

What are the benefits of mindfulness and meditation – other than enhancing your spiritual life? A research review.

In this article, I have been asked to do a brief review of the scientific research into the benefits of *mindfulness and meditation for the mind and body*. *The way that meditation practices can enhance your spiritual life will be dealt with by other authors in the Bosconian*. *This review is by no means exhaustive but does show the range of scientifically tested ways that mindfulness and meditation can be helpful.*

Mindfulness expert Andy Puddicombe notes how we live in a very busy world where our minds are likewise very busy - we always seem to have something that “has to be” done right now. He asks the question “when did you last take any time to do nothing? Just 10 minutes, undisturbed? So that's no emailing, texting, no Internet, no TV, no chatting, no eating, no reading. Not even sitting there reminiscing about the past or planning for the future. Simply doing nothing “1. The answer he often gets is “never!”

Andy Puddicombe states that this constant activity results in us getting stressed. *“You know, the mind whizzes away like a washing machine going around and round, lots of difficult, confusing emotions, and we don't really know how to deal with that. And the sad fact is that we are so distracted that we're no longer present in the world in which we live. We miss out on the things that are most important to us, and the crazy thing is that everybody just assumes, that's the way life is, so we've just kind of got to get on with it.”* Andy Puddicombe's answer is to come back to the present moment through mindfulness meditation and the beauty of it is that it need only take a few minutes a day to impact our entire life. 1.

In recent years, there has been a lot of research into how the brain responds to meditation and mindfulness practice and how physical and mental health can improve as a result. I am going to review just a few studies that cover the brain and body benefits, benefits for relationships, its uses in clinical settings and its use in educational settings

Brain & Body Benefits

Meditation and mindfulness can physically restructure our brain & facilitate our body's functioning. Scientists have published several studies in the *NeuroReport* (a peer-reviewed scientific journal in the field of neuroscience). A 2005 study showed, among other impacts, thicker cortical regions related to attention and sensory processing in long-term meditation practitioners compared to non-meditators. These findings also suggest that meditation practice may offset cortical thinning brought on by aging 2. Later studies also showed decreases in brain cell volume in the amygdala, which is responsible for fear, anxiety, and stress – and these changes matched the participants' self-reports of their stress levels, indicating that meditation not only changes the brain, but it changes our subjective perception and feelings as well. In fact, a follow-up study found that after meditation training, changes in brain areas linked to mood and arousal were also linked to improvements in how participants said they felt — i.e.,

their psychological well-being. A 2015 study from UCLA confirmed that long-term meditators had better-preserved brains than non-meditators as they aged. 3.

Another study focused on how an 8-week training course would affect the brains and immune systems of individuals. This study provided evidence of increased activation in a region of the brain correlated with positive emotions, as well as evidence that the immune system would react more robustly in antibody production after meditation training 4. Yet another study showed better stress regulation, as measured by a faster decrease in levels of the stress hormone cortisol following a stressful laboratory task, among undergraduates after 5 days of meditation training at 20 minutes a day. These students also reported less anxiety, depression, and anger compared to a group of students that only received relaxation training 5.

In 2012 researches published findings of tests which aimed to see if meditation could have protective outcomes for people with coronary heart disease. For the study, 201 people with coronary heart disease were asked to either (a) take a health education class promoting better diet and exercise or (b) take a class on transcendental meditation. Researchers followed up with participants for the next five years and found that those who took the meditation class had a 48% reduction in their overall risk of heart attack, stroke and death 6.

Mindfulness and Meditation Impacts on Relationships

Mindfulness training may affect an individual's ability to have successful social relationships. A University of North Carolina study demonstrated a correlation between mindfulness practice in couples and an enhanced relationship. The couples reported improved closeness, acceptance of one another, autonomy, and general relationship satisfaction 7. A 2007 study replicated this finding, also demonstrating a correlation between mindfulness and quality of communication between romantic partners 8. Loving-kindness meditation, which can involve positive imagery or wishes directed toward others or self, can affect how one relates to others. A recent study examined how individuals reacted to viewing photographs of strangers after loving kindness meditation. The meditation significantly affected the positive values they attributed to those strangers, demonstrating a relationship between loving-kindness meditation and social connectedness 9. This is a trait that we need more of in Australian today.

Mindfulness practice can benefit familial relationships. Parents of children with developmental disabilities described increased satisfaction with their parenting, more social interactions with their children, and less parenting stress following mindfulness training 10. In another study carried out by the same researchers regarding parents of children with autism, the same results of increased satisfaction in their parenting skills and relationship were found 11. In both studies, the children of these parents benefited from the mindful parenting practice, showing decreases in aggressive and non-compliant behaviour.

Uses of Meditation and mindfulness practices in Clinical settings

A popular form of mindfulness intervention for clinically significant mood disorders (e.g. Depression, anxiety stress), devised by Jon Kabat-Zinn, is Mindfulness-Based Stress Reduction (MBSR). Typically, in MBSR programs, individuals go through an 8-10-week session in which they practice for at least 45 minutes a day. When researchers studied its effectiveness in preventing a relapse of depression for those in remittance from a depressive episode, 37% of those that went through an 8-week MBCT program experienced a relapse compared to 66% of those not in the program 12.

Studies have shown the benefits of MBSR in reducing anxiety, even years after the initial 8-week course. Research has also shown that mindfulness meditation can reduce anxiety – and that these changes seem to be mediated through the brain regions associated with those self-referential (“me-centred”) thoughts. Mindfulness meditation has also been shown to help people with social anxiety disorder: a Stanford University team found that MBSR brought about changes in brain regions involved in attention, as well as relief from symptoms of social anxiety. A 2014 study at Johns Hopkins looked at the relationship between mindfulness meditation and its ability to reduce symptoms of depression, anxiety, and pain. Researcher Madhav Goyal and his team found that the effect size of meditation equivalent to effect size for antidepressants 3.

An interesting study carried out at Yale University, found that mindfulness meditation decreases activity in the default mode network (DMN), the brain network responsible for mind-wandering and self-referential thoughts. The DMN is “on” or active when we’re not thinking about anything in particular, when our minds are just wandering and worrying about the past and future rather than being in the present. Since mind-wandering is typically associated with being less happy, it’s the goal for many people to dial it down. Several studies have shown that meditation, though its quieting effect on the DMN, appears to do just this. And even when the mind does start to wander, because of the new connections that form, meditators are better at snapping back out of it. 3

Research in Educational settings

While most mindfulness studies have focused on adults, some pertain to the practice of mindfulness in children and adolescents. A series of studies have documented its use as an intervention for youth with psychological disturbances. In one 6-week study with anxious children, teachers reported an improvement in academic functioning and decrease in symptoms of anxiety in the children 13. Another utilised mindfulness-based cognitive therapy with over 80% of children and parents involved in this study believing that schools should teach mindfulness 14.

There is increasing interest in the utility of mindfulness practices in educational settings. A study of 1st-3rd grade children that involved a 12-week program of breath awareness and yoga (delivered once per week every other week) showed improvements in children's attention and social skills as well as decreased test anxiety in children who went through the training as compared to controls 15. Two pilot studies conducted through UCLA's Mindful Awareness Research Centre indicate improvements in self-regulatory abilities among preschool and elementary school students who participated in an 8-week mindful awareness practices training program (two 30-minute sessions per week). Specifically, children who were initially less well-regulated showed the strongest improvements after training, as compared to children in the control group who did not receive the training 16 17.

Having problems concentrating isn't just a kid thing – it affects millions of grown-ups as well, with an ADD diagnosis or not. Interestingly but not surprisingly, one of the central benefits of meditation is that it improves attention and concentration: One recent study found that just a *couple* of weeks of meditation training helped people's focus and memory during the verbal reasoning section of the US Graduate school admission test. In fact, the increase in score was equivalent to 16 percentile points, which is nothing to sneeze at. 3

Conclusion

There is a lot of evidence that meditation can provide benefits in areas as diverse as our physical health, mood disorders, attention and can even improve the functioning of our brain. It has clinical applications, educational applications and relationship benefits. It is no surprise that companies like Google, Apple and Target are incorporating it into their employee's schedules. Perhaps it also has spiritual benefits, many people think so, but that is dealt with other articles. In short how can you afford not to try it.

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