

Yoga and meditation – what is the active ingredient

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Yoga has proven benefits for patients experiencing many conditions, not only musculoskeletal problems but also anxiety, depression, premenstrual symptoms and cardiovascular disease.

Yoga is an ancient Eastern philosophy of living that includes physical postures (asanas), breathing techniques (pranayama), meditation, relaxation and moral codes, which together are said to provide a path to self-realisation.¹ In Western society, yoga postures can be practised in isolation from the other aspects of yoga.

Well-known styles of yoga in Australia include Iyengar (with a focus on technique and alignment), Ashtanga (dynamic sequences of postures), Satyananda (an integrated form of classical yoga) and Bikram (a sequence of postures in a heated room). These are all modern styles of Hatha yoga philosophy (therefore 'Hatha' is an umbrella term), usually blended with other yogic philosophies.

Yoga is the thirteenth most popular physical activity (not including walking)

in Australia, practised by 2.8% of the adult population, ahead of lawn bowls (2.1%) and surfing (1.9%).² However, yoga participation may increase to between 7% and 12% when therapeutic use is taken into account.³ The rate of participation in meditation in Australia is unknown but, given that yoga often includes meditation, it may be similar to or higher than the participation rate for yoga.

Traditionally, meditation is an integral part of yoga. In fact, the yoga postures are intended to develop a person's physical and mental discipline to practice meditation, in turn leading to deeper personal insight. Meditation is also part of many other spiritual traditions or can be practised in a nonreligious, secular fashion.

For example, 'mindfulness' (as in mindfulness-based cognitive therapy) is

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a form of secular meditation inherited from the Buddhist tradition based on non-judgemental awareness. A yoga class may or may not include meditation, which may or may not be mindfulness-based, depending on the tradition and training of the teacher. Likewise, autogenic training has parallels to visualisation techniques in yoga and meditation, the relaxation benefits of which are well established in the literature.

Yoga and meditation have long been known to have health benefits. However, like other traditional Eastern disciplines, it has taken some time to establish an evidence base in the conventional medical literature for their practice. This has been hampered by a lack of funding and methodological challenges such as attributing cause and effect of efficacy in the presence of multiple variables.

In the medical literature, yoga and meditation techniques are often combined with conventional medicine and other best practices to form an intervention, but may still be referred to as a 'yoga intervention'. The 'active ingredient' in the intervention, or the mechanism by which any effect is exerted, may be difficult to quantify.

Yoga as a therapy

Yoga and meditation have become part of the medical mainstream in Australia. A national survey of the attitudes of GPs to complementary therapies found that yoga and meditation, along with massage, acupuncture and hypnosis, were seen by GPs as being safe and effective.⁴ Most GPs reported that they had referred or suggested to a patient to use yoga (62%) or meditation (65%) in the previous 12 months. The only complementary therapies receiving a higher rate of referral or suggested use were massage (87%) and acupuncture (83%).

About one in 10 GPs in the survey said they practised yoga or meditation themselves, and 13% and 26% reported some previous training in yoga and meditation, respectively. One-third of GP respondents were interested in receiving training

in yoga, whereas 43% were interested in training in meditation.⁴

People who practice yoga have also found yoga and meditation useful in managing their health. In an as yet unpublished study by this author, a national survey of about 2500 people who practised yoga found that one in five respondents used yoga to address a specific health concern or medical condition.⁵

Stress management (15.63% of all conditions reported) and anxiety (8.25%) were more commonly addressed by yoga practice than back (11.84%), neck (6.69%) or shoulder (2.33%) pain and related problems. Study participants with women's health issues were the next largest group (8.81%) with reported improvement in premenstrual and menopausal symptoms, and assistance during and after pregnancy. Those with gastrointestinal (6.77%), respiratory (6.42%), or cardiovascular (3.66%) conditions also reported consistent improvement across all categories. Weight management (4.77%) was also seen by study participants to be assisted by yoga practice. Overall, 94.8% of respondents thought their condition had been improved by practising yoga, with 4.5% reporting their condition unchanged. Perceptions of quality of life were also improved in all areas – physical, mental, emotional, spiritual and in relationships.⁵

Applications of yoga and meditation

Musculoskeletal health

Yoga postures have long been associated with physical therapy. A review of non-pharmacological therapies for acute and chronic low back pain found yoga, acupuncture, massage and functional restoration to be effective.⁶ Another review of therapies for older adults with chronic pain reported that there was some evidence for the effectiveness of:

- meditation in patients with low back pain or osteoarthritis
- yoga and progressive muscle relaxation for pain reduction

- progressive muscle relaxation plus guided imagery for patients with osteoarthritis.⁷

Meditation, relaxation and other mind–body therapies have been found to be useful adjuncts in the treatment of patients with chronic low back pain or arthritis.⁸ Several small trials have found yoga to be beneficial in patients with rheumatoid arthritis,⁹ for improvement in pain intensity, functional disability and medication usage in patients with non-specific chronic low back pain,¹⁰ and also better than conventional exercise.¹¹

Mental health

An Australian systematic review of self-help treatments for depression and anxiety disorders reported that the evidence of benefit for yoga relaxation and breathing exercises, although promising, was inconclusive. However, it also reported that meditation might be an effective intervention for patients with high trait anxiety and generalised anxiety disorders.^{12,13} The national depression initiative BeyondBlue, in its *What Works for Depression* booklet, describes yoga as a promising treatment for depression, with it perhaps being as effective as conventional medical treatments.¹⁴ Yoga may also be effective for patients with sleep disorders, and is now the subject of a National Health and Medical Research Council-funded, randomised placebo-controlled trial of yoga for improving sleep in an elderly population.¹⁵

A review of the effectiveness of meditation found it to be useful for patients with epilepsy. Some benefit was also reported for patients with nonpsychotic mood and anxiety disorders, autoimmune illness and emotional disturbance in neoplastic disease.¹⁶

It should be noted that although meditation may be beneficial for patients with anxiety disorders, it may not be appropriate for those with a history of psychosis or personality disorders.¹⁷ Likewise, introspective meditation may be contraindicated in patients with depressive

illnesses,¹⁸ whereas a 'physical' style of yoga may be beneficial. There is also a theoretical risk that meditation could create conditions in the brain conducive to epilepsy,¹⁹ although meditation has also been shown to be effective for patients with epilepsy.²⁰

Women's health

Yoga has been shown to be beneficial for patients with premenstrual syndrome and menopausal symptoms, reducing the number and severity of hot flushes and improving sleep.²¹⁻²³ Research into the practice of yoga during pregnancy is limited, but one trial found that regular yoga practice after 18 to 20 weeks' gestation may decrease rates of preterm labour, increase birth weight and reduce complications such as pregnancy-induced hypertension and isolated intrauterine growth retardation.²⁴

Certain yoga postures are contraindicated in pregnancy.¹⁸ Best practice in the yoga teaching profession is to advise women not to attend 'general' yoga classes in the first trimester of pregnancy, although there are many yoga practices that are entirely safe during this time. Dedicated prenatal yoga classes throughout pregnancy are advised.

Cardiovascular health

One hour a day of yoga has been reported to be beneficial for patients with hypertension, obesity or hyperlipidaemia; for glycaemic control in patients with diabetes; and for improving quality of life in patients after a myocardial infarction.²⁵ Yoga has also been found to benefit patients with indices of cardiovascular risk related to insulin resistance syndrome, including glucose tolerance, insulin sensitivity, raised lipid profiles, raised blood pressure, oxidative stress, coagulation profiles, sympathetic activation and cardiovascular function, as well as improvement in several clinical endpoints.²⁶ Therefore, it seems that the effect of yoga on patients with cardiovascular disease is primarily by reducing the

risk factors and biochemical markers of cardiovascular disease, rather than by reversing coronary artery stenosis itself.

However, an intensive lifestyle-change program based on a yoga ashram lifestyle found that comprehensive lifestyle changes were able to bring about regression of even severe coronary atherosclerosis after only one year without the use of lipid-lowering drugs. The Ornish program utilised nutrition (less than 10% fat, whole foods, vegetarian diet, vitamins and supplements), exercise (moderate regular aerobic exercise), stress-management techniques (stretching, breathing, meditation, relaxation), smoking cessation and love/intimacy (group psychosocial support and communication).²⁷⁻²⁸

Other conditions

There is also good evidence for the benefit of yoga and/or meditation in patients with respiratory, gastrointestinal, cognitive or neurological conditions; in older patients; and to improve quality of life in patients with cancer and their carers.

The active ingredient

Yoga and meditation are holistic disciplines. Where efficacy is difficult to attribute directly to the yoga or meditation part of an intervention, these components are perhaps able to exert an influence on a medical condition by nurturing and supporting the patient's healing.

For example, 72 patients in cardiac rehabilitation for the first time completed questionnaires before and after participating in a weekend retreat. The retreat included education and discussion on lifestyle, exercise, nutrition, stress-management techniques, communication techniques that enhance social support and spiritual principals of healing. Experiential practices included yoga, meditation, visualisation and prayer. After the retreat, more than three-quarters (78%) of the participants reported an increased sense of spirituality, well-being, meaning in life and

confidence in handling problems and a decreased tendency to become angry, which may in turn translate into improved recovery and prognosis. The researchers recommended the development of healthcare settings that can support this level of integration.²⁹

Recommending yoga and meditation

It is important to understand that styles of yoga can range from 'meditative' (sometimes with no postures at all), 'gentle' with easy postures, 'intermediate' or 'advanced' with difficult postures, to 'dynamic' with flowing sequences of postures. Therefore, in the absence of a formal system of referral or integration between the medical and yoga teaching professions, advice given to patients needs to include an indication of the sort of yoga appropriate to their condition.

Consideration of the type of yoga should include both the 'style', which usually relates to the level of difficulty, and whether or not meditation is included in the practice or should be sought outside of yoga. However, for the participant, it may come down to a subjective sense of connection with the philosophy of the style of yoga and the teacher.

Professional yoga and meditation teachers can be found at www.yoga teachers.asn.au and www.meditation australia.org.au MT

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