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## **11 Surprising Things About Stress, Inflammation, Pain & Sleep**

And 6 Things You Can Do

From the course, *Unraveling the Knot of Stress, Inflammation, Pain & Sleep*

1. Short term stress can be protective and supportive of the immune system and it prepares us to deal with change and challenge. Stress Resilience is a result of strong and balanced nervous and endocrine systems, personal connections that are meaningful and supportive, and access to the resources that we need to meet the challenge.
2. Chronic Stress leads to Chronic Inflammation.
3. Chronic Inflammation and Chronic Stress are disease permissive and are connected to obesity, cancer, autoimmune diseases, heart disease, Alzheimer's disease, diabetes, depression, asthma, gastrointestinal problems and premature death.
4. Pain is Neuroinflammation and is made worse by Stress.
5. Pain arises from an inflammatory environment which has "heated up" neural signalling into an entrenched pattern. This pattern often persists after a structural injury is long resolved.
6. "Cooling off" any one of Stress, Inflammation or Pain reduces the impact of the others.
7. Sleep reduces the effects of Stress, Inflammation & Pain. Sleep disruption makes Stress, Inflammation & Pain worse.
8. Yoga practice results in an overall reduction in physiological markers of stress, showing changes in positive affect, self-compassion, and inhibition of the posterior hypothalamus and cortisol as mediators<sup>1</sup> and is associated with improved regulation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis.<sup>2</sup>
9. The practice of yoga is an effective method to reduce inflammation across a multitude of chronic conditions.<sup>3</sup>
10. Yoga research shows that yoga interventions result in a clinically significant improvement in functional outcomes in pelvic pain<sup>4</sup>, mild to moderate low-back pain and fibromyalgia,

significantly improve pain in osteoarthritis, rheumatoid arthritis, mild to severe low-back pain and associated disability.<sup>5</sup> Yoga research using randomized controlled trials and other research methods, indicate that yoga practice can reduce pain and disability, can be practiced safely, and is well-received by participants.<sup>6</sup>

11. Meditation practice has been shown to reduce pain intensity by 40% and pain unpleasantness by 57%, with decreases ranging from 11 to 93%. Morphine and other pain-relieving drugs typically show a pain reduction of 25%<sup>7</sup>

### **A Bonus for You:**

12. Yoga practitioners have more gray matter in multiple brain areas and increased pain tolerance. Regular yoga practice is associated with greater brain volume in areas involved in bodily representation, attention, self-relevant processing, integration of the autonomic nervous system, emotional regulation, stress regulation<sup>8</sup> and interoception<sup>9</sup>.

### **How to Start Flourishing Habits to Reduce Stress, Inflammation, Pain & Sleep?**

New habits tend to stay with us when we choose one to start, then practice until the new behavior is stable. Then, perhaps choose another. Here are a few recommendations to get you going. You may want to create your own list.

1. Practice any mind-body method: yoga, breathing meditations, tai chi, or mindfulness meditation, for example, 3-60 minutes a day, for more days than not each week.
2. Be at least 11% present (not away with other thoughts) with your practice and experiment with increasing how present vs non-present you are throughout the day.
3. If you are not yet fully plant based in diet, try swapping a plant based protein one day per week and see how you feel. Increase this at a pace that feels right for you, until your diet is mainly plant based.
4. Stay socially engaged in real time: in person, on the phone or facetime/zoom. Freely give and receive compassion, humor, and conversations.
5. At the beginning and end of each day, name 1-3 things for which you are grateful. Consider journaling.
6. Most importantly, have compassion for self as completely human, fallible, and also divine.

### **Another Bonus for You:**

Sitali Breath is a meditation practice found in most Yogic Traditions and, *yet another surprising thing*, it reduces stress, inflammation, and pain; and supports restful sleep.

## Sitali Breath

Sit in easy pose or on a chair with your weight equally distributed on both feet. Lengthen and align your spine comfortably. Keep your chin level with the floor, holding a light neck lock. Open your mouth and form an "O" shape with the lips. It may help to slightly pucker your lips. Extend the tip of your tongue past your lips and curl your tongue lengthwise.

Close your eyes and bring your focus at the point between your eyebrows.

Inhale slowly and deeply through your rolled tongue, filling your lungs completely. Exhale slowly and fully through your nostrils. Breathe slowly and calmly, so that the passage of air through the tongue and nostrils makes little sound. Continue for 3 to 11 minutes.

To end, inhale deeply through your nostrils, then exhale through your nostrils. Relax your tongue back into your mouth, relax your eye focus and resume normal breathing through the nose. Sit still with awareness for about 1 minute.

Sitali Breath is said to be a cooling practice that benefits the kidneys and adrenals, reduces pain and inflammation, and calms the mind. As with any breathing practice if you become dizzy or lightheaded stop and resume natural breathing.

*Unraveling the Knot of Stress, Inflammation, Pain & Sleep* is one course offered by the International Kundalini Yoga Therapy Professional Training. It is open to all Kundalini Yoga teachers who have taken the prerequisite, *Foundations of Kundalini Yoga Therapy: Principles & Practices*. For details, visit, [grdcenter.org/events](http://grdcenter.org/events)

## References

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