

# Health & Fitness Journal of Canada

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Volume 3

October 31, 2010

Number 2

## THE PRACTITIONER'S CORNER

### Why Yoga? An introduction to philosophy, practice, and the role of yoga in health promotion and disease prevention

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#### Abstract

Yoga, a philosophy of Indian descent, is becoming popular as a physical, healing, and spiritual practice adapted for diverse cultures and patient care settings. As the methods of this ancient tradition begin to influence the physical, cognitive, social, and environmental culture of the Western world, research examining how yoga affects health, disease-status, and longevity becomes integral to health promotion and patient care practices. Therefore, the purpose of this article is to introduce the philosophy and practice of yoga to health practitioners in an objective fashion and will include: an introduction to the core elements of yoga *asana* (postures), *pranayama* (breathing techniques) and *dhyana* (meditation), an overview of current evidence-based research supporting the use of yoga as a therapeutic alternative in health promotion, disease prevention and symptom management, and a description of the yoga styles commonly taught in Canada. Overall, the aim of this article is to introduce the practice of yoga and highlight its potential role in the maintenance of health and wellness, as well as in the prevention and management of disease and illness. **Health & Fitness Journal of Canada 2010;3(2): 13-21.**

*Keywords:* yoga, health promotion, disease prevention, yoga styles

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#### Introduction

*Yoga, an ancient tradition well known to the people of India, has many meanings. Sri K. Pattabhi Jois, a yoga guru and philosopher who brought the science of Ashtanga yoga practice to the West, teaches that yoga means path, or way which we follow, or by means of which we attain something (Jois 2002). Yoga is the means by which one can steadily focus attention, become aware of one's internal state and ultimately, realize one's true nature.*

Recently, many forms of yoga have become popular in the West. Most styles share the teachings of Ashtanga, which means *eight limbs*, or *steps*. These eight steps comprise of: *yama* (ethical principles such as non-harm, non-stealing, and non-possessiveness); *niyama* (purification and cleansing); *asana* (physical postures); *pranayama* (breath control); *pratyahara* (withdrawal of the senses); *dharana* (meditation); *dhyana* (concentration); and *samadhi* (awareness of the Self) (for further information about the eight limbs of yoga see the book: *Ashtanga Yoga* by Gregor Maehle 2006). Most yoga classes in western society focus on *asana*, *pranayama*, *dharana*, and *dhyana*, as well as the ultimate goal of *Samadhi*, or self-

awareness. These five limbs provide the foundation of yoga in Canada today. However, the greatest focus of western yoga practice is on *asana*, whereby yoga teachers encourage regular practice of postures as the foundation to learning and the base for lifelong physical, mental, and spiritual health. Indeed, the benefits of yoga extend beyond the physical, which has led to the use of various yogic techniques as an alternative to pharmaceutical intervention in the treatment of many ailments including eating disorders (Boudette 2006), chronic urologic conditions (Ripoll and Mahowald 2002), mood, sleep, and psychiatric disorders associated with cancer (Cohen et al. 2004, Shannahoff-Khalsa 2005), as well as physical and psychological symptoms associated with menopause (Booth-LaForce et al. 2007).

### **Who is Practicing Yoga?**

Yoga is being adopted increasingly worldwide. A 2005 study showed that 5.5% of Canadian adults (1.4 million people) practiced yoga and this number continues to increase (Namasta 2005). Subsequently, of the 1.4 million Canadians now practicing yoga, the fastest growing demographic is the 18-34 age group (which demonstrated a 25.7% increase from 2004 to 2005). In addition, 2.1 million Canadians, or 1 in 12 non-practitioners, say they intend to try yoga within the next 12 months (Namasta 2005). It has been reported that individuals who practice yoga are less likely to smoke, be classified as obese, and more likely to report a higher level of health status. In addition, participants report that yoga is integral to maintaining their mental health and well-being (Birdee et al. 2008).

With the direction and guidance of a trained professional, it is suggested that

both males and females across the life span can safely perform yoga (Jois 2002) to meet a wide variety of individual needs. According to Birdee et al. (2008) the three most common medical conditions reported by users of yoga in North America were musculoskeletal, asthmatic, and mental health conditions. Yoga for children, as well as mom-and-baby or mom-and-tot yoga class, and prenatal yoga is becoming increasingly popular and widespread. Further, athletes, the elderly, persons with physical or mental challenges, as well as individuals recovering from major surgery are now able to find specific and tailored yoga classes to meet their unique movement needs.

### **What are the Evidence-based Benefits of Practising Yoga?**

As yoga is relatively new in the West, limited evidence-based research exists to support its use. However, in recent years, there has been an increase in empirical findings that support the physiological and psychological benefits of yoga. Further, an increasing number of investigations provide evidence-informed support for the use of yoga as a therapeutic alternative for a variety of chronic illnesses and patient populations. For example, yoga has shown to be effective for: weight loss (Bijlani et al. 2005, Kristal et al. 2005, Manchanda et al. 2000, Schmidt et al. 1997); lowering levels of blood sugar (Yang 2007, Schmidt et al. 1997); blood pressure (Yang 2007, Schmidt et al. 1997, Haber 1986); cholesterol (Yang 2007, Bijlani et al. 2005, Manchanda et al. 2000, Schmidt et al. 1997, Yogendra et al. 2004); reducing chronic pain including lower back pain (Williams et al. 2005, Morone and Greco 2007); decreasing stress (Smith et al. 2007, Culos-Reed et al. 2006); anxiety

(Smith et al. 2007, Culos-Reed et al. 2006, Yogendra et al. 2004) and depression (Woolery et al. 2004, Culos-Reed et al. 2006); as well as reversing the progression of and improving the long-term outcome of coronary heart disease (Yogendra et al. 2004, Yang 2007, Schmidt et al. 1997, Manchanda et al. 2000, Bijlani et al. 2005); diabetes (Bijlani et al. 2005); breast cancer (Culos-Reed et al. 2006); asthma (Nagendra and Nagarathna 1986, Nagarathna and Nagendra 1985, Manocha 2003, Manocha et al. 2002); and arthritis (Dash and Telles 2001, Kolasinski et al. 2005).

### *Yoga as a Therapeutic Alternative in the Prevention and Treatment of Chronic Illness*

Diverse individuals with unique needs are finding extensive therapeutic and health benefits from participation in yoga across the life span. Specifically, yoga is being utilized to manage chronic health problems common in our contemporary Western society such as overweight, obesity, high blood pressure, high cholesterol, and Type 2 diabetes. Subsequently, many chronic and unique illnesses, such as those involving chronic pain, certain cancers, and mental disorders, respond positively to the yogic method of health and healing. As yoga offers a holistic approach to patient care, viewing the practitioner as an active participant in, and reflection of their mental, physical, social, and spiritual well-being, it has been suggested that the therapeutic benefits of yoga surpass potentially those of pharmaceutical drugs alone.

*Weight Loss:* Regular yoga practice is associated with significant weight loss and the maintenance of a healthy body weight (Bijlani et al. 2005, Kristal et al. 2005, Manchanda et al. 2000, Schmidt et

al. 1997). For example, one investigation showed an average loss of 5.7 kg after only 3 months of yoga practice in healthy adults. Yoga practice is also shown to facilitate the attainment of a healthy body weight in patients at high risk for coronary artery disease (Yang 2007).

*Lowering Blood Sugar:* Yoga has shown consistently to be effective in reducing fasting blood glucose in both healthy and diabetic individuals (Bijlani et al. 2005, Manchanda et al. 2000, Schmidt et al. 1997, Yang 2007, Yogendra et al. 2004, Damodaran et al. 2002). For example, one research investigation demonstrated a significant reduction in fasting blood glucose from an average of 144 to 119mgdL<sup>-1</sup> in participants with Type 2 Diabetes (Yang 2007).

*Lowering Blood Pressure:* Yoga may be effective for reducing blood pressure in healthy persons, as well as in people with cardiovascular disease, hypertension, and Type 2 Diabetes (Bijlani et al. 2005, Manchanda et al. 2000, Schmidt et al. 1997, Yang 2007, Yogendra et al. 2004, Damodaran et al. 2002). The effects of yoga on hypertension also appear to be long-lasting, whereby evidence suggests a further decrease in blood pressure in the weeks following daily yoga practice (Damodaran et al. 2002).

*Lowering Cholesterol:* Persons with high cholesterol have successfully decreased cholesterol levels with yoga practice (Damodaran et al. 2002, Bijlani et al. 2005, Manchanda et al. 2000, Schmidt et al. 1997, Yang 2007, Yogendra et al. 2004) and the greatest benefits may be for those with higher pre-yoga cholesterol levels. Lowering cholesterol is important given that high cholesterol is associated with cardiovascular disease, type 2 diabetes, hypertension, angina, as well as risk factors for coronary artery disease. In contrast, yoga is shown to produce

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significant improvements in lipid profiles including low-density lipoprotein, very low-density lipoprotein, triglyceride, and high-density lipoprotein levels following short-term intensive yoga practice (i.e., 3 hours daily for 8 days). Subsequently, a significant decrease in age-related deterioration in cardiovascular functioning has been found in long-term yoga participants (i.e., 5 or more years of practice) (Yang 2007).

*Chronic Low Back Pain:* Yoga may be an effective therapeutic method for reducing chronic low back pain (Morone and Greco 2007, Williams et al. 2005). Findings demonstrate that Iyengar yoga (see types of yoga classes) significantly improves both short and long term patient reports of pain, disability, and medication usage. Furthermore, patients who use yoga as a therapy for low back pain demonstrate on average a 25% reduction in pain medication usage. This finding is comparable to the reduced use of pain medication following massage therapy (26%), and chiropractic and physical therapy (24-27%), which are all greater than acupuncture (18%) and self-care (1%) (Williams et al. 2005).

*Breast Cancer:* Evidence suggests that yoga is associated with a number of positive physiological and psychological changes for breast cancer survivors. Culos-Reed et al. (2006) found that 7 weeks of yoga improved significantly participant's global quality of life and emotional function. In addition, results showed a decrease in diarrhea, emotional irritability, gastrointestinal symptoms, cognitive disorganization and cardiopulmonary symptoms, as well as decreases in total mood disturbance, tension, depression, and confusion (Culos-Reed et al. 2006).

*Chronic Stress, Anxiety and Mood Disorders:* Yoga is shown to be as effective

as relaxation therapy, such as the mindfulness-based stress reduction technique, for reducing stress and anxiety as well as improving quality of life. In fact, Smith (2007) claim that yoga may be more effective than relaxation therapy for improving mental health. Additional research supports a significant positive effect on perceived anxiety following 2 months of yoga practice in women suffering from anxiety disorders (Javnbakht et al. 2009). A subsequent investigation found that in adults with mild depression, yoga significantly reduced depression and anxiety, as well as negative mood and fatigue (Woolery et al. 2004).

*Quality of Life:* Evidence suggests that yoga results in improvements in relaxation, flexibility, one's ability to make healthy lifestyle changes, as well as improvements in sleep duration and quality (Cohen 2004). It has been commonly accepted by the yoga participant that yoga is effective in uplifting one's spirit, bringing a sense of optimism and peace to the mind, and decreasing negative mood states. Even small amounts of yoga can have immediate and substantial impact. For example, participating in yoga for 1 hour each week for 5 weeks reduced significantly depression and trait anxiety in a group of young female and male students identified as high risk for clinical depression (Woolery et al. 2004).

### *Yoga for Women*

Importantly, yoga is a therapy and an approach to living that is customizable and complementary to individuals throughout the lifespan, especially in times of transition, transformation, and change. For example, yogic techniques may be sought for the management of physical and emotional disturbances as

well as the emphasis on a holistic approach to transitions and significant changes throughout the female life cycle including, but not limited to pregnancy and menopause.

*Pregnancy:* Yoga techniques including deep relaxation while performing *asanas*, slow controlled breathing to control and slow respiration (*pranayama*), and mind calming techniques such as meditation (*dharana*) and chanting have been shown to significantly decrease rates of preterm delivery, small-for-gestational-age births, idiopathic intrauterine growth hormone (IUGR), pregnancy induced hypertension (PIH), and emergency caesarean sections (Chuntharapat 2008; Narendran 2005). It is hypothesized that these benefits are closely related to the stress-reducing quality of yoga. For example, Narendran et al. (2005) suggest that the practice of yoga decreases the transfer of cortisol, a potentially harmful stress hormone; thereby, improving blood flow between the mother and the fetus. As such, it is postulated that yoga during pregnancy may be associated with a longer healthier pregnancy, healthier birth weight, less complications during labour, and lower rates of pregnancy-related maternal depression and anxiety (Chuntharapat 2008; Narendran 2005).

*Menopause:* Yoga *asana*, *pranayama*, and *dhyana* has been shown to be effective for the management of menopausal symptoms in healthy women (Booth-LaForce et al. 2007). For example, a 10-week Hatha yoga intervention (see types of yoga classes) showed significant decreases in total menopausal symptoms, frequency of hot flashes, and disturbances in sleep duration and quality for women suffering from severe menopausal disturbances (Booth-LaForce et al. 2007).

*Where is further research needed?*

To-date, empirical investigations have typically focused on adulthood. Research is needed which examines the effects of yoga on children under the age of eight years, youth suffering from behavioural and emotional disorders, women in the postpartum phase, and patients managing and recovering from injury, illness and chronic disease. Subsequently, further research is needed which focuses on the use of yoga for the prevention of chronic illnesses such as cardiovascular disease and Type 2 diabetes, various forms of cancer, and chronic inflammatory diseases such as arthritis and fibromyalgia. Additional research that examines the role of yoga as a complementary therapy in prenatal and postnatal care is also imperative as more mothers are seeking a holistic and natural approach to pregnancy, parturition, and postpartum stages of motherhood.

### **What Type of Yoga Should I Recommend to my Client?**

Each individual has a unique body with specific and complex needs. Proper guidance by a professionally certified yoga instructor is essential in obtaining the benefits of yoga techniques, and is essential for all beginners. It is important to investigate whether your client has any injuries and/or physical or mental conditions. This is important for recommending the most appropriate yoga class for an individual's specific needs. However, in general, individuals should be encouraged to try different styles of yoga classes that are appropriate and accessible. Many instructors also offer private, home-based, and corporate yoga tailored to individual and group needs.

### What Types of Yoga Classes are Offered in Canada ?

Canada has a wide variety of yoga methods, styles, and teachers to meet the needs of individuals across the lifespan and continuum of health. Consequently, navigating the various styles, methods, and teachers can be a confusing and overwhelming task for those unfamiliar with the practice and teachings of yoga. As such, the most common yoga practice styles are succinctly described below.

*Hatha yoga.* Hatha yoga comes from the term *hatha* meaning “forceful” and its goal is the union of the internal sun (*ha*) and moon (*tha*) through purification practices and *asana*: physical postures (Singleton 2010). The ultimate goal of *asana* practice, outlined in the Hatha Yoga Pradipika (an ancient and thoroughly cited yogic text) is the attainment of steadiness (*sthairya*), freedom from disease (*arogya*), and lightness of body (*angalaghava*). The main focus in a Hatha yoga class is on the control and awareness of the breath through *pranayama* (breathing techniques). The focus on *pranayama* is thought to balance the subtle channels of the body called *nadis*, thereby improving vital energy (Singleton 2010). This style of yoga is beneficial for individuals at all levels from beginner to advanced stages of practice. Classes often concentrate on slower paced *asana* and safe stretching, while being attentive to the breath and the internal mental state.

*Ashtanga Yoga.* Ashtanga yoga is an energetic style of yoga co-ordinating breath (*Ujayi Pranayama*) with movement. The yogic teachings of Ashtanga in North America come from K. Pattabhi Jois, the founder of the Ashtanga Yoga Research Institute in Mysore, India. This approach consists of a specialized sequence of postures and focused

breathing techniques which encourage introspection, self knowledge, concentration, the ability to remain present, and the ultimate realization of one’s true self. In Ashtanga yoga, *asanas* are not the goal; rather *asanas* are a vehicle for one to access a deeper internal awareness (Swenson 1999). This method of yoga is most suitable for individuals seeking a deeper more disciplined yoga practice.

*Vinyasa Yoga.* Vinyasa yoga is any form of yoga that links one *asana* to another in a serpentine flow, described by Patthabi Jois as “the marriage of breath and movement” (Swenson 1999). Forms of yoga that involve vinyasa typically include ashtanga and hatha forms and often have the words “power”, “flow”, or “vinyasa” in the title. Vinyasa is about balance of strength, flexibility, lightness and heaviness, as well as movement and stillness brought about by the unity of breathing and movement. Existing as one, breath and movement allow for the practice of yoga to become like a rhythmic dance and the mind is set free. Additionally, the *vinyasa* method encourages the production of heat in the body. Finally, a *vinyasa* sequence acts as a neutralizer between sets of *asana*, preparing the body for each posture in the practice (Swenson 1999). Yoga classes incorporating the vinyasa method are appropriate for active beginners as well as advanced yogis.

*Yin Yoga.* Yin yoga is derived from the Chinese healing system and is a powerful practice which targets tendons, ligaments, and fascia within the body. Yin yoga classes focus on opening up meridians and stimulating energy points through movement in simple poses. With the help of props, poses are held for 5-10 minutes encouraging energy channels to release (Kohn 2008). Although this method of

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yoga is less acrobatic than the vinyasa systems, Yin offers a unique challenge and extensive benefit for individuals at all physical fitness levels. Yin is also a perfect complement to the more yang or active styles of yoga such as Vinyasa, Power, and Ashtanga.

*Kundalini Yoga.* Brought to the West in 1969 by Yogi Bhajan, this yogic method is a tantric yoga discipline involving the deliberate arousal of the *kundalini shakti*, which means serpent power. This method of practice focuses on the accumulation of the life force, or *prana*, regulated through breath control, to trigger the kundalini force and make it ascend through central channels (*nadis*) of the body from the base of the spine to the crown of the head (Feuerstein 1990). Ultimately, by raising the kundalini energy of the body one attains liberation from disease and suffering. This style of yoga, which largely focuses on stimulating the nervous system and concentrating the breath, may be practiced by individuals at all levels.

*Iyengar Yoga.* Iyengar Yoga is a systematic method of Hatha Yoga named after B.K.S. Iyengar of Pune, India, and is based on the Classical Yoga of Patanjali. The Iyengar method works on the principle of meditation in action. Practitioners concentrate closely on the movements in the yoga *asanas*, bringing the body into balance by increasing mobility, stability, strength, and alignment. Poses range from the stimulating and active to the restful and restorative. Iyengar is known for its ability to adapt poses to the needs and challenges of the individual student, making it appropriate for all ages and levels of fitness (B.K.S. Iyengar Yoga Association 2010). Iyengar yoga has commonly been used as a therapy for individuals recovering from surgery and

as a supplement in cardiac rehabilitation programs.

*Bikram Yoga.* Bikram yoga, established by bodybuilder Bikram Choudhury, is an arduous, athletic sequence of *asanas* developed for the purposes of health and fitness (Singleton 2010). The teachings of Bikram emphasize that the body holds the secret to spiritual advancement and that through the development of a “healthy animal” the god in man may be revealed. Based on the principle of self mastery attained through a regime of muscular exercise and “respiratory gymnastics”, the Bikram method is based on the exertion of the will for moral and spiritual benefit (Singleton 2010). A rigorous and specific sequence of 26 *asanas* (postures) lasting 90 minutes, Bikram yoga is practiced in a hot room. Bikram yoga is exemplary of the way in which modern culture’s aesthetic concern for grace, beauty and the muscular and structural perfection of the body has married yoga with physical exercise. This method of yoga, due to its intensity, should be approached with caution by all individuals regardless of fitness level.

*Hot Yoga.* Hot yoga is yoga performed in a heated room, which can take the form of the vinyasa method (involving a flowing series of postures), or the bikram method (involving a specific series of static *asanas*). The benefits of hot yoga are based on the theory that warm muscles are more receptive to movement, allowing for deeper opening through each posture and less tendency toward injury (Barnett 2004). Additionally, “hot” is viewed as a mental state, suggestive of the intensity of effort involved in this method of yoga as well as the resulting invigoration felt in the body as a result of practice in a heated environment (Barnett 2003). Students of Moksha Yoga, a form of hot yoga taught in North America, have

reported that this practice helped them to decrease stress, lose weight, strengthen their immune systems, increase their cardiovascular abilities, as well as feel more energized (Moksha Yoga Vancouver 2010). This yoga style may be practiced by individuals of all ages and fitness levels but extra care should be taken to replenish fluids and electrolytes before, during, and after participation.

### What is the Take-Home Message?

Overall, yoga offers a unique approach to health promotion, patient care, and disease prevention in North America. Today, health professionals recommend yoga to their patients to enhance health-related quality of life when coping with illness. As such, physician education about yoga is important and needed (Roth et al. 2009). Working in collaboration to marry the healing techniques of allopathic, naturopathic, alternative, and yogic therapies is the future of health promotion, disease prevention, and enhanced quality of life in a nation defined by individuals of diverse cultures, abilities, and health states. As the variety and scope of yoga techniques expands to suit the individual needs of special populations, research into the effectiveness and accessibility of yoga as an alternative and complimentary therapy is important for the advancement of health care practices.

### Acknowledgements

Katie L. Chapman is currently completing a Master's degree under the direction of Dr. Shannon S.D. Bredin. Ms. Chapman was awarded a Canadian Institute for Health Research (CIHR) Frederick Banting and Charles Best Canada Scholarship Master's Award.

### Qualifications

The author qualifications are as follows: Katie L. Chapman, BHSc, CSEP-CEP, Certified Ashtanga Yoga Teacher; Shannon S.D. Bredin, PhD, CSEP-CEP, CSEP-CPT ME.

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