

Yoga boosts heart health

9 November 2009

Heart rate variability, a sign of a healthy heart, has been shown to be higher in yoga practitioners than in non-practitioners, according to research to be published in a forthcoming issue of the *International Journal of Medical Engineering and Informatics*.

The autonomic nervous system regulates the [heart](#) rate through two routes - the sympathetic and parasympathetic nervous systems. The former causes the heart rate to rise, while, the parasympathetic slows it. When working well together, the two ensure that the heart rate is steady but ready to respond to changes caused by eating, the fight or flight response, or arousal.

The ongoing variation of heart rate is known as heart rate variability (HRV), which refers to the beat-to-beat changes in heart rate. In healthy individuals HRV is high whereas cardiac abnormalities lead to a low HRV.

Now, Ramesh Kumar Sunkaria, Vinod Kumar, and Suresh Chandra Saxena of the Electrical Engineering Department, at the Indian Institute of Technology in Roorkee, in Uttarakhand, India, have evaluated two small groups of men in order to see whether [yoga](#) practitioners can improve heart health. Anecdotal evidence would suggest that yoga practice may improve health through breathing exercises, stretching, postures, relaxation, and meditation.

The team analyzed the HRV "spectra" of the electrocardiograms (ECG) of forty two healthy male volunteers who are non-yogic practitioners, and forty two who are experienced practitioners, all volunteers were aged between 18 and 48 years.

The spectral analysis of HRV is, the team says, an important tool in exploring heart health and the mechanisms of heart rate regulation. The power represented by various spectral bands in short-term HRV are indicative of how well the heart responds to changes in the body controlled by the sympathetic and the parasympathetic nervous

systems.

The team explains that very low frequency (VLF) variations in the spectra are linked to the body's internal temperature control. Low frequency peaks are associated with the sympathetic control and high frequency with parasympathetic control.

The team concludes that in their preliminary study of 84 volunteers, there is strengthening of parasympathetic (vagal) control in subjects who regularly practice yoga, which is indicative of better autonomic control over [heart rate](#) and so a healthier heart.

More information: "A comparative study on spectral parameters of HRV in yogic and non-yogic practitioners" in *Int. J. Medical Engineering and Informatics*, 2010, 2, 1, 1-14

Source: Inderscience Publishers ([news](#) : [web](#))

APA citation: Yoga boosts heart health (2009, November 9) retrieved 2 July 2022 from <https://medicalxpress.com/news/2009-11-yoga-boosts-heart-health.html>

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