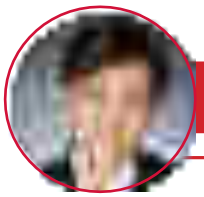
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Advantages of Yoga in the Treatment of Primary Headaches



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Primary headache and Migraine are common conditions in every society and are the 6th leading cause of disability worldwide, affecting approximately 12% of Americans and millions worldwide, resulting in an inability to attend work or school for at least 1 day every 3 months. Numerous pharmacological options exist for headaches treatment, but these therapies come at high cost and carry numerous potential adverse effects. Yoga is an ancient Indian non-religious technique that is known to aid in treatments of chronic conditions such as stress, anxiety, depression, hypertension and diabetes, and have a substantial effect on reducing headache burden. Research studies have been conducted to demonstrate the effectiveness of yoga lifestyle modifications and exercise on chronic pain syndromes, specifically in primary headache and migraine. Yoga was shown to improves quality of life, reduce headache intensity and headache frequency, when used alone or as an adjuvant to conventional therapy and show a significant decrease in headache frequency and intensity along with a reduction in the use of symptomatic medication. Yoga, being a slow non-exertional aerobic exercise, enhances mood and alleviates stress and depression in adults and invaluable treatment alternative in the pediatric population, where it can create a sustainable healthy lifestyle. Headache is one of the most common symptoms observed by healthcare professionals in their day-to-day clinical practice and the biggest contributor, affecting approximately 12% of Americans and millions worldwide [1]. It has been shown to be a main reason for decreased work or school productivity by 50% in almost half of affected individuals during an attack and thus has a significant impact on overall well-being and quality of life [2] and can result in an inability to attend work or school for at least 1 day every 3 months [3]. In the USA alone, migraine contributes to 86.5 million lost workdays each year and to an indirect annual cost of $9.3 billion [4]. Headache can be a secondary symptom of many neurological disorders as well as a primary disease and a risk factor for stroke, hypertension, diabetes, asthma and obesity [5]. It includes migraine headache, tension headache and trigeminal autonomic cephalalgias such as cluster headache and characterized as a recurrent disabling headache, pulsating or throbbing in quality, and moderate to severe in intensity. Migraines are often accompanied by photophobia, phonophobia, nausea, vomiting, and aggravated by routine physical exercise [6] and is classified into two categories: episodic migraine and chronic migraine. Chronic migraine is defined as 15 headache days per month with 8 days per month that meets the criteria for migraine and/or when a migraine medication such as a triptan is used for more than three months [7]. Episodic migraine is defined as 14 or less headache days per month [8]. Tension headaches are reported as recurrent episodes of headache which are typically pressing or tightening in quality, of mild to moderate intensity, bilateral in location and do not worsen with routine physical activity [9]. Globally, more than three billion people are estimated to be suffering from migraine and tension headache estimated to account for 11.2% of YLDs (years lived with disability) [10,11]. Prevalence is higher in females than in male with a changing ratio of 2:1 to 3:1, especially between the ages of 25 and 55 years [12]. For migraine, reported global agestandardized prevalence in 2016 was 14• 4% (13.8–15.0) overall: 18.9% (18.1–19.7) for women, and 9.8% (9.4–10.2) for men (Table 1). Worldwide, at any given time, it is approximated that 47% of adults have an active headache, 10% have a migraine, 38% have tension-type headache and 3% have a chronic headache. In the USA, headaches are the leading cause of outpatient visits to emergency department.

Yoga is an ancient Indian non-religious technique that combines both physical postures and breathing exercises known to decrease chronic pain syndromes by relieving stress. It may be implemented as an adjunctive approach in addition to pharmacologic therapy and other lifestyle modifications. Yoga has been shown to be effective in prevention and treatment multiple chronic conditions such as stress, anxiety, depression, hypertension and

diabetes and is known to have a substantial effect on reducing headache burden. [3] Yoga can dy disorder, where the disturbances in the mind influence the flow of Prana, which is the vital force/breath, resulting in physical problems and affecting the weakest system in the body [18]. Yoga can be practiced as a mind-body intervention on a daily basis that incorporates various stretching, breathing exercises, and asanas/postures, to create relaxation known as Shavasana [19]. The aim of this review is to provide comprehensive evidence for the practice of yoga as a more beneficial treatment modality for headaches than current pharmacologic treatment.

Literature Review : Journal articles were reviewed by using a PubMed search of the past 15 years for all studies pertaining to yoga as a treatment for headache. Attention was made to look for articles explaining how yoga can be used as a treatment for different types of headaches such as migraine and chronic tension type headaches, specifically the duration and frequency of yoga that was used and a description of the results, demonstrating the potential effects that yoga could have for patients. The review was analyzed by the number of subjects and implementation of yoga or complementary alternative medicine (which included yoga) as a treatment for headache. Articles that used yoga combined with alternative treatments along with pharmacological medications was not excluded, rather, purposely included showing how yoga could be used in conjunction with other medical treatments. Controlled prospective nonrandomized, cross-sectional, and comparative studies were included along with randomized control studies. The reviewed articles were not standardized by the number of patients nor by the populations from which patients were selected, which range from 19 patients to 23,393 patients. Yoga as remedy for headache in evidence-based literature There are several research studies that scientifically support the use of yoga to improve the quality of life of people with headaches [20]. Combined use of Ayurveda and yoga has been shown to significantly reduce migraine and stress. Specifically, for episodic migraine, studies have demonstrated that the application of integrative medicine, including yoga among other therapies, reduces overall stress level as well as headache frequency [21]. A 90-day study by Sharma et al. recruited 30 subjects in an Ayurveda and yoga group compared to 30 control subjects who received NSAID's to determine if Ayurveda and yoga could decrease symptomatology associated with headaches. The study showed yoga to significantly reduce pain intensity and improve the quality of life in patients with migraine. Specifically, the study was able to show that traditional Ayurveda along with yoga therapy decreased migraine symptoms [20]. Kisan et al. showed a similar reduction in pain intensity and demonstrated an improvement in vagal tone and reduction of sympathetic activity in such patients. Another study by Wells et al. showed reduction in migraine attacks after 8 weeks of mindfulness-based stress reduction, with decreased medication use in all groups, although the sample size was too small to detect a statistically significant affect.

Therefore, yoga could become an invaluable treatment alternative in the paediatric population as it can create a sustainable lifestyle, showing the need for conducting further studies on yoga and headaches as a potential treatment modality in the paediatric population. In a review where six randomized controlled trials were analysed investigating the effect of yoga on headaches, yoga exercise resulted in a significant reduction in headache intensity, frequency and in anxiety and depression. In particular, one randomized controlled trial compared the effect of yoga as a treatment for headaches, showing that there was a significant decrease in headache frequency and intensity along with a reduction in symptomatic medication used. This trial implemented yoga poses and breathing techniques to manage headaches and even though both groups received medication, the yoga group had significantly reduced frequency and intensity

Biography

Dr. Roni Sharon is a board certified Neurologist and a diplomat of the American Board of Psychiatry and Neurology (ABPN). He practices general neurology with a fellowship trained specialization in headache medicine.Dr. Sharon enjoys the challenging nature of neurology. He is particularly interested in . providing comprehensive care for many neurological conditions which often includes lifestyle changes, exercise and diet

in addition to medication and procedures. Dr. Sharon has authored multiple publications in medical journals. He has lectured on topics of Neurology all around the world. He takes a special interest in headache and migraine. Medical Training Education: Fellowship in Headache Medicine at Brigham and Women's Hospital, Harvard Medical School, Boston MA. Residency in Neurology at Mount Sinai Beth Israel Hospital, New York, NY. Internship in Internal Medicine at Mount Sinai Beth Israel Hospital, New York, NY.



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