

THE BENEFITS OF YOGA AND PILATES

Yoga originated in India about the fifth century BC, evolving over time as a mental, physical and spiritual discipline. Pilates is much younger, developed in the mid-1900s to help in the rehabilitation of injured dancers and athletes. Pilates focuses on the interconnectedness of the mind and body, drawing on the movements of calisthenics, yoga and ballet, whereas yoga focuses on the connection between mind, 5) body and spirit. Exploring the spiritual side of yoga is an integral part of the practice.

The majority of studies into the benefits of Pilates have focused on its advantages for the physical body, and there is an arguable lack of empirical evidence for these. One study, which aimed to assess improvements in posture, involved 47 adults practising Pilates once a week for three months. Despite subjects reporting improved posture, their height, used as a measure, did not change. A second study 10) exploring comparative effects of Pilates or weight training on posture found both groups experienced moderate change.

There is evidence to suggest that regular Pilates practice can help improve strength and flexibility. To what extent, particularly in comparison to other types of resistance training, is unsubstantiated although one study confirmed that Pilates improved strength equally to traditional resistance exercise (lifting 15) dumbbells). A different study used electromyography (EMG), which measures muscle activity, to compare the effect of Pilates and abdominal crunches on two muscles in the core region: the rectus abdominis (the six-pack) and external obliques. The Pilates exercises produced EMG values that were higher than the crunch, supporting claims that Pilates increases core strength and stability. There is some justification for the use of Pilates in rehabilitation. There are several studies reporting that it leads 20) to a significant reduction in pain intensity and disability in people with lower back injuries, for example. However, the number of studies is very small and the numbers of participants limited.

Research into the benefits of yoga has focused more on its contribution to wellbeing. According to yogi tradition, continued practice of asana (postures) and pranayama (breathing) increases sattva, a spiritual quality of light and love, the cultivation of which leads to greater equilibrium and less psychological and 25) physical illness. One study by researcher Sudheer Deshpande attempted to substantiate this claim by involving 226 adults in a programme where they had either one hour of moderate physical exercise (PE) a day or one hour of yoga a day for eight weeks. The number of persons who showed enhancement of sattva – measured by responses to a questionnaire – was significant in the yoga group but not in the PE group.

30) Dr Andrew Weil, a medical researcher, claims that investigations into the value of yoga are neither overwhelming nor conclusive. In his view, one of the problems identified is that most studies are done with small numbers of subjects. Others, such as the aforementioned Deshpande study, focus on trying to lay evidence to claims of the spiritual benefits of yoga, which as yet have found no support in Western science or medicine.

35) However, the value of deep breathing – an integral part of yoga practice – has found substantial support in medical science. Deep breathing has been shown to have numerous beneficial effects on health, some of which are easily measurable, such as the lowering of blood pressure. Dr Sheila Patel explains that abdominal breathing activates the parasympathetic nervous system, which

reverses the body's stress response. Because the abdominal muscles and diaphragm are engaged, there is also less strain on the muscles of the neck and upper chest which assist shallow breathing; thus, tightness is released in these areas.

The Kripalu Center for Yoga and Health in the United States developed a four-month programme for 18–25 year olds combining daily asana and pranayama practice and study of the principles of yoga. Research on the effects of the programme found that it significantly predicted increases in quality of life and self-compassion, and decreases in perceived stress. The researchers suggested that yoga could be used to assist those coping with the stresses of studying, job-searching and transitioning to adulthood.

G. Duraiswamy compared the effects of four months of either daily yoga practice or exercise on schizophrenic patients. The exercise involved activities including walking, jogging and stretching. While there was a decrease in psychotic symptoms in both groups, the decrease was more pronounced in the yoga group. The yoga group also performed better in terms of perception of increased quality of life as measured by the World Health Organization Quality of Life (WHOQOL) form. In addition, yoga has been shown to be effective in relieving symptoms of depression, anxiety and obsessive-compulsive disorder.

Further studies suggest that emptying the mind of thoughts, achieved during yoga practice through concentration on the postures and breath, leads to variations in the neural circuitry of the brain. Dr Sara Lazar, an American neuroscientist, used MRI scans to monitor changes in the brains of a group of adults who participated in an 8-week programme. Prior to the study, participants had never meditated; during the study, they did so for 30–40 minutes a day for 8 weeks. Results showed greater activity in the left hippocampus at the end of the study, the hippocampus being the segment of the brain that assists learning, retention and recall, and emotional regulation. There was also greater activity in the temporo-parietal junction, which controls empathy and compassion, and a reduction in the size of the amygdala, which suggests a reduction in stress.

Complete the sentences below.

Choose NO MORE THAN TWO WORDS from the passage for each answer. Write your answers in boxes 14–18 on your answer sheet.

14 Pilates was originally designed as physical therapy for and sportspersons.

15 The practice of yoga differs from Pilates in that it has a

16 Pilates practice does not seem to produce measurable effects on

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17 EMG results indicate that gains in core strength are greater from Pilates training than

18 Pilates may be beneficial for sufferers of pain although there is not a great deal of research to prove this.

Questions 19–24

Look at the following findings (Questions 19–24) and the list of researchers below. Match each finding with the correct researcher, A–F.

Write the correct letter, A–F, in boxes 19–24 on your answer sheet.

List of Researchers

- A Deshpande
- B Weil
- C Patel
- D Kripalu Center
- E Duraiswamy
- F Lazar

19 Yoga successfully reduces the characteristics of severe psychiatric disturbance, more so than other physical exercise.

20 The practice of yoga postures and breathing might be valuable for young adults facing difficulties in life.

21 The practice of yoga improves mental and emotional calmness and stability.

22 Meditation stimulates neuron activity in the brain.

23 Yoga provides relief from physical tension in the upper body.

24 Research on the benefits of yoga is insignificant and unconvincing.

Questions 25–26

Answer the questions below.

Choose **NO MORE THAN THREE WORDS** from the passage for each answer. Write your answers in boxes 25–26 on your answer sheet.

25 What did WHOQOL assess?

26 Which part of the brain is important for memory?