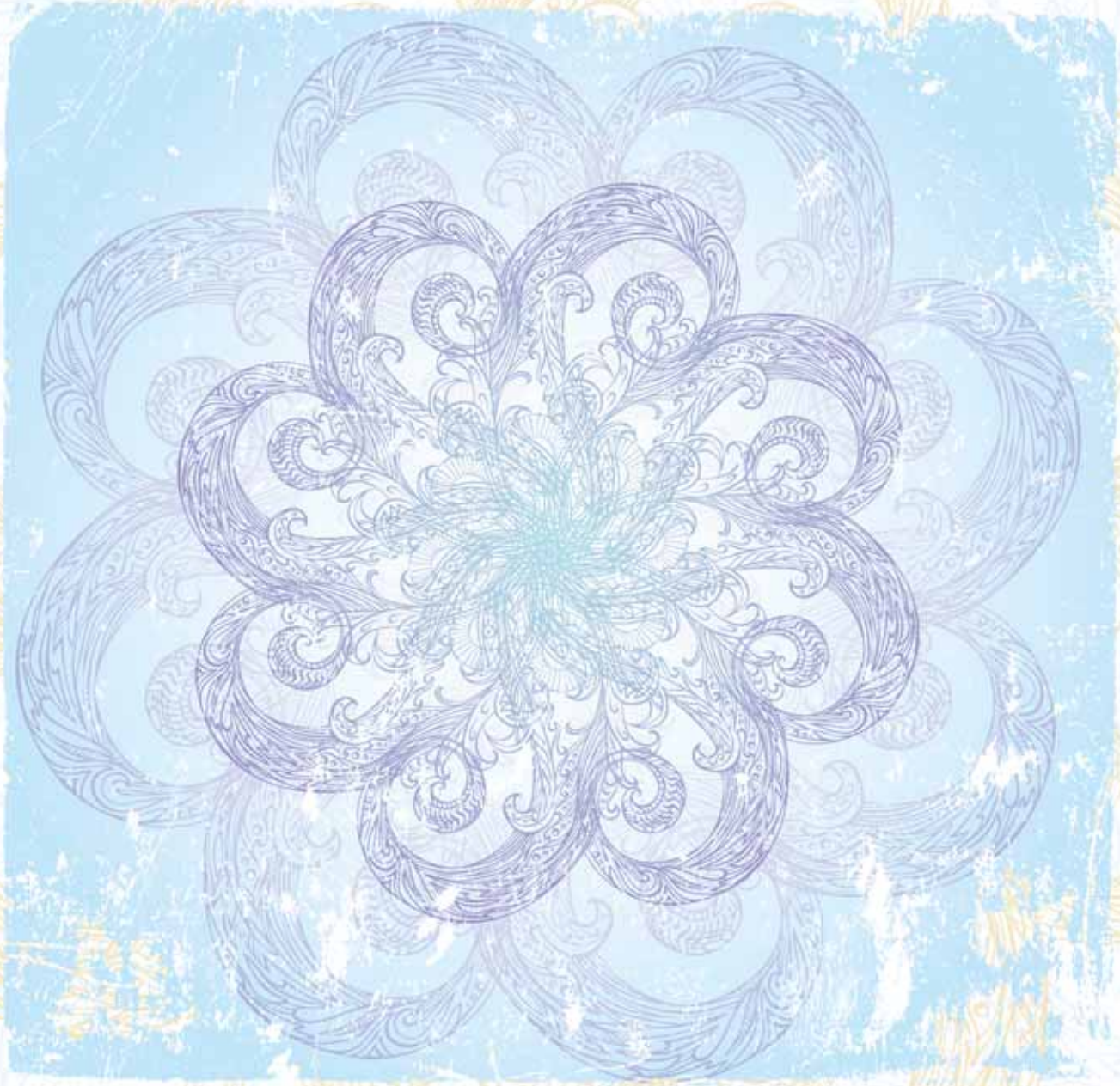

Meditation

medicine for the mind

Many Australians are recognising the benefits of meditation. Karen Nicoll describes some of the research supporting these benefits, and suggests some home practices.

Meditation is a powerful process that touches us on many levels – physical, mental, emotional, and spiritual. Our mind has incredible potentiality, including the capacity for empathy, compassion, contentment, equanimity, and creativity. In addition, it provides us with our wonderful intellectual abilities and our sense of self. However, the mind also has the ability to be critical, judgemental, jealous, and it excels at worrying! Depending on how our mind is used, it can contribute to us feeling very happy, or totally miserable. This article briefly looks at some research on meditation, and some suggested home practices.

A wealth of interesting research into meditation and the mind-body connection is being conducted. This research is confirming what yogis have known for centuries: meditation has a potent effect on our physiological and psychological wellbeing. Regular meditation changes the way our body and brain function, contributing to better health outcomes. Many of us would be aware that meditation lowers the levels of the stress hormones adrenalin and cortisol in the body. Studies also suggest that meditation helps to alleviate conditions such as migraines, depression, hypertension, and pain. It has also been shown to boost immunity, as well as contributing to our happiness.

Thanks to pioneers like Candace Pert, we now have a better scientific understanding of the yogic saying that the mind and body are one. Pert, who carried out research in the Department of Physiology and Biophysics at Georgetown University Medical Center, was one of the first scientists to show that our emotions do indeed influence our body systems. She says we are a chemical soup, and our cells communicate with each other by chemical messengers, such as peptides and hormones. Via the peptides and their receptors, our whole body feels and expresses emotion, and it is our emotions that link our mind and body. When we feel good, it is usually a sign that we are producing chemicals that support our wellbeing. Pert discovered that stress hormones interfere with the peptides, adversely affecting our breathing, blood flow, digestion, immunity, and the body's healing capacity. However, she found that meditation also influences the peptides, but in a way that restores our body to a healthy state.

Stress

When physical, mental, or emotional pressure exceeds our ability to cope, the stress response kicks in, and the body is primed for a quick getaway, even in response to emotional issues. As well as interfering with our peptides, stress activates the sympathetic nervous system, and the stress hormones adrenalin, noradrenalin, and cortisol are released. The body responds by increasing heart rate, blood pressure, muscular tension, blood glucose and lipid levels. Non-essential functions like digestion, reproduction, and immunity are put on hold. Initially, we are able to adapt to the extra demands, but over time elevated levels of adrenaline and cortisol contribute to, and exacerbate, a myriad of conditions. As well as affecting our body, stress overload also changes how we think, feel, and behave. There may be mood changes and a decreased ability to cope, resulting in what is sometimes referred to as 'burnout' or a 'breakdown'.

Over thirty years ago, Herbert Benson from the Harvard Medical School, was one of the first to scientifically demonstrate some of the benefits of meditation. Compared to a control group, a group of meditators showed reduced levels of stress hormones and an activation of the parasympathetic nervous system. This resulted in a decrease in blood pressure, heart and breathing rates, and muscular tension. Furthermore, the meditators had slower brain wave activity, consumed less oxygen, and also reported increased levels of wellbeing compared to the control group.

Mantra and meditation

Luciano Bernardi, from the University of Pavia in Italy, discovered that our biological rhythms are affected by chanting the mantra, 'Om Mane Padme Hum', or by reciting the Latin verse, 'Ave Maria'. The results of his research were quite astounding: the reciting and chanting resulted in the rhythms of each of the participants' blood pressure, heart rate, and breathing rate all harmonising, creating what Bernardi called 'a state of coherence'. Bernardi has associated this coherence with improved physical and mental health, including better immune function, and a reduction in inflammation and heart disease. As they chanted, Bernardi observed that the participants' breathing rates slowed to about six breaths per minute. This, he believes, is the key to the synchronisation of their physiology. In addition to a slowing of their breathing rate, meditators reported a greater sense of wellbeing.

Concentration and memory

Fascinating research involving the brain and meditation is being conducted by Andrew Newberg at the University of Pennsylvania. Imaging technology showed an increased blood flow in meditators (and hence increased activity) to the areas of the brain responsible for attention and concentration. In his latest research, Newberg is looking at the effects of a kundalini meditation, Kirtan

[practical meditation practice]

As you can see, it is not surprising that meditation has been called medicine for the mind! If you would like to help alleviate a stress-related condition, improve your memory and concentration, settle your mind, or cultivate empathy, compassion, and inner peace, try meditation on a regular basis and observe the effects. Even 10 minutes of meditation on a regular basis can make a big difference to our physical and mental wellbeing. Being able to experience peace of mind is an essential part of optimal wellbeing.

The meditation practice

The essence of meditation is to be aware, present, and focused in this moment. An unfocused mind tends to drift to the past, project into the future, be distracted by sensations and sounds, or be overcome by emotions. Meditation is the process of teaching the mind to come back to the present. As thoughts, emotions, and sensations arise, let them come and go and keep bringing your awareness back to the now and to your mental focus. Your mind does not need to be totally clear of thoughts to benefit from meditation. Meditation teaches us to settle our inner chatter. Allow the inner chatter to come and go, without reacting to it - just like a non-stick frypan! When we settle the chatter from the language centre in the brain, we activate the right side of the brain and are able to experience inner peace.

Preparing for meditation

To keep your mind aware and awake, sit comfortably in a chair, against a wall, or on the floor. Gently close your eyes. Turn the palms up and touch index finger to thumb.

Choose a meditation technique. There are many practices that provide us with a point of concentration or a focus, such as the breath, a sound, or mantra. All meditations support our physical and psychological wellbeing; although as mentioned, some of the meditation techniques may also confer some specific benefits.

Chanting Meditation

Benefits: This chanting meditation may synchronise your biological rhythms.

Take a comfortable in-breath and on the out-breath chant, 'Om' or 'Om mane padme hum' (this translates as 'jewel in the lotus'). Gradually lengthen your out-breath, so that you are slowing your breaths down to about six breaths per minute (i.e. about 10 seconds for each in and out breath).

You might like to prolong the 'mmmm' sound at the end of each chant.

Alternate Nostril Meditation

Benefits: As awareness moves from one side of the body to the other, you are connecting the left and right hemispheres of your brain.

Observe the natural flow of your breath. Imagine the air flowing up your left nostril to your eyebrow centre and out your right nostril; then, in your right nostril and out your left nostril. Perhaps imagine the air as a stream of golden light as it flows in and out of your nostrils.

Compassion Meditation

Benefits: Compassion meditation cultivates kindness and empathy.

First concentrate on yourself and wish yourself wellness by saying to yourself: 'May I be well and happy'. Next, concentrate on your loved ones and say to yourself: 'May they be well and happy'. Then, concentrate on compassion for all beings and say to yourself: 'May we all be well and happy'.

Kirtan Kriya Meditation

Benefits: Practise this twelve-minute meditation daily to improve your concentration and attention span; it may also improve your memory.

This meditation uses the sounds sa, ta, na and ma. Start with the palms turned up. On the out-breath touch index fingers to thumbs and say 'sa'. Release your fingers on the in-breath. Continue with the breathing and:

- touch middle fingers to thumbs with 'ta'
- touch ring fingers to thumbs with 'na'.
- touch little fingers to thumbs with 'ma'.

For the first round, say the sounds out loud for two minutes. For the second round, whisper the sounds for two minutes. For the third round, say the sounds silently for four minutes. For the fourth round, whisper the sounds for two minutes. Finish by saying the sounds out loud for two minutes.

Kriya, on memory. Preliminary findings show improvement in memory and concentration with just twelve minutes of this meditation daily. There may also be a link between high stress levels and age-related memory problems. Studies at McGill University show elderly people with high levels of stress hormones to be significantly impaired in their memory function.

Compassion

In ongoing investigations, Dr Richard Davidson at the University of Wisconsin-Madison is studying how meditation presents the opportunity to reshape the brain. A study that measures the electrical activity in the brains of Tibetan monks practising 'compassion meditation' found increased activity in the left prefrontal lobes. This, he believes, contributes to the monks feeling happy and content, and having a robust immune system. Recently, Davidson discovered that 'compassion meditation' changes the areas in the brain associated with picking up on the emotional state of others and having empathy. These changes were particularly noticeable in the right side of the brain.

Left and right hemispheres of the brain

It seems as though there is not just one area of the brain specific for one particular function. In her book, *My Stroke of Insight*, Jill Bolte Taylor, a brain scientist, looks at the brain from a different perspective. At the age of thirty-seven, Jill suffered a massive stroke in her left brain hemisphere, leaving her initially unable to walk, talk, or read. However, despite these limitations, she at times experienced a deep inner peace and observed herself

being more intuitive, nurturing, and empathic. Jill explains that the left hemisphere of the brain is essential for us to operate in the world: it enables us to think in a logical and sequential fashion, facilitates our communication with others, and gives us our identity and ego. In addition, it provides our internal chatter and gives us the ability to criticise, judge, hold grudges, be sarcastic, and remember old hurts.

Inner peace, contentment, empathy, compassion, intuition, and creativity all spring from the right brain. With the left side of her brain incapacitated, Jill believes she started functioning more from her right brain. For the first few years after the stroke, Jill was unable to look after herself, but after eight years of rehabilitation she was able to return to work as a brain scientist. As Jill recovered and regained the function of her dominant left brain, she realised that she could quieten the chatter of this side of her brain and consciously choose to cultivate the qualities from the right side of the brain. Jill believes that when she is experiencing a deep inner peace and is expressing compassion, love, and joy she is using her right brain, and meditation is one of the ways she keeps the right side of her brain activated. Meditation quietens our language centre, and it is thought that when the inner chatter settles, our ability to experience inner peace and to be compassionate, empathic, intuitive, and nurturing is enhanced.

Jill's experience has been backed up by research, demonstrating that a busy, active left brain inhibits the activity in the right hemisphere. During and after meditation, the EEG (electrical activity in the brain) studies show a greater coherence between the left and right hemispheres, which is thought to promote better emotional functioning and more balanced moods. Practices such as alternate nostril breathing also help us to utilise both hemispheres and enhance the connection between the two hemispheres. As both hemispheres complement each other, using both hemispheres of the brain assists us to flourish as human beings.

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