



Mindfulness – how might it work and is there any evidence?

fact sheet

“If the problem can be solved, why worry? If the problem cannot be solved worrying will do you no good.” An assessment of worry attributed to the Buddha

Research into the concept, definition, practice and outcomes of mindfulness has exploded in the past 20 years, with increasing attention into the potential therapeutic impacts of this centuries' old human activity. A recent online University library search for articles with 'mindfulness' in the title yields 84 results for the years between 1990 and 2000, jumping to 1243 for the following decade and increasing nearly tenfold to 11 682 in the years between 2010 and 2020!

Criticism of the concept and its popularity have noted that much of the research struggles to gain relevance because of debates regarding the definition and measurement of 'mindfulness'. There are concerns that most research studies have small numbers and the impact of the placebo effect can't be discounted. However, whilst academics engage in ongoing debate there do seem to be encouraging findings linking mindfulness to multiple benefits.

Recent research has linked core neurological structures with potential pathways of change for those who report more mindfulness. Current theory postulates that the *default mode network*, or network of neurological structures that appear more active during restful moments, shifts towards a more regulated state in those with higher mindfulness states. This theory suggests that mindfulness leads to more balanced and connected brain function; an integrated brain. Neuroimaging data appears to partly support these concepts. These brain changes could explain how mindfulness might work. (See related Expert Fact Sheet on *Neuroplasticity and the Mind/Body System* for further details on these and other concepts.)

Overall, the research shows that increased mindfulness is linked to:

- 1. Improved mental health** including lower perceived stress, lower depressive symptoms, lower rumination on the past (Shapiro, Oman, Thorensen, 2008; Tomlinson, Yousaf, Vitterso et al, 2018), improved emotional regulation, increased self-compassion (Lykins and Baer, 2009; Keng, Smoski and Robins, 2010) and reduced anxiety (Goyal, Singh, Sibinga et al, 2014; Vøllestad, Nielsen, MB and Nielsen, GH, 2012).



- 2. Better physical health** including decreased pain perception (Goyal, Singh, Sibinga et al, 2014; Shonin, Van Gordon and Griffiths, 2015, Creswell, Lindsay, Villalba et al, 2015), better self-reported physical health, healthy eating and sleep quality (Rogers, Ferrari, Mosely et al, 2017) and shorter duration or reduced severity of inflammatory related disorders such as the common cold, psoriasis and irritable bowel syndromes (Creswell, Lindsay, Villalba et al, 2015).
- 3. Optimised relationship and work experiences** including prosocial behaviour defined as “voluntary behaviour intended to benefit another.” (Donald, Sahdra, Van Zanden et al, 2019), greater romantic relationship satisfaction, improved friendship and empathy (Kozlowski, 2013; McGill, Adler-Baeder and Rodriguez, 2016, Pratscher, Rose and Markovitz et al, 2018), and greater job satisfaction (Hülshager, Alberts, Feinholdt et al, 2013).

As with all decisions regarding your health, please consult a trusted health professional regarding the potential benefits of any intervention for your unique circumstances.

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