Research on Sudarshan Kriya Yoga –
Physical & Mental Health benefits

Sudarshan Kriya and accompanying breathing practices, referred to collectively as SKY and taught worldwide by the International Association for Human Values, in collaboration with the Art of Living Foundation, have been found to enhance brain, hormone, immune and cardiovascular system function. Published research shows that SKY significantly reduces stress, depression, anxiety and Post-Traumatic Stress Disorder (PTSD), and significantly increases well-being both mentally and physically. Research also demonstrates that the effects of SKY reach all the way down to the molecular level, to our DNA.

Over 60 independent studies conducted on four continents and published in peer reviewed journals, have demonstrated a comprehensive range of benefits from SKY practice.

Significant Health Benefits Documented in Independent Research and published in Peer Reviewed Journals

Mental Well-being:

Restoration and Enhancement of Vibrant Mental Health:

- **Relieves anxiety [1-8] & depression [2, 4, 8-15], PTSD symptoms [3, 13, 14] and stress levels [4, 6, 15, 16]**
    - significant reductions in anxiety are found in many populations, including a 73% response rate and 41% remission rate in individuals for whom medication and psychotherapy treatments had failed [**1**].
    - Multiple studies demonstrate that depressed patients who learned SKY experienced a 68-73% remission rate within one month.
    - Significant reductions in PTSD symptoms were found in 4-6 weeks and were sustained at 6 months[13] and one year**[3, 13].**

- **Reduces impulsivity and addictive behaviors [17, 18]**

- **Improved emotional regulation [15, 19, 20]**

- **Increased levels of optimism, joviality (e.g. joy, happiness, energy), serenity, life satisfaction and quality of life [4, 5, 13, 20-22]**

Enhanced brain functioning: [11, 12, 23]

- **Increased mental focus / heightened awareness** [**23]**

Physical Well-being:

Enhanced biochemical status:

- **Reduced biochemical markers of stress**: cortisol **[2, 25, 26]**, corticotrophin [2] blood lactate [**27]**, ACTH [**2**], and plasma malondialdehyde (MDA) **[2, 28] [29]**
    - For example, blood lactate levels in police cadets who did not learn SKY were 4 times higher than their classmates who were randomized to learn SKY, suggesting a greatly increased resilience to stress in SKY practitioners.
    - Since stressful physiological responses negatively impact immune, cardiovascular and endocrine systems, as well as mental health, this has significant implications for wellness [**14]**.

- **Increased levels of antioxidant enzymes** (glutathione, catalase, and superoxide dismutase) [**6, 27, 31]**
    - Antioxidants protect us from many diseases and rapid aging.

Enhanced immune function:

- **Improved immune cell counts in apparently healthy individuals [16, 18]**
    - Some documented within three weeks (neutrophils, lymphocytes, platelet count) **[16]**

- **Improved immune cell counts in health compromised individuals seen in 12 weeks** (Natural Killer Cells) [**18]**

- **Rapid changes to gene (packages of information in DNA) expression [31-33]**
    - SKY induced changes in the expression of genes in white blood cells (our immune cells) within two hours of starting the practice. This was 4-fold more than simple exercise and relaxation used as the control condition in the same study participants [32**]** .

    - Long-term effects of SKY on expression of 11 genes related to oxidative stress, DNA damage, cell cycle control, and cell death suggests that the long-term benefits of SKY may be mediated in part by regulation of gene expression [**31]**.

Enhanced Cardiovascular and Respiratory Function:

- **Reduced heart rate** in both healthy and health compromised individuals **[34-36] [6]**

- **Reduced blood pressure**
    - In both healthy and health compromised individuals **[6, 29, 34, 35]**

- **Improved cholesterol and triglyceride (lipid) profiles: [28] [6, 16]**
    - Sometimes seen as early as 3 weeks, with no change in diet **[28]**

- **improved respiratory function: [3, 35-38]**

- respiration rate dropped by 5% in 1 week **[3**] and 15% in 12 weeks **[37]**
- increased lung (vital/forced vital) capacity **[35, 36, 38]**

In Summary, Sudarshan Kriya uses specific cyclical, rhythmic patterns of breath to bring the mind and body into a relaxed, yet energized state. Its effects have been studied in open and randomized trials, both in healthy and health compromised populations.

Research suggests that SKY reduces depression, anxiety, PTSD and stress. It has also been shown to curb addictive behaviors and substance abuse. It significantly increases feelings of well-being, optimism and mental focus and improves emotion regulation. In addition, SKY is associated with enhanced cardio-respiratory function, antioxidant status and immune system function. The practice has even been shown to impact gene expression at short and long term periods, suggesting that the effects of SKY span all levels of the physiology from the genetic level to our cells to organ systems. Viewed together, the wide range of documented benefits suggest that SKY may be an efficient tool for rapidly strengthening the mind-body complex.

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