

Mindfulness based programs and interventions

Research on the effectiveness of “mindfulness” based programs has increased dramatically over the last ten years. PCORI has supported mindfulness research on condition-specific and population subgroups, including for chronic pain, anxiety, and substance use disorder among adults, seniors, children, and people with autism. Some studies compare a well-defined mindfulness intervention with another similar intervention or compare intervention lengths or with pharmaceutical treatments, or in addition to pharmaceutical treatments.

Mindfulness-based interventions are a type of mind-body practice that can help improve health and well-being through self-regulation and attention to the present moment. A technique that involves being aware of what is happening in the present moment without judging the thoughts and feelings that may occur. The goal is to become more aware of thoughts and feelings so they can be managed instead of being overwhelmed by them through developing a more flexible and accepting mindset. Mindfulness practice typically involves meditation and breathing and may also involve yoga or other body awareness techniques.

Evidence for mindfulness practice interventions

Systematic reviews of the highest quality mindfulness studies find a [modest](#) positive impact on the outcomes measured in various trials, which include levels of anxiety, cravings, sleep quality, and attention or distraction, for example. Increasingly, researchers are including brain scanning and biomarkers that may change during the practice of mindfulness, suggesting brain pathways or regions that are affected by some mindfulness interventions. Trials that measured improvements in self-reported wellbeing after formal mindfulness interventions also have showed positive results, suggesting mindfulness programs may have a protective or prevention effect on mental health.

A good study design must have a standardized intervention, and many mindfulness studies evaluate the outcomes of Mindfulness-based Stress Reduction (MBSR), an eight week [program](#) developed by Jon Kabat-Zinn. However, the MBSR program might be too time demanding for some people. One challenge of evaluating any intervention is that participants may drop out before finishing the entire trial process, and the remaining participants may differ from those who dropped out in ways that bias the study results.

In a [study](#) sponsored by PCORI that looked at whether a mindfulness intervention could improve overall feelings of well-being (as opposed to improving a specific behavioral health or other condition), researchers compared two mindfulness interventions with different time commitments: one involved an eight week commitment and in-person sessions, while the other was only and lasted only three weeks. Results (based on a standardized questionnaire measuring well-being) suggest that the shorter version of mindfulness training was associated with improvement in well-being and the results were “non-inferior” to the improvement measured among those who enrolled in the longer program. A non-inferiority study is designed to test whether a new treatment (in this case, a shorter and web-based mindfulness program) is not materially worse than the active

treatment it is being compared to). Another PCORI sponsored non-inferiority [study](#) compared an eight-week mindfulness intervention with a standard anti-anxiety medication, escitalopram. It also compared an online based mindfulness program with the in-person version. All of the treatments reduced patients' anxiety symptoms, with those individuals randomly assigned to the mindfulness practices reporting fewer side effects.