S UNIQUE ABOUT MINDFULNESS-BASED TREATMENTS?

In mindfulness-based psychotherapies and stress management programs, the goals are to

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**TABLE 1: Key Characteristics of Mindfulness**

1. Increased awareness of internal states and external experiences
2. Being aware moment to moment (*i.e.*, staying in the present moment)
3. Refraining from evaluating or judging experiences
4. Openness to sit with all emotional and physical experiences (including both negative and positive experiences)
5. Approaching internal and external experiences with compassion
6. Increasing awareness consciously and with deliberate intention

increase self-awareness of external events, physical sensations, thoughts, and emotions, as well as accept these experiences without efforts to evaluate or modify them. Awareness and acceptance of internal and external experiences are key features of mindfulness and related therapies. This is a departure from more traditional change-based approaches to psychological and behavioral treatment. In change-based interventions, the focus is on modifying one's internal experiences (*e.g.*, thoughts, emotions) and external environment. For example, clients' negative and distressing thoughts (*e.g.*, "I'll never be able to lose this extra weight.") would be challenged, and they would be encouraged to develop a more adaptive or balanced thought. In contrast, mindfulness is not about changing one's thought content. Rather, the focus is on changing one's re-

action, attitude, and relationship to thoughts and emotions. This is achieved through "decentering" or detached awareness, which involves removing oneself from the thought and becoming a nonjudgmental accepting observer of the thought or emotion (2).

According to mindfulness-oriented practices and treatments, when we allow ourselves to become upset by our own thinking and emotions, we are reacting to those internal events and making judgments about these experiences. Often, we are making an assumption that because we feel or think a particular way, this is an accurate reflection of reality (*i.e.*, it must be true). Mindfulness practices help clients learn that thoughts are simply thoughts rather than an accurate statement about oneself or one's circumstances (Figure). Thoughts are not inherently harmful or destructive. Rather, it is our reaction to these thoughts that can become problematic (*e.g.*, overeating, giving up on an exercise regimen, unhealthy and unsustainable dietary restrictions, etc). Because thoughts are harmless passing events, we realize that negative thinking or emotions are acceptable and do not have to be avoided or reconstructed. This is crucial because it is the avoidance of negative internal experiences (pain, anxiety, sadness) and/or the overwhelming desire to change these experiences that create the destructive cycle of distress and psychological disturbance. In addition, some individuals ruminate on negative thoughts (*e.g.*, "I'm a failure."), making themselves feel even worse. These are

<p><i>Ms. Jones is engaged in treatment to assist with her weight loss efforts and to begin a regular physical activity program. After a few weeks of modest success, she has several setbacks. In particular, she experiences slips in her dietary and exercise plans following several difficult situations, including a recent vacation where she found it difficult to exercise and stick with her diet plan. She also recently attended a work-related banquet where she consumed a number of high-calorie foods. Ms. Jones expresses her frustration and disappointment, stating, "I'm such a failure. I'll never be able to stick with this program."</i></p>	
<b>Change-Based Treatment Approach</b>	<b>Mindfulness-based Treatment Approach</b>
<ul style="list-style-type: none"> <li>● Challenge client's negative thoughts (<i>e.g.</i>, re-focus on prior successes, re-frame global negative evaluation as situation-specific and a learning opportunity).</li> </ul>	<ul style="list-style-type: none"> <li>● Help client to become more aware of her thought content. Also help her notice connection between thought and emotions. Allow for more detached, self-observation of thoughts.</li> </ul>
<ul style="list-style-type: none"> <li>● Provide specific strategies to deal with future risky situations (<i>e.g.</i>, eat healthy meal before attending parties, plan alternative exercise activities when away from home).</li> </ul>	<ul style="list-style-type: none"> <li>● Do not challenge or attempt to alter client's interpretation or thought content. Instead, help client to label these as harmless, passing thoughts instead of accurate reflections of reality.</li> </ul>
<ul style="list-style-type: none"> <li>● Goal of treatment is to change thought content.</li> </ul>	<ul style="list-style-type: none"> <li>● Goal of treatment is to not react to thought content, but rather just observe the thoughts.</li> </ul>

**Figure.** Distinctions between mindfulness-based treatments and change-based treatments.

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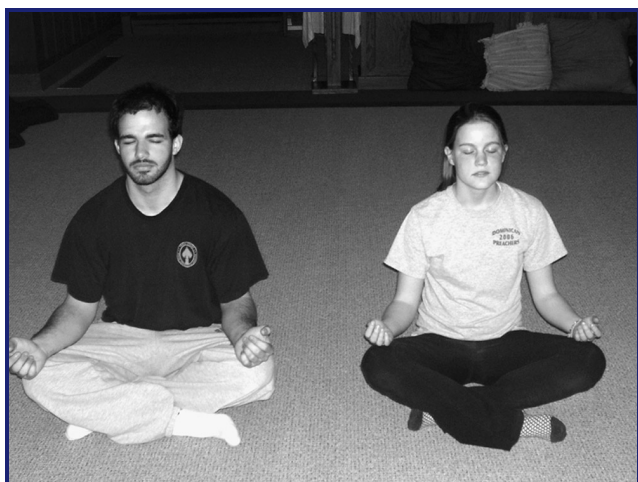
the self-laid traps that mindfulness-based approaches strive to help individuals avoid.

The clinical scenario summarized in Figure highlights some of the key distinctions between traditional change-based therapies and contemporary mindfulness-based approaches.

By being mindful and therefore accepting current thoughts and emotions without judgment, individuals can then change their behavioral response to these internal events. Once a person learns to accept unpleasant emotions and thoughts, then she can realize that she does not have to react to such thoughts (*e.g.*, by overeating or giving up on her treatment plan). Because thoughts are not necessarily factual or accurate, they may not require a behavioral response at all (3). The increased self-awareness and acceptance of experiences result in less reactivity to experiences (*i.e.*, the individual becomes less upset by his/her own thoughts and feels less need to “correct” this negative experience). In turn, this improves one’s ability to make adaptive nonimpulsive choices (3).

It is worth noting that acceptance, which is a quality of mindfulness, is about being open to current experiences as they are without judgment or avoidance. However, acceptance is not the same as positively evaluating (*i.e.*, putting a “positive spin”

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on a difficult situation), nor is it about “giving up” on oneself or circumstances. Acceptance should not be interpreted as resignation. Instead, it is about accepting things as they are without imposing or interpreting it in terms of what one wishes it to be (4).

### HOW IS MINDFULNESS ACHIEVED?

Meditation, which includes focused awareness of breathing and awareness of other bodily sensations and mental events, is one of the most common methods of practicing mindfulness. To increase awareness of bodily sensations, clients can engage in a “body scan” exercise, in which they are instructed to sequentially direct their attention through their breath to different areas of the body, paying particular attention to physical sensations experienced (or lack of sensations) in each area (5). Other techniques, which are very similar to meditation, also are used to develop mindfulness and increased moment-to-moment awareness. These include breathing exercises, yoga, use of imagery, muscle relaxation, and other stretching exercises (1–3,5,6). Activities such as Hatha yoga and mindful stretching provide opportunities to raise awareness of physical sensations associated with slowed and deliberate bodily movement.

It is important to note that mindfulness is often experienced and practiced through these meditation-based activities, although the principles and practice of mindfulness are not synonymous with meditation (7). Rather, meditation is just one technique that can be implemented to promote mindfulness through mindfulness meditation practice as a therapeutic strategy for clients (Table 2). Regardless of the exact method of promoting mindfulness, treatment typically involves clients in mindfulness activities in-session (*e.g.*, yoga, meditation) and encouraging clients to engage in formal and informal mindfulness activities between sessions in everyday activities (*e.g.*, practicing mindfulness when walking, eating, cleaning, etc).

Cognitive or imagery-based exercises also have been developed to promote mindfulness. For example, one such exercise has clients focus on their thoughts and imagine small soldiers “parading” by carrying signs depicting each thought (in words or images). Clients are instructed to simply observe the parade and take note when the parade stops, when they become participants in the parade, or when they become distracted (8). In a similar exercise, clients are instructed to

**TABLE 2: Common Methods to Promote Mindfulness**

1. Meditation (sitting, walking, body-scan meditation)
2. Breathing exercises
3. Use of imagery
4. Muscle relaxation
5. Stretching exercises and Hatha yoga



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imagine their thoughts, emotions, and physical sensations as clouds in the sky, which they simply observe rolling by (9). The purpose of these exercises is to help clients become less involved with their thoughts and instead become nonjudgmental observers of these thoughts. In addition, such exercises help clients become more aware of distractions that disrupt their thinking and help them determine what thoughts or other circumstances caused these interruptions. This simple strategy can begin to promote individuals' increased awareness of their internal experiences, and they learn to observe their thoughts rather than become active participants in the thoughts.

Mindfulness-based techniques specifically designed for clients with excessive or pathological concerns regarding their weight and body image also have been developed (10). In one activity, the client is encouraged to stand in front of a full-length mirror and thoroughly describe his/her body. For individuals with body image disturbances, this can be a very anxiety-provoking and difficult experience because they tend to focus on their perceived imperfections and try to "control" their negative thoughts by "problem-solving" how to correct their imperfect body. Through this mindfulness procedure, the client is taught how to observe their judgmental thoughts and feelings that arise as they start this exercise, then breathe and describe their body without judgment and with compassion. They learn to observe and describe their body nonjudgmentally while staying in the present moment without letting their thoughts wander into past frustrations (e.g., "how did I get to this point?") or future worries (e.g., "what do I need to do to 'fix' this?").

Using a variety of these techniques, several specific therapies have been developed that are based on acceptance and mindfulness strategies. Mindfulness-based stress reduction (MBSR) is one of the most studied and well-known mindfulness programs that teaches mindfulness through meditation practice and has been shown to produce significant improvements in psychological and affective symptoms as well as improvements in pain, physical

impairment, and other medical symptoms across a variety of clinical and nonclinical samples (11). In addition to MBSR, other emerging therapies rooted in a mindfulness-based approach include acceptance and commitment therapy (8), mindfulness-based cognitive therapy for depression relapse (12), dialectical behavior therapy for personality disorders and eating disorders (9), and mindfulness-based relapse prevention for substance use disorders (13).

## WHAT CONDITIONS BENEFIT FROM MINDFULNESS?

Although a considerable amount of the research evaluating the effectiveness of mindfulness-based treatments has occurred in the fields of mental health and stress management, there also is strong support for the benefits of these interventions for a variety of physical and/or medical conditions, including cardiovascular disease, fibromyalgia, psoriasis, and certain types of cancer (11,14). Mindfulness-based interventions also have been successfully applied to the treatment of anxiety, pain management, personality disorders and suicidal behaviors, stress management, and the prevention of relapse from depression and alcohol/substance use disorders (2,5,11–13). These interventions have been implemented among a variety of populations (Table 3), including psychiatric patients, oncology patients, cardiac patients, chronic pain patients, and generally healthy and nonclinical samples (5,7,11).

In addition to the established benefits for the previously cited conditions, mindfulness-based therapy has shown recent promise for improving patients' management of diabetes (15), reducing maladaptive eating patterns (3), and enhancing the sports performance of athletes (16). Regarding the use of these principles for optimizing athletic performance, previous sports performance enhancement therapies have focused on modifying athletes' negative thinking to alleviate performance anxiety that

**TABLE 3: Conditions and Associated Symptoms Benefiting From Mindfulness-Based Treatments**

1. Symptoms of stress
2. Anxiety (generalized anxiety disorder, panic disorder)
3. Chronic pain and fibromyalgia
4. Relapse from major depressive disorder
5. Personality disorder (borderline personality disorder)
6. Suicidal behaviors
7. Eating disorders (binge eating, bulimia)
8. Cancer
9. Coronary artery disease
10. Psoriasis
11. Alcohol/drug relapse
12. Diabetes management (exercise, diet, glucose monitoring, glycemic control)

may interfere with performance. Paradoxically, such refocusing can actually serve to increase the negative influence of these variables (e.g., it is very difficult to avoid thinking about missing a goal when you are deliberately trying to NOT think about missing a goal!). Therefore, mindfulness-based approaches work to have athletes nonjudgmentally accept their negative thoughts and anxiety by acknowledging their presence but not focusing or ruminating on them (16).

### HOW DOES MINDFULNESS APPLY TO DIETARY AND PHYSICAL ACTIVITY CHANGES?

In addition to the application of mindfulness-based techniques for the enhancement of athletes' performance and the treatment of body image disturbance described previously, mindfulness-based approaches have other relevance to dietary and exercise modifications/programs. Specific to eating, mindfulness exercises can be used to target the actual process of eating. For instance, clients can be instructed to focus on the emotions experienced when eating and the tastes and detailed textures of particular foods (3). Such techniques are designed to raise individuals' full moment-to-moment awareness of the eating experience as opposed to the more typical process of "mindless" eating. By becoming more aware of the potential relationship between food and emotional experiences (e.g., eating when nervous or sad), this may ultimately lead to changes in the response to these internal triggers for eating. In addition, this activity can have the added benefit of slowing eating, resulting in earlier feelings of satiety and the consumption of less food.

Examples of thoughts/emotions specific to diet and exercise that can be addressed through mindfulness-based strategies are provided in Table 4. As illustrated in these examples, the goal is not to directly change the way clients think about their bodies, food, or physical activity, but to change the way they view these thoughts and the importance they attach to them. By changing an individual's reaction to their thought content, the automatic potentially maladaptive habits that have formed over

time (e.g., overeating in response to stress, terminating exercise at the first signs of discomfort) can be modified. Again, behavior can be moved from the realm of mindless habitual reactions to mindful purposeful action.

In addition, therapies such as MBSR can have more general benefits for clients engaged in weight loss and physical activity programs as well. The MBSR is designed to help individuals better manage stress, including stressors associated with work, family, finances, and other areas. Because such stressors can clearly impact clients' abilities to stick with dietary and physical activity recommendations and plans, targeting these issues can be very beneficial for improving weight and exercise outcomes. Referral to behavioral health providers, yoga instructors, medical providers, or other individuals specializing in such approaches can be particularly helpful to some clients. This may be especially indicated for individuals who also experience other psychological and/or medical conditions, such as depression, anxiety, or chronic pain.

### CAN MINDFULNESS IMPROVE MY PROVISION OF CARE?

Increased mindfulness can be beneficial for health/fitness providers and their clients (6). Most individuals providing medical, physical, rehabilitation, or mental health services will admit to occasional frustration, burnout, and even anger when working with some clients who exhibit apparently difficult, confrontational, or self-defeating behavior. By learning to increase awareness and be mindful of our own thoughts and emotions, we can observe our internal reactions to clients. This provides an opportunity to more effectively deal with negative reactions, which allows us to accept and work with some of the most difficult behaviors of clients. Such an approach can serve to improve the therapeutic alliance and ultimately promote clients' adoption of healthy behavioral changes. Adopting a mindful stance that includes acceptance and compassion for the client also serves to model these behaviors and attitudes

**TABLE 4: Application of Mindfulness to Diet- and Exercise-Specific Thought Content**

Thought	Mindless/Automatic Reaction	Mindful Response
"This physical discomfort is too much. I can't keep up with this exercise routine."	I feel discouraged, hopeless. I may terminate the physical activity regimen.	Because I experience some pain does not necessarily mean I am unable to do any exercise. I am more fully aware of all physical aspects of the experience—both positive (more energy) and negative (pain) sensations.
"I'll never be able to lose all this weight and look good again."	I feel discouraged, frustrated. I may potentially abandon the weight loss plan.	Because I feel discouraged does not necessarily mean I should be discouraged. This thought is just a thought—it does not define me or my ability.
"I'm really craving a cheeseburger and fries."	I go through the drive-thru and satisfy my food craving.	This craving is a mental event, and mental events come and go. I can accept the experience of this craving without responding to it.
"I'm so stressed out. I think I need some chocolate!"	I eat in response to the negative emotions or stress.	My negative emotions or being stressed does not require a behavioral response on my part. Telling myself that I need chocolate does not make it so.

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for the client, which can promote his or her adoption of this approach as well.

## CLINICAL IMPLICATIONS

Referrals for mindfulness-based interventions may be worth considering for individuals attempting to make healthy lifestyle changes, such as dietary modification and increased physical activity. Such interventions could be helpful in addressing clients' stress and mood, as research suggests that a variety of mindfulness-based programs are beneficial for such conditions (5,11). Clients' engagement in mindfulness-based interventions also may improve their perspective toward themselves more generally and their approach and attitude to diet and exercise regimens. Mindfulness-based interventions are certainly not for everyone, but this approach will have intuitive appeal for some individuals. There are some clients who are a bit "turned off" by the structured and regimented protocol of diet and exercise programs. Some individuals perceive these as not only demanding, but also controlled by external forces, including their personal trainer, dietitian, physical therapist, physician, and so on. In such cases, incorporating mindfulness-based treatments may be particularly useful. At its core, mindfulness is about both self-awareness and self-acceptance. By promoting this increased awareness and acceptance, mindfulness can focus the individual on his/her own circumstances and attitudes rather than external forces and influences. This refocusing can promote a sense of control over one's goals and behaviors. Thus, learning to adopt such a perspective can serve to motivate and empower clients in making lifestyle changes that are appropriate for them as individuals, as they begin to perceive more intrinsic responsibility and acceptance of their diet and exercise goals.



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## CONDENSED VERSION AND BOTTOM LINE

There is growing interest and support for stress management and other treatments designed to promote mindfulness (i.e., greater awareness, acceptance, and compassion for one's moment-to-moment thoughts, emotions, and physical sensations). Several of the mindfulness techniques used in these treatments can be successfully applied to health behavior changes pertaining to diet and physical activity. Therefore, fitness professionals may want to consider mindfulness-based treatment referrals for some clients.