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The impact of Yogasana on hockey players: Enhancing performance and well-being

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Abstract

Around the world, yoga is a very trendy activity. Since its inception and widespread promotion, yoga has primarily been practiced in social groups and studios, frequently as a part of college elective courses. In middle schools, basic yoga teaching is typically nonexistent. The majority of lower extremities, including the hips, legs, and other connected lower extremities, are injured in hockey players. The purpose of this study is to look at the benefits that adding yoga poses to hockey players' training regimens may have. The study looks at the physiological and psychological advantages of yoga poses, their effects on balance, flexibility, and injury avoidance, as well as their potential effects on focus and mental toughness. The paper attempts to shed light on the holistic benefits that Yogasana may provide to improve the performance and well-being of hockey players using references to scientific studies and professional perspectives.

Keywords: yoga and hockey, effect of Yogasana, core strength, balance, stability, flexibility, mind-body connection

Introduction

Athletes in the realm of sports are constantly looking for ways to enhance their abilities, physical health, and general well-being. Hockey players must keep their physical and mental focus at their highest levels because it is a hard and physically demanding sport. Incorporating yoga poses, or Yogasana, into an athlete's training regimen is one strategy that has gained popularity in recent years. Yogasana, which has its roots in ancient Indian practices, is a collection of postures and breathing exercises meant to increase physical stamina, flexibility, and mental clarity (Telles *et al.*, 2016) [1]. Numerous studies have shown that yoga has extra benefits for reducing stress and treating and preventing chronic non-communicable diseases (Bucea-Manea-Țoniș *et al.*, 2023) [4]. Based on the research showing that yoga enhances immune and respiratory systems, some writers have created relatively simple-to-follow integrated yoga modules that can be practiced for illness prevention. (Bucea-Manea-Țoniș *et al.*, 2023; Nagarathna *et al.*, 2020; Sawant *et al.*, 2021) [4, 12, 18]. Yoga is frequently practiced by athletes as part of their training to improve their physiological capabilities, performance, and self-control while lowering their risk of developing post-traumatic stress disorder. Mindfulness practices are the main focus of all therapeutic programs and therapies for stress reduction and the treatment of various stress- and lifestyle-related health conditions. Effective self-regulation techniques are a key component of the yoga path to obtaining holistic health and well-being. The elite athlete can develop superior self-awareness and self-regulatory skills compared to non-practitioners through the regular and proper practice of yoga postures and meditation, which is reflected in higher levels of interceptive awareness and decentering capabilities (Bucea-Manea-Țoniș *et al.*, 2023; Tolbaños-Roche & Menon, 2021; Vago & Silbersweig, 2012) [4, 21, 24]. Elite athletes regularly utilize the yoga's self-awareness, self-regulation, and self-transcendence framework as a strong training foundation. Yoga sessions feature a conscious inner focus on awareness of the self, breath, and energy in addition to physical activity. Yoga practice produces a physiological state that reverses the stress reaction, which makes it possible to establish harmony and oneness between the body and mind.

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Yoga is utilized in sports to achieve optimum physical fitness and prevent injuries while enhancing performance. A yoga intervention improves athletes' flexibility, muscle strength, stamina, and cardiovascular performance, according to certain research (Polsgrove *et al.*, 2016; Tran *et al.*, 2001)^[15, 22]. The metamorphosis of elite athletes requires the development of physical endurance and flexibility as well as stress management, resiliency, tranquility, mind-body awareness, and spiritual/personal growth. The effectiveness of the global health system has increased as a result of these processes, notably in terms of physical and mental health and wellbeing (Bucea-Manea-Țoniș *et al.*, 2023; Cheshire & Cartwright, 2021)^[4, 5]. Hockey is a competitive sport, and both the players and the teams practice hard to perform at a medal-winning level. Due to their intense training, hockey players frequently sustain injuries to their legs, lower limbs, or other significant lower body muscles. Leg muscle strengthening may be beneficial for reducing the risk of injury. Yoga asanas can also help to strengthen the leg muscles. The prone and supine poses, as well as some other back extension poses, have been demonstrated to build back strength in various research investigations. Positive outcomes have been obtained from research on a variety of topics. Through prone and supine laying asanas, the researcher seeks to assess the back strength of the female hockey players in this study. The researcher felt it worthwhile to conduct and see the results of its impact (Trivedi & Kamra, 2023)^[23]. The physiological effects, impact on flexibility and injury prevention, and contribution to psychological well-being are the main topics of this paper's investigation into the possible advantages that yoga poses may offer to hockey players.

Main points to cover

Benefits of Yoga and Elite Sports Training

A organized training program in conjunction with the regular practice of yoga, a component of traditional Indian culture and lifestyle, aids practitioners in monitoring and improving their level of physical fitness. All athletes can benefit from yoga, but it is particularly effective at preventing injuries in sports like sprinting, tennis, basketball, and baseball that call for fast movements. By increasing vagal (parasympathetic) activation and reducing the sympathetic nervous system's and the hypothalamic-pituitary-adrenal axis's stress response, yoga is hypothesized to have therapeutic effects. Yoga closely resembles the essential elements of athletic performance, including balance, flexibility, muscle strength, muscle endurance, and movement effectiveness (coordination) (Bucea-Manea-Țoniș *et al.*, 2023; Jeitler *et al.*, 2020)^[4, 7]. Yoga training equips athletes with a variety of strategies and techniques that will benefit them in both their academic and social life. Target participants' memory and cognitive function are improved by yoga. This is due to the fact that yoga can benefit athletes who experience high levels of stress. Yoga practice will also result in improved social-emotional skills over time.

Yoga reduces post-traumatic stress disorder

The number of injuries among athletes is epidemic. The psychological and physical strains placed on athletes by psychosocial stressors and training regimens greatly enhance their risk of injury (Arbo *et al.*, 2020; Laux *et al.*, 2015)^[2, 9]. Sports-related concussions may have a longer neurobiological recovery time than clinical recovery time, which may increase the risk of repeated musculoskeletal injury. According to several researchers, concussions sustained while participating

in sports increase the chance of musculoskeletal injury. Players with a prior injury would face a higher frequency of acute-noncontact injuries compared to athletes without a history of concussions from sports, but only female athletes would be impacted by this association. Throughout the competitive season, team sports coaches collected electronic records of athlete exposures and injury data, including injury features like injury rates per 1000 athlete exposures and incidence rate ratios (IRRs). Acute-noncontact lower-extremity injuries were 87% more likely to occur among people who had previously sustained a sports-related concussion compared to participants who had not. The IRRs of acute-contact or overuse lower-extremity injuries were unaffected by a prior concussion sustained while participating in sports. Young female athletes who had previously suffered a sports-related injury during the preceding 12 months were more likely to suffer an acute, non-contact lower limb injury when participating in top sports training. (Biese *et al.*, 2021)^[3]. At the very least, yoga can promote the ability of a yoga intervention to reduce two critical risk factors for injury: generalized fatigue and perceived susceptibility to injury. Yoga can be successfully implemented into players' sports regimens. Football, handball, swimming, skiing, and baseball are a few activities that can benefit from yoga PTSD (Arbo *et al.*, 2020; Laux *et al.*, 2015)^[2, 9].

Yoga improves athletes' performance

Participants' sit-and-reach scores increase after practicing yoga. In comparison to the control group, NCAA baseball and soccer players' flexibility and balance greatly increased after a 10-week yoga intervention, according to research by Polsgrove *et al.* The aforementioned writers examined the effects of yoga training on the flexibility of collegiate athletes between the ages of 18 and 24 and came to the conclusion that after 12 weeks of instruction, their flexibility had significantly increased. Yoga practice also enhanced muscle torque and decreased lower back pain. Additionally, there was a noticeable improvement in shoulder elevation, ankle flexibility, knee extension, trunk extension, and trunk flexion (Bucea-Manea-Țoniș *et al.*, 2023)^[4].

Physiological benefits of Yogasana

Regular standing Yogasana practice has been shown to increase core muscle strength, postural stability, and reduce the risk of musculoskeletal disorders. Numerous tailored exercise programs have recently been created and implemented to improve physical capacity and muscle strength to enable this population to continue participating in activities of daily living. However, the Yoga participants' leg press physical strength increased (deshi & Das, 2023)^[6]. It was discovered that doing asanas was more beneficial than jogging for raising serum cholesterol, vital capacity, and breath holding duration. Through the neuroendocrinal mechanism, it has already demonstrated its potency in reducing oxidative stress and enhancing the glycemic state of diabetics (Prem & Rajan, 2017)^[16]. Yogasanas involve tonic muscular contraction, coordinated with respiratory control and kinesthetic awareness, which uses less energy than phasic muscle contraction, which is frequently seen in physical activities. Yogasanas involve coordinated, rhythmic movements that correct postural abnormalities, muscular imbalance, promote joint mobility and muscle strength, stimulate postural control systems, and extend self-awareness without causing unnecessary tiredness (Mullerpatan *et al.*, 2020)^[11].

Flexibility and injury prevention

Previous research have shown that practicing yoga increases flexibility and strength, improves musculoskeletal health, lowers the risk of cardiovascular disease, and enhances quality of life. According to reports, yoga is a safe regular type of treatment and exercise (Liu *et al.*, 2021) ^[10].

Psychological well-being and mental resilience

Yoga is a practice that athletes use into their training regimens

to improve performance. Along with cognitive, metacognitive, and procedural regulation techniques, performance can be improved by the use of attention, emotion, and yoga-inspired aspects. Numerous factors, including load, volume, frequency, mental-physical link, contraction speed, work-rest ratio, and amount of isometric exercise, affect how the muscle adapts to high-level training (Petre *et al.*, 2022) ^[14].

Table 1: Scientific Studies and Expert Opinions

Author	Title	Year	Publication	Subject	Result
(Trivedi & Kamra, 2023) ^[23]	Effect Of Selected Prone And Supine asanas On back strength Of Female Hockey Play	2023	A multidisciplinary, peer reviewed and refereed Research Journal	Seventy female hockey players	Supine and Prone Asanas strengthen the back. The back strength of any athlete is the primary health-related physical fitness factor. Due to their numerous advantages, Prone and Supine lying Asanas should therefore be a key component of every competitor's training program.
(Prem & Rajan, 2017) ^[16]	Effect Yogic Practices on Selected Physical and Physiological Variables among College Men Hockey Players	2017	Asian Journal of Applied Research	Thirty male hockey players	The researcher firmly believed that yoga would enhance college men's hockey players' flexibility, cardiorespiratory stamina, resting heart rate, and Breath holding capacity, all of which would enhance their performance.
(J. Singh & Singh, 2017) ^[19]	Analyze the effect of yoga asana and physical exercise on Health-related fitness of hockey players	2017	International Journal of Physical Education, Sports and Health	80 male hockey players	The data analysis showed that there were three experimental groups. Yoga asana training, specifically designed exercise, and a combination of the two (exercise and yoga) all significantly improved the participants' cardiovascular endurance, strength, flexibility, agility, and body composition.
(T. Singh, 2015) ^[20]	Effects of 8-Week of Yoga Training on Muscular Strength, Muscular Endurance, Flexibility and Agility of Female Hockey Players	2015	The international journal research publication	40 female hockey players	Results showed significant differences in muscular strength (t-6.946*), muscular endurance (t-9.863*), flexibility (t-11.052*), and agility (t-14.068*) between pre- and post-tests of the experimental group. However, there were no appreciable variations between the control group's pre- and post-tests.
(Rajkumar <i>et al.</i> , 2017) ^[17]	Effect of Iron Yoga Training on Core Strength and Flexibility among Hockey Players	2017	A Multi - Disciplinary Refereed Journal	20 male hockey players	Hockey players' core strength and flexibility significantly improved as a result of iron yoga training. The control group, however, had not demonstrated any appreciable improvement in any of the core strength and flexibility tests.
(Perrotta <i>et al.</i> , 2018) ^[13]	Efficacy of Hot Yoga as a Heat Stress Technique for Enhancing Plasma Volume and Cardiovascular Performance in Elite Female Field Hockey Players	2018	<i>The Journal of Strength and Conditioning Research</i>	Ten international caliber female field hockey players	When entering a 6-day competition period, gains in submaximal performance and a delayed hypervolemic response may have a performance-enhancing effect.
(Karthikeyan, 2017) ^[8]	Effect of yogic practices and stress reducing exercises on selected psychological variables among hockey players	2017	International Journal of Yogic, Human Movement and Sports Sciences	forty five young Hockey players	This study's primary findings were that yoga and stress-relieving exercises had the greatest positive effects on hockey players' physical and psychological health as well as their playing skills.

Conclusion

Hockey players' use of yoga poses in their training sessions offers a promising way to improve both their physical prowess and mental toughness as the worlds of athletics and holistic well-being continue to converge. Hockey players may benefit from an edge in their performance on the rink as well as an improvement in their quality of life off the ice by utilizing the physiological benefits, flexibility enhancements, and psychological balance that Yogasana offer.

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