

Why meditation?

BACKGROUND While many general practitioners perceive meditation as an acceptable, even mainstream, health care strategy, it is paradoxically a poorly understood discipline.

OBJECTIVE To define meditation, outline the broad types of meditation and give an overview of the extent and validity of available evidence for its efficacy.

DISCUSSION The basic question of what constitutes meditation and what separates it from relaxation therapy has been an impediment to formulating quality studies in order to research meditation techniques. Examining the literature using evidence based criteria reveals that, while meditation does appear to have therapeutic potential, there is a great need for further research before definitive conclusions can be made. Researchers have yet to systematically compare different techniques of meditation to compare their profiles.

Meditation is seen by a number of researchers as potentially one of the most effective forms of stress reduction.¹ While stress reduction techniques have been cultivated and studied in the West for approximately 70 years, the data indicates that they are not consistently effective.²

Meditation however, has been developed in Eastern cultures and has a documented history of more than several thousand years. Eastern meditative techniques have been developed, trialed and refined over hundreds of generations with the specific intention of developing a method by which the layperson can regularly attain a state of mental peace and tranquillity, ie. relief from stress. It is a strategy that can easily be adapted to the needs of clinicians and their patients in the West.

A US study for example, showed that a short course of behaviour modification strategies that included meditation led to significantly fewer visits to physicians during the six months that followed. The savings were estimated at over \$200 per patient.³ A study of insurance statistics showed that the use of medical care was significantly less for meditators compared to nonmeditators.⁴

The growing emphasis on:

- quality of life outcomes
- concepts such as psychoneuroimmunology or mind-body medicine,⁵ and
- reducing healthcare costs

suggest that stress reduction and improving mental health are becoming increasingly relevant to healthcare.

The need for an evidenced based approach

A recent survey of Australian general practitioners showed that while GPs perceived meditation as an acceptable, even mainstream, health care strategy, it is paradoxically a poorly understood discipline. In view of this, the authors concluded that well designed trials and education are urgently needed to inform GPs' decision making.⁶

Meditation vs relaxation

Implicit in the fact that the term 'meditation' exists separately from that of 'relaxation' suggests that there should be clear differences between the two phenomena. However, there is as yet insufficient evidence to draw a clear distinction. Moreover, researchers have yet to systematically compare different techniques of meditation to determine whether or not these techniques use different or similar mechanisms or have differing effect profiles.

Lack of quality research

Despite the breadth of information available on meditation, a report of the US National Research Council (NRC) on meditation raised concerns about weak methodology and poor definition of the process.⁷

Examining the literature using evidence based criteria reveals that while meditation does appear to have therapeutic potential, there is a great need for further research before definitive conclusions can be made. The body of knowledge currently suggests that not all meditation techniques are the same; most techniques are

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probably elaborate relaxation methods while there are others that may well involve physiological processes unique to meditation.

The Meditation Research Program (MRP) is one of the ongoing activities of the Natural Therapies Unit at the Royal Hospital for Women in Sydney. The MRP is committed to thorough scientific evaluation of meditation, its physiological effects and its potential for healthcare.

What is meditation?

There are many forms of meditation, ranging in complexity from strict, regulated practices to general recommendations. If practised regularly, meditation is thought to help develop habitual, unconscious microbehaviours that can potentially produce widespread positive effects on physical and psychological functioning. Meditation even for 15 minutes twice a day has been shown to bring beneficial results.³

How does meditation work?

Parasympathetic response

Most theories are based on the assumption that meditation is a sophisticated form of relaxation involving a concept called the parasympathetic response. Psychological stress is associated with activation of the sympathetic component of the autonomic nervous system which, in its extreme, causes the 'fight or flight response'. Meditation and any form of rest or relaxation acts to reduce sympathetic activation by reducing the release of catecholamines and other stress hormones such as cortisol, and promoting increased parasympathetic activity which in turn slows the heart rate and improves the flow of blood to the viscera and away from the periphery.

Other neurophysiological effects

Other proponents claim that meditation involves unique neurophysiological effects; however, this remains to be proven. Research at the MRP suggests the limbic system may be involved in Sahaja yoga meditation (SYM) since significant effects involving mood state have been consistently observed.

Defining what we mean by meditation

The most important issue that must be addressed in this field of research is to clearly define meditation and then subject that definition to scientific testing.

Meditation is popularly perceived to be any activity in which the individual's attention is primarily focused on a repetitious cognitive activity. This very broad definition is, in the opinion of the MRP, the main cause for much of the inconsistent outcomes seen in meditation research.

'Thoughtless awareness'

If one closely examines the authentic tradition of meditation it is apparent that meditation is a discrete and well defined experience of a state called 'thoughtless awareness'. This is a state in which the excessive and stress producing activity of the mind is neutralised without reducing alertness and effectiveness.

Authentic meditation enables one to focus on the 'present moment' rather than dwell on the unchangeable past or undetermined future. It is this state of equipoise that is said to be therapeutic both psychologically and physically and which fundamentally distinguishes meditation from simple relaxation, physical rest or sleep.

Reducing 'background mental noise'

According to this perspective, stress is the inevitable byproduct of an overactive mind. The unsilenced mind is responsible for almost continuous 'background mental noise' the content of which is mostly unnecessary and unproductive. Yet it is this 'mental noise' that impinges on our otherwise natural tendency toward psychological, mental and spiritual health.

Quasi-meditation

Most commercialised meditation techniques do not reliably give the key experience of mental silence or 'thoughtless awareness' hence they can more precisely be described as 'quasi-meditative'. These include methods that use constant repetition of syllables (such as mantras), visualisations or other thought forms.

This does not mean they may not be useful as they do encourage relaxation by reducing or simplifying mental activity or focusing attention. However, well designed physiological and clinical trials have, on the whole, shown little difference between these techniques and physical rest or relaxation.⁸

Types of meditation

There are many meditation techniques available to consumers. Three notable examples include transcendental meditation, mindfulness and Sahaja yoga.

Transcendental meditation

Transcendental meditation (TM) is the commonest form of mantra meditation. It aims to prevent distracting thoughts by use of a mantra. Students are instructed to be passive and, if thoughts other than the mantra come to mind, to notice them and return to the mantra. A TM student is asked to practise for 20 minutes in the morning and again in the evening.

Transcendental meditation is said to be associated with clinical outcomes such as blood pressure reduction⁹ and physiological changes such as lowered blood cortisol levels.¹⁰

Adverse effects

There are however, a number of case reports in the mainstream medical literature describing occasional adverse psychological^{11,12} and physical effects¹³ that appear to be causally related to the technique. These adverse events range from mild to severe and warrant further systematic investigation.¹⁴

Cost issues

The technique is taught using a commercial system in which one begins by purchasing a mantra. Further instruction entails an escalating system of fees that can be cost prohibitive. Moreover, the TM organisation has on occasion been implicated in unethical and cultic practices.¹⁵ In light of this information, medical practitioners have no choice but to recommend caution with regard to this method.

Mindfulness and Vipassana meditation

Mindfulness is a general method that serves as a basis for techniques such as Vipassana meditation. It aims to use focused attention (often by using a physical sensation such as the breath) to cultivate mental calmness. Regular practice enables one to objectively observe one's thoughts and therefore enhance one's self understanding. Mindfulness approaches have been shown to be effective in certain clinical applications such as chronic pain.¹⁶

Vipassana is both a general term referring to a specialised form of mindfulness meditation and also a specific brand name. The following information refers to the latter. Vipassana is taught in Australia via a number of Vipassana retreats and centres. The retreats involve up to 10 days of intensive meditation, several hours per day, and other strict observances such as not talking and encouragement to maintain strict postures for long periods of

time. There is no fee for these retreats but 'recommended donations' are described. These retreats are unsuitable for the average person, particularly those unfamiliar with meditation, due to the extreme physical and psychological demands. Adverse events associated with Vipassana have been described although it is unclear as to which form these reports refer.¹⁷

Sahaja yoga meditation

Sahaja yoga meditation (SYM) is the technique of choice in the MRP. Sahaja yoga meditation aims to promote the experience of 'thoughtless awareness' based on the original meditative tradition. Meditators in the MRP consistently describe the ability to achieve this experience. They are encouraged to practise twice daily for approximately 15 minutes. Sahaja yoga meditation is well suited for the general population and for research, because it is easy to learn and is taught free of charge. Sahaja yoga meditation is currently used in three Sydney hospitals for patients, staff and public. Feedback from management teams and anecdotal reports from patients and carers are favourable. As yet no adverse effects have been reported in the MRP's trials, clinics or in the literature.

The MRP has conducted a number of small and large trials on SYM which have generated promising results in Australian conditions. A randomised controlled trial of meditation for moderate to severe asthma compared SYM to a relaxation control. SYM was more effective in a number of objective and subjective endpoints.

A number of locally conducted pilot studies examining the effect of SYM suggest that it may have a beneficial role in menopausal hot flushes, severe migraine and psychological stress. Randomised controlled trials are underway in order to obtain definitive data. Studies in India suggest that SYM is more beneficial than mimicking exercises in the treatment of epilepsy and hypertension.¹⁸

Recommending meditation techniques to patients

General practitioners must exercise commonsense and discrimination when recommending meditation to their patients as they have a duty of care to ensure the safety of their patients' health and finances. Meditation is contraindicated in those suffering from psychosis and should only be applied with great caution in those with severe psy-

chological problems. The medicolegal implications of recommending a technique that leads to an adverse event have not been explored.

A simple and effective rule of thumb when choosing or recommending a meditation technique is to assume that 'the best things in life are free'. Organisations involved in the commercialisation and marketing of often costly 'meditation' techniques, courses and 'master classes' are least likely to be selling an authentic method. Unfortunately in these situations the welfare of the individual and the community usually become secondary to profit or fame.

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SUMMARY OF IMPORTANT POINTS

- Meditation can be an effective form of stress reduction and has the potential to improve quality of life and decrease healthcare costs.
- Although meditation differs from relaxation techniques, the components which constitute this difference have not yet been clearly defined.
- Meditation involves achieving a state of 'thoughtless awareness' in which the excessive stress producing activity of the mind is neutralised without reducing alertness and effectiveness.
- Authentic meditation enables one to focus on the present moment rather than dwell on the unchangeable past or undetermined future.
- There is little quality evidence comparing one meditation technique with another or meditation with relaxation techniques.
- The theoretical explanation for the effects of meditation and relaxation techniques is that the release of catecholamines and other stress hormones are reduced and parasympathetic activity is increased.
- Whether meditation involves other unique neurophysiological effects remains to be proven.

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