

## **Evidence Based Research Clearly Demonstrates the Remarkable Health Benefits of Yoga. By Joanna Bertzeletos, 7 January 2018.**

In this technological age, health care paradoxes abound. Computerisation, designed to facilitate daily life, carries with it a demand to be externally connected to events at all times. In doing so, paradoxically, we become alienated from reflecting personally upon body, mind and spirit. Use of other substances from food binges to illicit drugs or pharmaceuticals can alleviate some of our symptoms, but this approach can also mean that we can carry on as normal with our busy lives, reducing our ability to monitor and focus on our personal health and wellbeing.

Yoga challenges the “busy-ness” of modern day life, providing us with a return to simply being, watching the world around us, cultivating an awareness of the impact of this world upon ourselves and also how our actions impact upon our world. Yoga enables us to reconnect with ourselves and learning to see ourselves, and our reactions to the world around us, from a different perspective. It takes emotional and spiritual strength to reflect inwardly and directly address personal conflicts, anxieties, hopes and fears, and understand how we respond to them. It also takes time to learn how these states of mind impact directly on physical wellbeing, and how we can change this.

At a time when technology, social media, alcohol, drugs, fast food and instant gratification dominate the way we live our lives, it is refreshing that yoga not only persists and more people are seeking yoga to fill the ever increasing void but that researchers are taking the time to explore exactly how this practice can help us.

The evidence collected through research into yoga continues to reveal the health benefits it can have on different aspects of our physical, mental and spiritual health, supporting the case for its use in our own personal healthcare and in the healthcare of our community and planet. Regular yoga practice can increase our awareness about how our body actually feels with all its aches and pains, and helps us restore balance, improves posture, oxygenates the brain, promotes healthy eating habits, cultivates an attitude of peace, helps us to become spiritually conscious, cultivates discipline and improves our overall quality of life.

We will now explore the mounting evidence based research into the health benefits of yoga by focusing on the following 15 areas which will demonstrate unequivocally that attending a weekly class (minimum) is worth the investment of time and effort.

1. Improves, flexibility, balance and strength;
2. Improves breathing;
3. Promotes positive self-perception;
4. Promotes healthy eating habits;
5. Lengthens lifespan and youth;
6. Sharpens the brain;
7. Staves off and helps to manage stress, depression and anxiety;
8. Helps manage chronic pain;
9. Prevents and manages chronic neck and low-back pain;
10. Helps with pro-inflammatory diseases such as cancer, heart disease and diabetes;
11. Helps improve sleep quality;
12. Helps with osteoporosis and ageing;
13. Reduces PMS and improves women’s overall health;
14. Great for pregnancy;
15. Great for child and adolescent development.

**1. Improves flexibility, balance and strength.** Yoga is well known to improve all of these areas. Below you will find some specific research that supports this.

A 2016 study ([Impact of 10-weeks of yoga practice on flexibility and balance of college athletes](#)) looked at the impact of 10 weeks of yoga on 26 male college athletes. Doing yoga significantly increased several measures of flexibility and balance, compared to the control group.

Another study conducted in 2014 ([Flexibility of the elderly after one-year practice of yoga and calisthenics](#)) assigned 66 elderly participants to either practice yoga or calisthenics, a type of body weight exercise. After one year, total flexibility of the yoga group increased by nearly four times that of the calisthenics group. A 2013 study ([A 12-week yoga program improved balance and mobility in older community-dwelling people: a pilot randomized controlled trial](#)) also found that practicing yoga could help improve balance and mobility in older adults.

In addition to improving flexibility, yoga is a great for its strength-building benefits. In fact, there are specific poses in yoga that are designed to increase strength and build muscle.

In a study conducted in 2011 ([How Effective Is Sun Salutation in Improving Muscle Strength, General Body Endurance and Body Composition?](#)), 79 adults performed 24 cycles of sun salutations — a series of foundational poses often used as a warm-up — six days a week for 24 weeks. They experienced a significant increase in upper body strength, endurance and weight loss. Women had a decrease in body fat percentage, as well.

A 2015 study ([Effects of a 12-Week Hatha Yoga Intervention on Cardiorespiratory Endurance, Muscular Strength and Endurance, and Flexibility](#)) had similar findings, showing that 12 weeks of practice led to improvements in endurance, strength and flexibility in 173 participants.

**2. Improves breathing.** Pranayama, or yogic breathing, is a practice in yoga that focuses on controlling the breath through breathing exercises and techniques. Most types of yoga incorporate these breathing exercises, and several studies have found that practicing yoga could help improve breathing. Improving breathing can help build endurance, optimize performance and keep our lungs and heart healthy.

In research ([Hatha yoga: improved vital capacity of college students](#)) undertaken in 2000, 287 college students took a 15-week class where they were taught various yoga poses and breathing exercises. At the end of the study, they had a significant increase in vital capacity<sup>1</sup>.

Another study ([The effect of various breathing exercises \(pranayama\) in patients with bronchial asthma of mild to moderate severity](#)) in 2009 found that practicing yogic breathing improved symptoms and lung function in patients with mild-to-moderate asthma.

**3. Promotes positive self-perception.** Yoga develops inner awareness. It focuses our attention on our body's abilities at the present moment. It helps develop breath and strength of mind and body. It's not about physical appearance.

In a pilot study from Brazil published in [Complementary Therapies in Clinical Practice in May 2016](#), university students reported feeling good after their yoga practice, especially pertaining to self-control, self-perception, well-being, body awareness, balance, mind-body and reflexivity.

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<sup>1</sup> Vital capacity is a measure of the maximum amount of air that can be expelled from the lungs. It is especially important for those with lung disease, heart problems and asthma.

Surveys<sup>2</sup> have also found that those who practiced yoga were more aware of their bodies than people who didn't practice yoga. They were also more satisfied with and less critical of their bodies. For these reasons, yoga has become an integral part in the treatment of eating disorders and programs that promote positive body image and self-esteem.

"Yoga/meditation users with normal BMI appear to be more satisfied with their body weight and shape than non-yoga/meditation users." – *Lauche et al (2017), [Nutrition](#)*

"Results showed yoga practitioners scored higher on positive body image and embodiment, and lower on self-objectification than non-yoga participants. ... It was concluded that yoga is an embodying activity that can provide women with the opportunity to cultivate a favourable relationship with their body." – *Mahlo et al (2016), [Body Image](#)*

"[The study] tested whether yoga practice is associated with greater awareness of and responsiveness to bodily sensations, lower self-objectification, greater body satisfaction, and fewer disordered eating attitudes. Three samples of women (43 yoga, 45 aerobic, and 51 nonyoga/nonaerobic practitioners) completed questionnaire measures. As predicted, yoga practitioners reported more favorably on all measures." – *Daubenmier (2005), [Psychology of Women Quarterly](#)*

**4. Promotes healthy eating habits.** Mindful eating, also known as intuitive eating, is a concept that encourages being present in the moment while eating. Researchers describe mindful eating as a non-judgmental awareness of the physical and emotional sensations associated with eating.

The researchers found that people who practiced yoga were more mindful eaters according to their scores. Both years of yoga practice and number of minutes of practice per week were associated with better mindful eating scores. Practicing yoga helps us to be more aware how our body feels. This heightened awareness can carry over to mealtime as we savour each bite or sip, and note how food smells, tastes and feels in our mouth.

People who practice yoga and are mindful eaters are more in tune with their bodies. They may be more sensitive to hunger cues and feelings of fullness.

Researchers found that people who practiced yoga for at least 30 minutes once a week for at least four years, gained less weight during middle adulthood. People who were overweight actually lost weight. Overall, those who practiced yoga had lower body mass indexes (BMIs) compared with those who did not practice yoga. Researchers attributed this to mindfulness. Mindful eating can lead to a more positive relationship with food and eating.

One study ([Randomized Controlled Clinical Trial of Yoga in the Treatment of Eating Disorders](#)) incorporated yoga into an outpatient eating disorder treatment program with 54 patients, finding that yoga helped reduce both eating disorder symptoms and preoccupation with food.

Another small study ([Yoga as a treatment for binge eating disorder: a preliminary study](#)) looked at how yoga affected symptoms of binge eating disorder, a disorder characterized by compulsive

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<sup>2</sup>Reference (1) [Nutrition Feb 2017, Associations between yoga/meditation use, body satisfaction, and weight management methods: Results of a national cross-sectional survey of 8009 Australian women](#) & (2) [Science Direct, Sept 2016, Yoga and positive body image: A test of the Embodiment Model](#)

overeating and a feeling of loss of control. Yoga was found to cause a decrease in episodes of binge eating, an increase in physical activity and a small decrease in weight.

**5. Lengthens lifespan and youth.** Though we cannot change our biology or chronological age we can definitely reverse/slow down the pace at which we age by adopting Yoga *and* Meditation based lifestyle intervention (YMLI). This is the first study ([Impact of Yoga and Meditation on Cellular Aging in Apparently Healthy Individuals: A Prospective, Open-Label Single-Arm Exploratory Study](#)) carried out in 2017 to demonstrate improvement in both cardinal and metabotropic biomarkers of cellular aging and longevity in apparently healthy population after Yoga and Meditation based lifestyle intervention.

Another study published in the [Journal of Alternative and Complementary Medicine May 2016](#) analysed the effects that 90 days of YMLI had on an obese 31-year-old man who had a history of fatigue, difficulty losing weight, and lack of motivation. Not only did adopting a YMLI help erase some signs of aging, but also prevented several lifestyle-related diseases of which oxidative stress and inflammation are the chief cause.

Further benefits of adopting a YMLI include...

- ♥ Meditation creates a unique hypo-metabolic state, in which the metabolism is in an even deeper state of rest than during sleep. During sleep, oxygen consumption drops by 8%, but during meditation, it drops by 10 to 20%.
- ♥ Meditation is the only activity that reduces blood lactate, a marker of stress and anxiety.
- ♥ The calming hormones melatonin and serotonin are increased by meditation, and the stress hormone cortisol is decreased.
- ♥ Meditators secrete more of the youth-related hormone DHEA<sup>3</sup> as they age than non-meditators. Meditating for 45 year old males has an average of 23% more DHEA than non-meditators and meditating females have an average of 47% more. This helps decrease stress, heighten memory, preserve sexual function and control weight.
- ♥ Meditation has a profound effect upon three key indicators of aging: hearing ability, blood pressure and vision of close objects.
- ♥ Long-term meditators experience 80% less heart disease and 50% less cancer than non-meditators.
- ♥ 75% of insomniacs were able to sleep normally when they meditated.
- ♥ 34% of people with chronic pain significantly reduced medication when they began meditating.

**6. Sharpens the brain.** A complete yoga practice (that also includes breathing, meditation and relaxation practice) does not just make your body more flexible and strong, but also your brain too.

In a recent study of 133 older adults, ages 53 to 96, those who practiced 30 minutes of yoga performed twice a week for more than a month saw an improvement in their cognitive function. "Focused breath equals maximizing oxygenation and movement increases blood flow to brain and body," says registered nurse Graham McDougall Jr. Ph.D., the lead researcher of the report published in the June 2016 issue of the [Journal of Neuroscience Nursing](#). Participants of the study saw significant gains in memory performance and had fewer depressive symptoms as well.

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<sup>3</sup> See the following research (1) [Effect of a comprehensive yoga-based lifestyle modification program on lipid peroxidation](#) & (2) [Effect of Regular Yogic Training on Growth Hormone and Dehydroepiandrosterone Sulfate \(DHEAS\) as an Endocrine Marker of Aging](#)

The following neuroendocrine study - [Yoga practice improves executive function by attenuating stress levels](#) - suggest that brain exposure to higher cortisol concentrations contribute to cognitive deficits as we age. Mind-body techniques such as yoga have shown to improve stress levels by restoring the body's sympathetic-parasympathetic balance. Eight weeks of regular yoga practice resulted in improved working memory performance. Yoga participants showed improved accuracy on executive function measures and an attenuated cortisol response compared to their stretching counterparts who showed increased cortisol levels and poor cognitive performance at follow up.

A 2014 study ([Effect of trataka on cognitive functions in the elderly](#)) into the use of trataka showed that cognition was increased in the people who partook in the study.

**7. Staves off and helps to manage stress, depression and anxiety.** Yoga postural work, breathing practices, relaxations and meditations can produce strong sensations in the body/mind/emotional complex. How we respond to them in a yoga class will give us a big clue to how we respond to various stresses in our lives<sup>4</sup>.

Do we tend to force ourselves into a yoga practice to the extent of nearly hurting ourselves? Do we avoid the practice completely and not even try to challenge ourselves a little? When doing a practice are we avoiding letting go and fighting with ourselves? Are we holding tension in other parts of our body, not just the physical body but also the mental/emotional layers?

All these strategies are variations of the flight, fight or freeze response and create unnecessary tension in our bodies/minds and emotions and also affect our breathing. Paying attention to how our body and mind react to the "stress" of our yoga practice offers clues about how we typically react to stress in our life. By training ourselves to actively observe while staying calm in our yoga practice, we will be able to do the same thing when difficult sensations, thoughts, or emotions arise in the face of stress. Instead of going into our habitual reaction mode, we'll notice what's happening while staying present enough to choose an appropriate response.

Yoga is known for its ability to ease stress and promote relaxation. In fact, multiple studies<sup>5</sup> have shown that it can decrease the [secretion of cortisol](#), the primary stress hormone.

One study ([Rapid stress reduction and anxiolysis among distressed women as a consequence of a three-month intensive yoga program](#)) demonstrated the powerful effect of yoga on stress by following 24 women who perceived themselves as emotionally distressed. After a three-month yoga program, the women had significantly lower levels of cortisol. They also had lower levels of stress, anxiety, fatigue and depression.

Another study ([A randomised comparative trial of yoga and relaxation to reduce stress and anxiety](#)) of 131 people had similar results, showing that 10 weeks of yoga helped reduce stress and anxiety. It also helped improve quality of life and mental health.

Interestingly enough, there is quite a bit of research showing that yoga can help reduce anxiety. In one study ([Effects of yoga on depression and anxiety of women](#)), 34 women diagnosed with an anxiety disorder participated in yoga classes twice weekly for two months. At the end of the study, those who practiced yoga had significantly lower levels of anxiety than the control group.

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<sup>4</sup> [How Can Yoga Help To Alleviate Stress?](#)

<sup>5</sup> [Association of yoga practice and serum cortisol levels in chronic periodontitis patients with stress-related anxiety and depression](#)

Another study ([Yoga as an adjunctive treatment for posttraumatic stress disorder: a randomized controlled trial](#)) followed 64 women with post-traumatic stress disorder (PTSD), which is characterized by severe anxiety and fear following exposure to a traumatic event. After 10 weeks, the women who practiced yoga once weekly had fewer symptoms of PTSD. In fact, 52% of participants no longer met the criteria for PTSD at all.

In research looking more closely at the effect of yoga on anxiety, Dr. M. Javnbakht and colleagues from the Psychiatry Department of Islamic Azad University in Iran showed that participating in a two-month yoga class can significantly reduce anxiety in women with anxiety disorders. In their [paper published in \*Complementary Therapies in Clinical Practice\*](#), the researchers say this “suggests that yoga can be considered as a complementary therapy or an alternative method for medical therapy in the treatment of anxiety disorders.”

Yoga is a great way to calm down. You can feel a soothing wave wash over you immediately during and after practice - and it's not just a placebo effect. A new report (you need to be a [member of Medscape](#) to view this report) presented at the Anxiety and Depression Association of America (ADAA) Conference 2015 in April linked yoga to lowering levels of cortisol, the stress hormone, especially in women at risk for mental health problems. In the study of 52 women, ages 25 to 45, who had mildly elevated anxiety, moderate depression or high stress, those who practiced yoga twice a week felt better (mood improved), looked better, and had better control over their anxiety.

In the May 2016 issue of [Complementary Therapies in Clinical Practice](#), researchers found that women experiencing postpartum depression saw a significant improvement in their anxiety, depression, and health-related quality of life after just eight weeks of yoga (twice a week) compared to their counterparts who did not practice yoga.

Gaiswinkler et al (2016), [Complimentary Therapies in Medicine](#) found highly involved yoga practitioners exhibited a significantly increased amount of mindfulness and religious/spiritual well-being and lower psychiatric symptoms such as depression compared to those who were only marginally/moderately yoga-involved or who were in the gymnastics control group. Manincor et al (2016), [Depression and Anxiety](#) found that yoga plus regular care was effective in reducing symptoms of depression compared with regular care alone.

For more research on how yoga can help with stress, depression and anxiety look at the footnotes<sup>6</sup>.

**8. Helps manage chronic pain.** Chronic pain is a persistent problem that affects millions of people and has a range of possible causes, from injuries to arthritis.

There is a growing body of research demonstrating that practicing yoga could help reduce many types of chronic pain. In one study ([Yoga-based intervention for carpal tunnel syndrome: a randomized trial](#)), 42 individuals with carpal tunnel syndrome either received a wrist splint or did yoga for eight weeks. At the end of the study, yoga was found to be more effective in reducing pain and improving grip strength than wrist splinting.

Another study ([yoga for treating symptoms of osteoarthritis of the knees](#)) in 2005 showed that yoga could help decrease pain and improve physical function in participants with osteoarthritis of the

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<sup>6</sup> Further research articles include (1) [Medical Students' Stress Levels and Sense of Well Being after Six Weeks of Yoga and Meditation](#); (2) [The effectiveness of yoga for the improvement of well-being and resilience to stress in the workplace](#); (3) [Mindfulness and Levels of Stress: A comparison of beginners and advanced hatha yoga practitioners](#); (4) [A randomised comparative trial of yoga and relaxation to reduce stress and anxiety](#)



knees. Although more research is needed, incorporating yoga into your daily routine may be beneficial for those who suffer from chronic pain.

**9. Prevents and manages chronic neck and low-back pain.** The back and in particular the spine are probably one of the most important parts of the body, particularly as most movement originate or impact on the axis of the body. In yoga, in particular, the focus on the spine is central to our practice. It is even said in yoga circles that the health of our back and spine are an indication of our overall health, wellbeing and vitality not just physically but mentally, emotionally, energetically and on our deeper intuitive and blissful aspects of our being. I am sure we have all experienced periods of back discomfort and firstly we notice it on a physical level, it soon begins to impact on how we think and feel, it affects our energy and we are usually blocked from experiencing moments of clarity, insight or bliss.

So how do we keep our entire being healthy? By looking after our back and spine. In a nutshell the body and in particular the back were designed to be moved. To maintain optimum health of your entire being ideally a gentle yoga practice where you explore the full range of movements of your back should be practiced. The practice should include stretching, strengthening, breathing work, positive affirmations, relaxation and meditation.

This is supported by the following research:

In the January issue of [Israel's Medical Association journal](#), Harefuah, researchers reported that yoga may be a valuable tool to treat chronic neck and low-back pain. Herniated discs and spinal stenosis do not cause pain but cause an irritation on the nerve which is usually caused by muscles tightening or going into spasm to protect the area and it is this tightening that then causes the pain. Muscular relaxants are prescribed by doctors to relax the muscles of the back. In yoga we contract muscles and then relax them mindfully to the rhythm of our breath. As we deeply breathe out the back pain may start to slowly ebb away.

Another [study, published in Complementary Therapies in Medicine](#), examined the effect of yoga on lower back pain. Dr. Padmini Tekur and colleagues from the Division of Yoga and Life Sciences at the Swami Vivekananda Yoga Research Foundation in India carried out a seven-day randomized control trial at a holistic health centre in Bangalore, India, with 80 patients who have chronic lower back pain. They assigned patients to one of two groups – yoga therapy and physical therapy. Their results showed that practicing yoga is more effective than physical therapy at reducing pain, anxiety and depression, and improving spinal mobility.

“The primary finding of the present study was yoga intervention decreased back pain, accompanied by increasing serum [brain-derived neurotrophic factor] level in premenopausal women with chronic low back pain. Subjects in the yoga group demonstrated a significant decrease in back pain intensity... and a significant increase in flexibility after 12-week yoga intervention whereas back pain increased... in the control group.” – Lee et al (2014), [Evidence-Based Complementary and Alternative Medicine](#)

If you wish to browse more papers on how yoga can help to maintain a healthy back please click [here](#).

**10. Helps with pro-inflammatory diseases such as cancer, heart disease and diabetes.** Diseases such as cancer, heart disease and diabetes are [pro-inflammatory diseases](#) caused by chronic inflammation. Research into these areas are suggesting that yoga may help with reducing inflammation. A study ([Effect of Yoga Practice on Levels of Inflammatory Markers After](#)

[Moderate and Strenuous Exercise](#)) carried out in 2015 divided 218 participants into two groups: those who practiced yoga regularly and those who didn't. Both groups then performed moderate and strenuous exercises to induce stress. At the end of the study, the individuals who practiced yoga had lower levels of inflammatory markers than those who didn't. Similarly, a small 2014 study ([Yoga reduces inflammatory signaling in fatigued breast cancer survivors: a randomized controlled trial](#)) study showed that 12 weeks of yoga reduced inflammatory markers in breast cancer survivors with persistent fatigue.

Although more research is needed to confirm the beneficial effects of yoga on inflammation, these findings indicate that it may help protect against certain diseases caused by chronic inflammation.

As well as yoga reducing or managing inflammation for the onset of the diseases mentioned here below you will find some additional benefits of practising yoga on these diseases (cancer, cardiovascular health and diabetes).

*Cancer:* Cancer patients could also use yoga as a fierce weapon to battle the effects of the disease. A study published in 2014 in the [Journal of Clinical Oncology](#) found that performing yoga twice a week for as little as three months could lower inflammation, boost energy, and lift the mood of female cancer patients.

A study conducted in 2007 ([Effects of an integrated yoga programme on chemotherapy-induced nausea and emesis in breast cancer patients](#)) followed women with breast cancer undergoing chemotherapy. Yoga decreased symptoms of chemotherapy, such as nausea and vomiting, while also improving overall quality of life.

A similar study in 2007 ([Yoga for women with metastatic breast cancer: results from a pilot study](#)) looked at how eight weeks of yoga affected women with breast cancer. At the end of the study, the women had less pain and fatigue with improvements in levels of invigoration, acceptance and relaxation.

In the following study [Effect of yoga on patients with cancer](#) they concluded that yoga may help improve sleep quality, enhance spiritual well-being, improve social function and reduce symptoms of anxiety and depression in patients with cancer.

More research follows...

In the following study [Effect of a six month yoga exercise intervention on fitness outcomes for breast cancer survivors](#) a yoga-based programme proved to be beneficial for practitioners, including cancer survivors. This study reports on the improvements in physical fitness for 20 breast cancer survivors who participated in a six-month yoga-based exercise program. Results are compared to a comprehensive exercise program group and a comparison exercise group who chose their own exercises.

[Physical and psychosocial benefits of yoga in cancer patients and survivors, a systematic review and meta-analysis of randomized controlled trials.](#) This study aimed to systematically review the evidence from randomized controlled trials (RCTs) and to conduct a meta-analysis of the effects of yoga on physical and psychosocial outcomes in cancer patients and survivors. Yoga appeared to be a feasible intervention and beneficial effects on several physical and psychosocial symptoms were reported. Further in depth study is required.



“Our findings support the notion that yoga for pediatric cancer patients during active treatment is feasible and potentially helpful in improving both patients' and parents' well-being.”

– Orsey et al (2017), [Rehabilitation Oncology](#)

“Feasibility of YP [yoga practice] immediately after breast cancer diagnosis was good. Improvement in emotional well-being, anxiety, depression, and levels of confusion was found in both groups.”

– Pruthi et al (2017), [Global Advances in Health and Medicine](#)

“Yoga is valuable in improving negative moods in patients with breast cancer. We also concluded five key mechanisms of yoga therapy in improving negative moods.”

– Zuo et al (2016), [International Journal of Nursing Sciences](#)

“In general, the present qualitative findings suggest yoga was an important component of survivorship aiding cancer survivors in their cancer journey and provided respite during active treatment.” – Mackenzie et al (2016), [Evidence-Based Complementary and Alternative Medicine](#)

“Lagged analyses of length of home yoga practice (controlling for individual mean practice time and outcome levels on the lagged days) showed that on the day after a day during which women [with metastatic breast cancer] practiced more, they experienced significantly lower levels of pain and fatigue, and higher levels of invigoration, acceptance, and relaxation.” – Carson et al (2015), [Journal of Pain and Symptom Management](#)

***Improves cardiovascular health:*** From pumping blood throughout the body to supplying tissues with important nutrients, the health of our heart is an essential component of our overall health. Studies show that yoga may help improve heart health and reduce several risk factors for heart disease.

The following study ([Effect of yoga on cardiovascular system in subjects above 40 years](#)) carried out in 2003 found that participants over 40 years of age who practiced yoga for five years had a lower blood pressure and pulse rate than those who didn't. High blood pressure is one of the major causes of heart problems, such as heart attacks and stroke. Lowering our blood pressure through yoga can help reduce the risk of these problems.

Yoga improves cardiovascular health because when we practice yoga the blood vessels relax which reduces blood pressure whilst increasing the blood flow to the heart muscle. As there is increased blood flow the coronary arteries do not get blocked and the blood vessels do not constrict which reduces hypertension and heart disease. A study published in the April 2015 issue of the [journal Diabetology & Metabolic Syndrome](#) backs this: Researchers followed 182 middle-aged Chinese adults who suffered from metabolic syndrome who practiced yoga for a year. The activity proved to not only lower their blood pressure, but also help them significantly slim them down, too.

This research ([Beneficial effects of yoga lifestyle on reversibility of ischaemic heart disease: caring heart project of International Board of Yoga](#)) also suggests that incorporating yoga into a healthy lifestyle could help slow the progression of heart disease. In this study 113 patients with heart disease were followed, looking at the effects of a lifestyle change that included one year of yoga training combined with dietary modifications and stress management. Participants saw a 23% decrease in total cholesterol and a 26% reduction in “bad” LDL cholesterol. Additionally, the progression of heart disease stopped in 47% of patients. It's unclear how much of a role yoga may have had versus other factors like diet. Yet it can minimize stress, one of the major contributors to heart disease.

For further research on yoga and cardio vascular health click [here](#).

Helps with diabetes: Through yoga we can improve our digestion which helps in how we digest blood sugar which in turn helps with both preventing and managing diabetes. A new study published in the April 2015 issue of the [Journal of Clinical and Diagnostic Research](#) supports this: Thirty men with Type 2 diabetes who practiced yoga for six months saw a significant decrease in their blood glucose levels.

Below you will find summaries from further research which supports this...

“Adherence to yoga has an effect on the blood glucose parameters in diabetes. Hence, strategies to motivate participants to undergo 'lifestyle modification practices' including maximizing adherence to yoga should be the focus to experience any beneficial effects of yoga.” – Angadi et al (2017), International Journal of Yoga

“Yoga practice enhances the subjective wellbeing, QOL [quality of life], improves mood and concentration, and facilitates achievement of adequate glycemic control among Type II diabetic patients.” – Satish et al (2016), International Journal of Yoga

“Yoga asanas have a beneficial effect on glycaemic control and improve nerve function in mild to moderate Type 2 diabetes with sub-clinical neuropathy.” – Malhotra et al (2002), Indian Journal of Physiology and Pharmacology

“These findings suggest that better glycaemic control and pulmonary functions can be obtained in NIDDM [Diabetes mellitus type 2] cases with yoga asanas and pranayama.” – Malhotra et al (2002), Indian Journal of Physiology and Pharmacology

“The present study was conducted to assess the effectiveness of yoga in the management of dyslipidemia in patients of type 2 diabetes mellitus... After intervention with yoga for a period of 3 months the study group showed a decrease in total cholesterol, triglycerides and LDL, with an improvement in HDL.” – Shantakumari et al (2013), Indian Heart Journal

**11. Helps improve sleep quality.** Poor sleep quality has been associated with obesity, high blood pressure and depression, among other disorders. As we have already explored studies show that yoga has a significant effect on anxiety, depression, chronic pain and stress - all common contributors to sleep problems. Further studies (see below) show that incorporating yoga into our routine could help promote better sleep.

In a 2005 study ([Influence of Yoga and Ayurveda on self-rated sleep in a geriatric population](#)), 69 elderly patients were assigned to either practice yoga, take an herbal preparation or be part of the control group. The yoga group fell asleep faster, slept longer and felt more well-rested in the morning than the other groups.

Another study ([Psychological adjustment and sleep quality in a randomized trial of the effects of a Tibetan yoga intervention in patients with lymphoma](#)) looked at the effects of yoga on sleep in patients with lymphoma. They found that it decreased sleep disturbances, improved sleep quality and duration and reduced the need for sleep medications.

Though the way it works is not clear, yoga has been shown ([Effects of Hatha yoga and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion](#)) to increase the secretion of melatonin, a hormone that regulates sleep and wakefulness.

**12. Helps with osteoporosis and ageing.** We have already explored studies into how yoga can help to expand our lifespan and youth. Yoga can also impact on other areas of the ageing process such as osteoporosis, fear of falling, fear of reduction in the quality of life, loss of muscle strength and flexibility.

In one study ([Randomized, controlled, six-month trial of yoga in healthy seniors: effects on cognition and quality of life](#)), 135 seniors were assigned to either six months of yoga, walking or a control group. Practicing yoga significantly improved quality of life, as well as mood and fatigue, compared to the other groups.

“Significant improvements in physical function and muscle-specific lower-extremity strength occur with the regular practice of a modified Hatha yoga program designed for seniors.”

– Wang et al (2016), [Evidence-Based Complementary and Alternative Medicine](#)

“The Insomnia Severity Index and diary-reported sleep onset latency, sleep efficiency, and number of nights with insomnia were significantly improved at post-intervention versus pre-intervention ( $p < .05$ )... This study supports the feasibility and acceptability of a standardized evening yoga practice for middle-aged to older women with OA [osteoarthritis].”

– Taibi et al (2011), [Sleep Machine](#)

“The results indicate that yoga may be a promising intervention to manage FoF [fear of falling] and improve balance, thereby reducing fall risk for older adults.”

– Schmid et al (2010), [Archives of Physical Medicine and Rehabilitation](#)

“Yoga appears to be an effective way to build bone mineral density after menopause.”

– Fishman et al (2014), [Topics in Geriatric Rehabilitation](#)

“The study measured effects of Sit ‘N’ Fit Chair Yoga on pain and physical and psychological functioning... There was greater improvement in depression and life satisfaction in the yoga group than in the control group.”

– Park et al (2014), [Holistic Nursing Practice](#)

“Yoga interventions resulted in small improvements in balance and medium improvements in physical mobility in people aged 60+ years.”

– Youkhana et al (2015), [Age and Aging](#)

“Yoga is a potential intervention to reduce fear of falling and improve balance in older adults.”

– Nick et al (2015), [PM&R Journal](#)

“[It] can be concluded that combined approach of yoga (Kriya, Suryanamaskara, Asana, Pranayama, and Meditation) significantly increases the basal level of [growth hormone] and [dehydroepiandrosterone sulfate] in the blood, thus contributing in promoting healthy aging.”

– Chatterjee et al (2014), [Evidence-Based Complementary and Alternative Medicine](#)

“Yoga has potential utility as a complementary and alternative therapy for chronic diseases and can help older adults to maintain their health.” – Eda (2014), [Journal of Clinical Research & Bioethics](#)

“We found that, among healthy sedentary menopausal women, yoga appears to improve menopausal quality of life.”

– Reed et al (2014), [American Journal of Obstetrics & Gynecology](#)

**13. Reduces PMS and improves women's health generally.** While śavāsana (pronounced shavasana and translates as corpse pose) sounds great during that time of the month, other poses may alleviate period symptoms as well. In a 2015 study ([The acute effects of yoga on cognitive measures for women with premenstrual syndrome](#)) published in the Journal of Alternative and Complementary Medicine this May, researchers found that 11 women who practiced yoga in the follicular phase (from first day of period until ovulation) and luteal phase (during ovulation) of a menstrual cycle felt more relaxed or were in a more peaceful mental state immediately afterward compared to the control group.

“This preliminary study suggests that women with PMS could benefit from yoga in the luteal phase to quickly reduce water retention.” –*Tsai et al (2016)*, [European Journal of Integrative Medicine](#)

“The results of this study suggest that women with PMS could attend short-term yoga exercise in the luteal phase to make themselves feel better and maintain a better attention level.” –*Cramer et al (2016)*, [Deutsche Zeitschrift für Akupunktur](#)

“In the present study, the relaxation response in the females suffering from PMS showed a reduction in an abnormally high basal sympathetic activity and a heightened relaxation response in both the study groups (group B [Anuloma-viloma] and Group C [yogic asanas]) in comparison with group A [no intervention].” –*Sharma et al (2013)*, [Indian Journal of Physiology and Pharmacology](#)

“[61-points relaxation exercise, a relatively less known hatha yoga technique] is effective in providing relief from PMS and may be a useful adjuvant to medical therapy of PMS and other stress disorders.” –*Dvivedi et al (2008)*, [Indian Journal of Physiology and Pharmacology](#)

“Premenstrual stress affects 75% of women of childbearing age and yoga has been found to be beneficial in many psycho-somatic disorders. Also, regular practice of yoga has beneficial effects on [the premenstrual and postmenstrual] phases of the menstrual cycle.” –*Kanojia et al (2013)*, [Journal of Clinical and Diagnostic Research](#)

“The patients with [menstrual disorders experiencing] mild to moderate anxiety and depressive symptoms improve significantly with 'Yoga Nidra' intervention.” –*Rani et al (2012)*, [International Journal of Yoga](#)

#### Helps to reduce stress when undergoing IVF...

“Our data suggest that women who are more distressed are more likely to accept psychological support before starting an IVF cycle and that in these women HY [Hatha Yoga] practice is associated with distress reduction.” –*Valoriani et al (2014)*, [European Journal of Obstetrics & Gynecology and Reproductive Biology](#)

“Anxiety, depression and fertility-specific quality of life showed improvement over time in association with participation in a 6-week Yoga programme in women awaiting their treatment with IVF.” –*Oron et al (2015)*, [Reproductive Biomedicine Online](#)

#### Helps with the menopause...

“Significant pre- to post-[yoga] treatment improvements were found for severity of questionnaire-rated total menopausal symptoms, hot-flash daily interference; and sleep efficiency, disturbances, and quality.” –*Booth La-Force et al (2007)*, [Maturitas](#)

“Yoga combined with meditation can be considered a safe and effective complementary intervention for menopausal symptoms in breast cancer survivors. The effects seem to persist for at least 3 months.” – *Cramer et al (2015)*, [Cancer](#)

“We found that, among healthy sedentary menopausal women, yoga appears to improve menopausal quality of life.” – *Reed et al (2014)*, [American Journal of Obstetrics & Gynecology](#)

“A pilot study of the effects of 10 weeks of yoga practice on 11 midlife women's menopausal symptoms was conducted... The women reported feeling relaxed and physically better after yoga class. Many viewed yoga as a skill they could incorporate into daily life to reduce stress and manage their menopausal symptoms.” – *Taylor et al (2008)*, [Journal of Evidence-Based Complementary & Alternative Medicine](#)

“Mean number of hot flushes per week decreased by 30.8% (95% CI 15.6-45.9%) and mean hot flush score decreased 34.2% (95% CI 16.0-52.5%) from baseline to week 8. No adverse events were observed... This pilot trial demonstrates that it is feasible to teach restorative yoga to middle-aged women without prior yoga experience.” – *Cohen et al (2007)*, [Maturitas](#)

#### Helps with gynaecological problems...

“The women's perceptions of the programme, [a 10-week course of Hatha yoga for gynaecological cancer patients,] were generally positive; many found benefits. [Patients] noted the breadth and applicability of the techniques in their day-to-day lives.” – *Archer et al (2014)*, [Complementary Therapies in Medicine](#)

#### Improves women's health generally...

“Participants agreed yoga improved: energy...happiness...social relationships...sleep...and weight. Yoga might be beneficial for a number of populations including elderly women and those with chronic health conditions.” – *Ross et al (2013)*, [Complementary Therapies in Medicine](#)

“A large percentage of the female population are using yoga or meditation... Women who regularly use yoga or meditation positively associated with measures of mental and physical health.” – *Sibbritt et al (2011)*, [Complementary Therapies in Medicine](#)

**14. Great for pregnancy.** There has been boundless research undertaken into how yoga can help with pregnancy. Some of the research is highlighted below...

“Yoga during pregnancy may contribute to a reduction pain of labour and improved adequacy of childbirth.” – *Jahdi et al (2017)*, [Complimentary Therapies in Clinical Practice](#)

“This study indicated the immediate stress reduction effects of yoga during pregnancy.” – *Kusaka et al (2016)*, [Women and Birth](#)

“Findings from this study suggest that pregnant, urban, adolescents are highly stressed; they interpret depression-like symptoms to be signs of stress; they desire group-based, interactive activities; and they are interested in yoga classes for stress/depression management and relationship building.” – *Kinser et al (2015)*, [Women's Health Issues](#)

“The current study suggests that prenatal yoga may be a viable approach to addressing antenatal depression, one that may have advantages in terms of greater acceptability than standard depression treatments. On average, participants' depression severity decreased significantly by the end of the intervention.” – *Battle et al (2015)*, [Women's Health Issues](#)

“Women who took part in the prenatal yoga program reported significantly fewer pregnancy discomforts than the control group at 38–40 weeks of gestation. The subjects who participated in the yoga program exhibited higher outcome and self-efficacy expectancies during the active stage of labor and the second stage of labor compared with the control group.” – Sun et al (2010), [Midwifery](#)

“The findings suggest that the location in which a woman practices yoga is associated with attitudinal, health-related and birth environmental factors.” – Cramer et al (2015), [BMJ Open](#)

“The integrated yoga is an efficacious means of improving the quality of life of pregnant women and enhancing certain aspects of their interpersonal relationships.” – Rakhshani et al (2010), [Quality of Life Research](#)

“Yoga reduces perceived stress and improves adaptive autonomic response to stress in healthy pregnant women.” – Satyapriya et al (2009), [International Journal of Gynecology and Obstetrics](#)

“Teachers see yoga for pregnancy as a multi-faceted, non-prescriptive intervention that enhances women's physical, emotional and social readiness for labour and birth, and supports women to make their own decisions across the transition to parenthood.” – Campbell et al (2015), [Women and Birth: Journal of the Australian College of Midwives](#)

“This randomized control study on yoga-based visualization and relaxation in high-risk pregnancy has shown significantly better uteroplacental and fetoplacental blood flow velocity in the yoga group compared to the control group.” – Rakhshani et al (2015), [Advances in Preventive Medicine](#)

**15. Yoga is wonderful for child and adolescent development.** The studies show that not only can it help with academic performance but it also helps to increase self-esteem, independence, confidence, physical & mental wellbeing, improves class room behaviour, helps children with ADHD, helps children who are mentally challenged, helps children to manage pain better and it also reduces stress.

*Improves academic performance...*

“This qualitative study of six focus groups across four public schools in New York City found that middle and high school students perceived the benefits to yoga as increased self-regulation, mindfulness, self-esteem, physical conditioning, academic performance, and stress reduction.” – Wang et al (2016), [Evidence-Based Complementary and Alternative Medicine](#)

“Among students with higher participation, those assigned to yoga classes had a significantly higher GPA. For example, at 49 classes of participation for both groups, students assigned to yoga classes had an estimated 2.70 higher mean GPA (effect size = 0.31) than students assigned to PE. – Hagins et al (2016), [Mind, Brain, and Education](#)

“The results suggest that yoga may have a protective effect on academic performance by preventing declines in GPA...” – Butzer et al (2015), [Evidence-Based Complementary and Alternative Medicine](#)

“This study was conducted to examine the differences in various domains of attention between long-term concentrative meditators versus matched controls... Long-term Vihangam Yoga meditation improves attention span, processing speed, attention alternation ability, and performance in interference tests.” – Prakash et al (1989), [Perceptual & Motor Skills](#)

“The results show that the students who practiced yoga performed better in academics. The study further shows that low-stress students performed better than high-stress students, meaning thereby that stress affects the students' performance.” – Kauts et al (2009), [International Journal of Yoga](#)



Improves child's development, health and wellbeing...

"These findings suggest that the implementation of yoga practice in physical education lessons contributed to children's development." – Folleto et al (2016), [International Journal of Yoga](#)

"In conclusion, the present study demonstrates attenuation of the sweating response to step test by yoga training. Further, yoga training for a short period of six weeks can produce significant improvements in respiratory muscle strength and endurance." – Madanmohan et al (2008), [Indian Journal of Physiology and Pharmacology](#)

"In conclusion, the study presents the efficacy of yoga to improve strength, endurance, whole body endurance and aerobic capacity with 3 months of training in the pediatric group." – D'souza et al (2014), [Indian Journal of Physiology and Pharmacology](#)

"The gross motor development of pre-school children may be enhanced by participation in a 6 week long developmentally appropriate group yoga program. When compared to a control group, the group participating in yoga demonstrating a statistically significant increase in static balance and functional lower extremity strength." – Bubela et al (2014), [Journal of Yoga & Physical Therapy](#)

"This study suggests that practice of yoga for a short duration (3 months) of time can significantly improve respiratory muscle strength in pediatric population." – D'Souza et al (2014), [International Journal of Yoga](#)

"The yoga module used may help improve proprioceptive function in VI [visually impaired] children." – Mohanty et al (2014), [British Journal of Visual Impairment](#)

"The results suggest that yoga practice, including physical postures, yoga breathing, meditation and guided relaxation improved delayed recall of spatial information." – Manjunath et al (2004), [Indian Journal of Physiology and Pharmacology](#)

Reduces stress and improves self-esteem...

"The purpose of this study was to investigate the efficacy of mindfulness training through yoga with school-age girls to reduce perceived stress, enhance coping abilities, self-esteem, and self-regulation, and explore the relationship between the dose of the intervention and outcomes... Self-esteem and self-regulation increased in both groups. The intervention group was more likely to report greater appraisal of stress ( $p < .01$ ) and greater frequency of coping ( $p < .05$ )." – White et al (2014), [Journal of Pediatric Health Care](#)

"After the 6-week yoga program, children ( $n = 7$ ) had a significant decrease in anxiety score ( $P = .04$ ) while adolescent scores ( $n = 7$ ) showed a decreasing trend ( $P = .10$ ). Scores for fatigue, sleep, and balance remained stable post-intervention. Fatigue and balance scores were below norms for health children/adolescents while sleep and anxiety scores were similar to healthy peers." – Hooke et al (2015), [Journal of Pediatric Oncology Nursing](#)

"Anecdotal data and clinical observation underscore the promise of yoga as a viable approach to build self-regulatory capacity of traumatized youth." – Butzer et al (2015), [Evidence-Based Complementary and Alternative Medicine](#)

"We conclude that participation in yoga classes may be both enjoyable and beneficial to children living in stressful conditions...[or] postwar stress situations." – Ehud et al (2010), [International Journal of Yoga](#)

### Helps with classroom behaviour...

“Evidence for the effectiveness of three months yoga on EF [executive function] was demonstrated in this study, which may be a useful tool for the young orphans, to be practiced for cognitive health on a daily basis. The sustained effect of Yoga on EF seen in the present study may have potential implications on learning, classroom behaviour and in handling the adverse circumstances and stand as a preventive measure for mental health problems.” – Purohit et al (2017), [Journal of Traditional and Complementary Medicine](#)

“These results suggest that school-based yoga programs may be appropriate for promoting healthy behaviors at a societal level by focusing on the prevention of negative patterns during the adolescent transition.” – Conboy et al (2013), [Explore: The Journal of Science and Healing](#)

### Helps with ADHD and mentally challenged children...

“Within these limitations, we may conclude that in-patients with ADHD can be taught a package of yoga along with other medical treatments. The findings encourage RCT of yoga intervention in in-patients with ADHD. There is a suggestion from this study that home yoga practice is also feasible and may benefit ADHD.” – Hariprasad et al (2013), [Indian Journal of Psychiatry](#)

“The results of this pilot study demonstrate that a six-week peer-mediated multimodal behavioural program that included Yoga and Meditation can lead to measurable benefits in children with ADHD. More than 50% of the children improved their academic and behavioural performance.” – Mehta et al (2011), [ISRN Pediatrics](#)

“There was highly significant improvement in the IQ and social adaptation parameters in the yoga group as compared to the control group. This study shows the efficacy of yoga as an effective therapeutic tool in the management of mentally challenged children.” – Uma et al (1989), [Journal of Intellectual Disability Research](#)

“Yoga has the potential to help [psychiatrically hospitalized] adolescents in an acute care psychiatric hospital learn to soothe themselves, to regulate their emotions, and to find relief from emotional distress while hospitalized.” – Re et al (2014), [Journal of Child and Adolescent Psychiatric Nursing](#)

“Positive effects of yoga have been shown in persons with mental-health problems, eating disorders and irritable bowel syndrome. There is considerable evidence that mind-body interventions have mild to moderate effects on physical symptoms, psychological functioning and [quality of life], and may be particularly helpful for children coping with acute pain... chronic abdominal pain... and mental-health problems.” – Hartmann et al (2012), [Focus on Alternative and Complementary Therapies](#)

### Helps manage various illnesses...

“Group yoga is effective in promoting relaxation in children and adolescents with recurrent headache. Yoga may offer an adjunct to common pharmaceutical options for headache management for children and adolescents.” – Fury et al (2013), [Global Advances in Health and Medicine](#)

“These preliminary findings suggest that Hatha yoga has the potential to play an important role in pediatric obesity...and support the use of Hatha yoga as a safe and promising intervention for improving aspects of physical and psychosocial functioning in severely obese adolescents.” – Hainsworth et al (2014), [Journal of Yoga & Physical Therapy](#)

“This pilot study suggests that yoga exercises are effective for children aged 8–18 years with [functional *abdominal pain*], resulting in significant reduction of pain intensity and frequency, especially in children of 8–11 years old. Parents reported a significantly higher [Kidscreen quality of life] score after yoga treatment.” – Brands et al (2011), [Complementary Therapies in Medicine](#)

“This 12-week community-based yoga intervention was feasible and provides preliminary evidence for the benefits of yoga on [health-related quality of life], physical fitness and [physical activity levels] in *pediatric cancer* out-patients.” – Wurz et al (2014), [Pediatric Blood & Cancer](#)

**Conclusion.** As we can see from the multiple evidence based research explored in this essay yoga can help us not only improve our overall physical fitness, but it can help with the prevention and management of pro-inflammatory diseases, alleviate stress and anxiety, sharpen the brain, help us to remain youthful and to manage the aging process, help prevent and manage a variety of women’s health issues, help in pregnancy, child and adolescent development. Yoga is quite a powerful tonic and hopefully the research will continue and perhaps some will focus on the more subtle esoteric benefits of yoga. Such as, developing a feeling of deep connection and oneness, and through the development of this feeling of “connection” changing lifestyle habits to help not only ourselves but other species that we inhabit this planet with, becoming more eco, ethically and socially minded.

In a nutshell finding time to practice yoga a minimum of one time a week will have enormous benefits not only on our own health but on the health of our community and planet. See you on the mat!

