

The science of mindfulness

Mindfulness has established itself as a powerful practice to improve wellbeing, performance and relationships. Regular practise aids our ability to be more aware and focused, and live our lives more fully. **DANAE DIMITROPOULOU** investigates the origin and science of mindfulness, and consults two renowned experts to help separate the fact from fiction.

Mindfulness has become a bit of a buzzword of late. Touted for its awareness-enhancing, anxiety-reducing properties, mindfulness practices are being incorporated into all areas of our lives including our work, rest and play. Major corporations such as Google are incorporating mindfulness training courses into the workplace, while athletes and dancers are incorporating mindful moments into their exercise

regimens, and wellness studios are running mindful meditation courses. But what exactly is mindfulness and where did it originate?

From Buddhist roots

The concept of mindfulness lies at the heart of Buddhist meditation and was first described in the *Pāli Canon*, a collection of literary, intellectual and spiritual scriptures, which make up the foundation of

Theravāda Buddhism.

According to Buddhist philosophy, mindfulness is a distinct quality of paying attention and Buddhists advocate four foundations for practising it: the posture of the body; our feelings and sensations; our state of mind or consciousness; and mental objects or phenomena. Buddhists also differentiate between 'right' mindfulness, also known as *samma sati*, and 'wrong' mindfulness,

which is known as *miccha sati*. The difference, they say, is the intention behind the practice: a person practising right mindfulness has positive and good intentions, whereas a person practising wrong mindfulness is coming from a place of self-indulgence and superficial gain.

When practised regularly, mindfulness meditation is believed to enhance our appreciation of life through sustained attention to our immediate experiences.

Mindfulness in the Western world

Mindfulness rose to Western consciousness in the late '70s, when Jon Kabat-Zinn, creator of the research-backed program Mindfulness-Based Stress Reduction, taught mindfulness to chronically ill patients. Their pain decreased, they reduced their medications and their mental health and quality of life significantly improved. Since that time, researchers have aimed to demystify the ancient practice and thousands of studies have documented its many physical and mental benefits.

Research has shown that practising mindfulness strengthens our neural pathways in parts of the brain such as the prefrontal cortex, which results in an increased level of concentration, awareness and mental clarity. It also dials down activation in parts of the brain associated with depression and anxiety. It even affects the body, with research showing it reduces physical pain, lowers blood pressure and even slows the ageing process at a genetic level, by reducing the rate of telomere shortening.

With so many health benefits, it's no wonder that mindfulness is being increasingly incorporated into training and lifestyle programs. But with all new phenomena, a host of opinions and instructions can easily cloud the scientific evidence and qualified opinions. To separate the fact from fiction, we asked two qualified mindfulness experts to explain the definition and science of mindfulness.

The mindfulness experts



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ON THE DEFINITION

There is no single universally agreed upon definition of mindfulness. In fact, it's surprisingly hard to define. I prefer to offer a short explanation and example instead. Firstly, mindfulness is not a 'thing'; it's a way of paying attention more consciously than we normally do, so that we can see things with greater clarity and understanding, in order to respond in more skillful ways.

A simple example: say you're running late for work. You're rushing. You're thinking of all the things you have to get done that day. You're feeling anxious and harried. You can't find your keys even though you're sure you put them in your bag just two minutes ago. Your partner asks you where the milk is. You respond with irritation, snapping, "Find it yourself!" This is an example of an unmindful response – an automatic, habitual reaction triggered by a range of internal and external factors.

With mindfulness, you'd pay a bit more attention to what was going on, both within and around you. You'd notice your thoughts and emotions speeding up and understand that they could affect the way you speak and act. You'd see clearly that your partner has not made an unreasonable request, so there's no need to snap. Your keys can't be far away and you'll probably still make it to work on time. With these small insights, your whole day goes a bit more smoothly.

In other words, mindfulness involves paying attention to your thoughts and feelings in order to become more aware of them, less enmeshed in them and better able to manage them.

ON THE SCIENCE

The list of science-researched benefits is too long to cover here. In summary (according to the American Psychological Association):

- It reduces stress, literally – and it also increases your tolerance to stress.
- It improves your ability to concentrate, as well as your working (short-term) memory.
- It makes you less emotionally reactive, which in turn can help with relationship and leadership skills.
- It helps make the mind more cognitively flexible and creative.

Mindfulness has been shown to enhance self-insight, morality, intuition and fear modulation, all functions associated with the brain's prefrontal cortex.

ON COMMON MYTHS

Because mindfulness is a form of meditation, some people believe it's a practice just for monks or hippies. Along with that come dozens of myths that are either unhelpful, inaccurate or false, such as:

- I shouldn't be thinking so much. I should be able to observe or control my thoughts.
- There's a correct – or best – posture.
- There's a 'right' way to practise.
- You need to practise every day, or for a certain length of time.
- I'm not doing it correctly if I fall asleep.
- It's boring.
- I can't practise because I'm too anxious or stressed.

The single biggest myth I'd like to de-bunk is the idea that you have to return your attention to the

breath every time you notice yourself thinking. That would help you to be mindful of the breath but you can be mindful of anything, including your thoughts and emotions, the sounds and sights around you, physical sensations, your speech and behaviour. To be mindful doesn't mean you have to be relaxed, fully aware or present. To be mindful simply means to pay conscious attention to any and all real-time perceptions.

ON PRACTISING DAILY

Mindfulness is a very versatile and adaptable set of skills and attitudes. You can do it literally anywhere

and at anytime. For example, you could drive to work mindfully, by paying more attention to the way you drive and the traffic around you. You could engage in a conversation mindfully, by listening more attentively and noticing people's gestures and facial expressions along with their words.

You could walk, run or exercise mindfully, by paying attention to the rhythm of your breath and how you use your body.

When [you're] feeling stressed or anxious, you could pay mindful attention to the thoughts and feelings that contribute to these mental states,

in order to understand them better and resolve them sooner.

ON THE LONG-TERM HEALTH BENEFITS

Mindfulness is essentially a mental tool for making better decisions. If you habitually make better decisions in all areas of life: exercise, nutrition, relationships, work etc. then it follows that your long-term health and wellbeing will naturally improve.

The Melbourne Meditation Centre runs regular meditation and mindfulness courses in and around Melbourne as well as online. Visit melbournemeditationcentre.com.au for more information.



Dr Richard Chambers

Clinical psychologist, internationally-recognised mindfulness expert and author of *Mindful Learning*, *Mindful Relationships* and *The Art Of Mindful Origami*.
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ON THE DEFINITION

Mindfulness is being fully aware and engaged in each moment. It involves paying attention to what we are doing with an attitude of openness and curiosity.

ON THE SCIENCE

Mindfulness can be 'practised' through just paying attention to whatever task we are engaged in throughout the day, and also through periods of formal meditation practice. Meditation means 'attention training' and here we just use something happening in the senses (what we can feel, hear etc.) as an anchor, and bring our attention back to it when it wanders off.

When we do this, we strengthen the prefrontal cortex, which is responsible for focusing attention, memory, thinking clearly, managing emotions and being self-aware. We also strengthen the hippocampus [the brain's long-term memory area] and insula [responsible for

awareness of our internal physical and emotional state].

As these brain areas become stronger, we become more able to focus. Research shows this significantly improves our productivity. We also spend less time worrying and reliving past

events, which reduces levels of stress, anxiety and depression. There is even research that people who receive mindfulness-based cognitive therapy as part of their treatment for depression are half as likely to get depressed again down the track – and that mindfulness is as effective as antidepressants for preventing relapse.

We also become better communicators – actually listening when people talk to us. This makes us more empathic and less reactive, resulting in improved relationships.



ON COMMON MYTHS

Mindfulness is an attention training practice involving paying attention to what we are doing in each moment. While mindfulness practices can be found in many of the world's wisdom traditions, it is not a spiritual practice or 'hippy' thing. It is something very practical and useful.

It is also not about getting rid of our thoughts. When we meditate, thoughts continue, and trying to stop them makes things worse. But we can learn to recognise when we get caught up in them and bring our attention back – so we spend more time in the present. We can even observe our thoughts (and emotions) themselves and learn how our mind works.

Finally, it is not necessarily about relaxing. We often relax when we get our attention into the present moment rather than all those busy thoughts of the past and future. But this is just a side effect. Mindfulness

is really about becoming more aware – so if we notice we are tense or our mind is racing, we just notice that, without reacting to it.

ON PRACTISING DAILY

We can have a mindful moment in any moment just by paying attention to what we are doing. We don't even

Mindfulness is essentially a mental tool for making better decisions.

need to stop – we can just tune in to our senses and use this to reconnect with the present. But because we live in such an unmindful world – with fast-paced living, digital technology and other people being unmindful – it is necessary to have a regular practice to counteract this. This is why doing formal meditation practice – even for

just five to 10 minutes a day – can be very useful. Starting the day with meditation means we are more likely to have a mindful day, and ending the day with meditation can aid sleep.

Throughout the day we can also practise unitasking – focusing on one thing at a time. And learning to manage technology (e.g. turning off notifications and resisting the temptation to use our phones all the time) is also an excellent way of improving our wellbeing, productivity and happiness.

ON THE LONG-TERM HEALTH BENEFITS

Practising mindfulness is one of the best things we can do to improve our wellbeing, in the short and long term.

Dr Richard Chambers and Dr Craig Hassed have created a free six-week online course at Monash University, *Mindfulness for Wellbeing & Peak Performance*. Visit drnichardchambers.com for more information. ■



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