

## **Yoga and Sexual Functioning: A Review**

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*Yoga is an ancient practice with Eastern roots that involves both physical postures (asanas) and breathing techniques (pranayamas). There is also a cognitive component focusing on meditation and concentration, which aids in achieving the goal of union between the self and the spiritual. Although numerous empirical studies have found a beneficial effect of yoga on different aspects of physical and psychological functioning, claims of yoga's beneficial effects on sexuality derive from a rich but nonempirical literature. The goal of this article is to review the philosophy and forms of yoga, to review the nonempirical and (limited) empirical literatures linking yoga with enhanced sexuality, and to propose some future research avenues focusing on yoga as a treatment for sexual complaints.*

The psycho-medical approach to treating sexual difficulties has a relatively short history, but one that is characterized by sharp turns. In the 1980s, a paradigm shift began whereby humanistic and behavioral treatments of sexual problems fell out of favor, and treatment of sexual difficulties began to fall into the domain of medicine. This occurred largely because urologists were interested in the biological basis of sexual difficulties, and because of the observed benefits of medical interventions in curing erectile dysfunction (Tiefer, 2006). Despite the enormous popularity and success of the oral pharmaceutical agents for men's sexual difficulties, at least one-third of men do not refill their prescriptions (Klotz, Mathers, Klotz, & Sommer, 2005; Son, Park, Kim, & Paick, 2004), the success of oral pharmaceuticals can trigger dissatisfaction in a female partner who may have habituated to a new sexual repertoire that does not focus on intercourse (Askew & Davey, 2004; Loe, 2004), and these sexual pharmaceuticals have been largely ineffective for women (e.g., Basson, McInnis, Smith, Hodgson, &

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Koppiker, 2002). In contrast to this very short sexual pharmaceutical history, Eastern approaches have many millennia of history for conceptualizing and addressing sexual complaints. Eastern approaches such as tantra, Tao, mindfulness, acupuncture, and yoga have all been implicated in sexual fulfillment and pleasure (as reviewed in Brotto, Krychman, & Jacobson, 2008), and the efficacy of some of these approaches has been established in empirical studies (Brotto, Basson, & Luria, 2008; Brotto & Heiman, 2007; Danielsson, Sjöberg, & Östman, 2001; Powell & Wojnarowska, 1999). More recently, yoga has been found effective for improving ejaculatory control among men with premature ejaculation (Dhikav, Karmarker, Gupta, & Anand, 2007). The goal of this review is to explore the historical and empirical literature on the role of yoga in sexual health and discuss future research worth exploring on yoga for specific sexual complaints. Moreover, we provide a limited background on yoga theory from an authentic Eastern perspective, which is essential for linking yoga to enhanced sexuality theoretically.

## WHAT IS YOGA?

A historical note on the origins and philosophies of yoga is essential in order to place yoga within a theoretical framework for being used for sexual enhancement. The word yoga is derived from the Sanskrit root *yuj* meaning “to yoke, to bind, to attach, to join, to direct and concentrate one’s attention on, or to use and apply” (Iyengar, 2001, p.1). Yoga is one of the six systems of Indian philosophy that was systemized by Patañjali with his text, *The Yoga Sūtras*. Here, yoga is described as a sacred science that involves evolution through eight components, known as the eight limbs of yoga. The first step is *Yama* (attitudes towards the environment), and evolving through to *Samādhi* (complete integration with the object to be understood). The other limbs include: *Niyama* (attitudes towards the self), *Āsana* (the practice of body exercises), *Prānāyāma* (the practice of breathing exercises), *Pratyāhāra* (restraint of the senses), *Dhāranā* (the ability to direct the mind), and *Dhyāna* (the ability to develop interactions with what one seeks to understand (Desikachar, 2003). Through these limbs one is given the tools to connect with the higher being (which can be translated to whichever belief system one chooses) and therefore be liberated—free of suffering mentally, physically, emotionally, and spiritually.

In the Western world, the most discussed of these components are *Āsana* and *Prānāyāma*. *Āsanās* are postures used to exercise the entire body, whereas *prānāyāma* exercises the breath through different patterns of inhales, exhales, and holds. *Āsana* and *prānāyāma* aid the practitioner in improving health and controlling the mind; as one gains the ability to control the body and breath, one develops the capacity to control the mind (Iyengar,

2001). The *āsanas* and *prānāyāmas* prepare the individual for meditation; they give one the ability to focus and concentrate on the present moment, with the least amount of resistance, in order to reach the goal of liberation (Satchidananda, 1977, p. 166).

In order to achieve a meditative state, some forms of yoga have *mantras*, *mudrās*, and *kriyās*, which act to assist one in connecting to the spiritual to evoke focus, strength, and healing. *Mantras* are sanskrit words, taught as sound syllables, which act as sound currents to focus the mind. Through repetition of these words, silently or aloud, one reconditions the patterns of the mind, directing the mind's attention to whichever quality one chooses to manifest (Kaur Khalsa, 1996, p. 35, p. 308). According to Yogi Bhajan, *mantras* create a direct connection to the higher being, similar to prayers, which allow one to evoke the quality of mind and body in which one seeks (Kaur Khalsa, 1996, pp. 36–37). *Mudrās* are subtle physical positions that may involve the whole body or just the hands, which are used to focus energy (Satyananda, 1996, pp. 423–424). *Kriyās* can combine *mantra*, *mudrā*, breath, and postures into a “complete action” which gives individuals exercises to invoke cleansing, healing, or manifesting different qualities of mind and body (Kaur Khalsa, 1996, pp. 229–275).

## YOGA AND HEALTH

Part of yoga's long-standing and increasing popularity relate to its effects on mental health. In yoga, psychological suffering is described as *dubkha*, which refers to suffering, troubles, or sickness of the mind. *Dubkha* is a restrictive state that prevents action and understanding (Desikachar, 1999, p. 83), and is thought to arise from *avidyā*, or “incorrect comprehension” derived from the conditioned patterns of unconscious action. These ingrained habits and perceptions (*saṃskāra*) obscure an individual's concept of reality. Yoga provides a means to become aware of *dubkha* and therefore overcome these obstacles and retain “correct understanding” (Desikachar, 1999, pp. 10, 83–84).

In the *Yoga Sūtras*, Patañjali reveals yoga as “*chitta vrtti nirodhab*,” which translates as “restraint of mental modifications or as suppression of the fluctuations of consciousness (Iyengar, 2001, p. 2). Patañjali further explains the five causes of psychological pain as: ignorance (*Avidyā*), having a sense of individuality that limits a person from a group (*asmitā*), attachment of passion (*rāga*), aversion (*dvesa*), and the instinctive clinging to life and bodily pleasures, which results in the fear of death (*abhiniveśa*) (Iyengar, 2001, p. 5). In other words, much of psychological suffering results from these conditioned patterns of perceptions, thoughts, attitudes, and behaviors, and yoga can be used as a vehicle to alleviate such pains.

There is compelling empirical data showing the benefits of yoga on psychological well-being and mood (Elavsky & McAuley, 2007; Hadi & Hadi, 2007; Oken et al., 2004). Meditation plus yoga significantly improved remission rates in long-term depressed patients compared to hypnosis and psycho-education control (Butler et al., 2008; Lavey et al., 2005). Moreover, there is both an acute effect of yoga (from the start to the end of a session) as well as a chronic benefit (over long-term practice; Shapiro et al., 2007). The beneficial effects of yoga on mood have been shown both in seniors (Oken et al., 2006) as well as in young adults (Woolery, Myers, Sternlieb, & Zeltzer, 2004). Neuroendocrine data show that the improvements in mood and affect are associated with a decline in cortisol levels (West, Otte, Geher, Johnson, & Mohr, 2004).

Yoga has also been shown to benefit physical health (Hadi & Hadi, 2007; Smith, Hancock, Blake-Mortimer, & Eckert, 2007), including improvements in blood pressure, body mass index, and heart rate (McCaffrey, Ruknui, Hatthakit, & Kasetsoomboon, 2005), improved performance on motor skill tasks in children (Telles, Hanumanthaiah, Nagarathna, & Nagendra, 1993), and improved lung capacity similar to athletes (Prakash, Meshram, & Ramtekkar, 2007).

Yoga theory suggests that physical and psychological illness result from an imbalanced or blocked *chakra* system (Bhushan, 1997). Many have attempted to correlate the *chakra* system to Western physiology in order to gain an understanding of the underlying mechanisms of the mind-body-spirit connection (Roney-Dougal, 2000). It is believed that the *chakra* system directly and indirectly affects the endocrine system and nervous system through energy, known as life force (*prāna*; Kaur Khalsa, 1996, p. 53). Iyengar (2001) explains that, "Yoga is the method by which the restless mind is calmed and the energy is directed into constructive channels" (p. 2). Thus, *prānic* energy is directed through the body via yogic breath and posture, to either maintain or rebalance the *chakra* system, and therefore heal and sustain the health of the body and mind.

## YOGA INTERVENTION PROGRAMS

Given the well-documented health benefits of yoga, it follows that yoga has been used as a popular nonpharmacological alternative to treat a plethora of physical and psychosocial anomalies. In a systematic review by Smith and Pukall (2009), yoga interventions specifically for cancer patients were noted for eliciting significant improvements on measures of sleep, quality of life, levels of stress, and mood. As an alternative to Western medicine, yoga has been shown empirically to treat depression among inpatients (Krishnamurthy & Telles, 2007; Shapiro et al., 2007), to improve chronic pain, pancreatitis, and low back pain (Chou, Huffman, American Pain Society, & American

College of Physicians, 2007; Fleming, Rabago, Mundt, & Fleming, 2007; Sareen, Kumari, Gajebasia, & Gajebasia, 2007; Williams et al., 2005), to treat cardiovascular disease (Bijlani et al., 2005), diabetes (Sahay, 2007), irritable bowel syndrome (Kuttner et al., 2006), osteoarthritis (Kolasinski et al., 2005), migraine (John, Sharma, Sharma, & Kankane, 2007), multiple sclerosis-associated fatigue (Oken et al., 2004), and menopausal hot flashes (Cohen et al., 2007).

## YOGA AND SEXUAL HEALTH

Given the inextricable link between sexual health, well-being, and physical health (Laumann et al., 2005; Lindau et al., 2007), it is reasonable that yoga might also be associated with improvements in sexual health. For example, yoga moderates attention and breathing (Gupta, Khera, Vempati, Sharma, & Bijlani, 2006; Telles, Raghurai, Arankalle, & Naveen, 2008), decreases anxiety and stress (McCaffrey et al., 2005; Michalsen et al., 2005; Smith et al., 2007), induces a state of relaxation (Krishnamurthy & Telles, 2007; McCaffrey et al., 2005), and modulates cardiac parasympathetic nervous activity (Khattab, Khattab, Ortak, Richardt, & Bonnemeier, 2007). All of these effects are associated with improvements in sexual response. Female practitioners of yoga have been found to be less likely to objectify their bodies and to be more aware of their physical selves (Impett, Daubenmier, & Hirschman, 2006). This tendency, in turn, may be associated with increased sexual responsibility and assertiveness, and perhaps sexual desires. Perhaps more importantly, however, is the effect of yoga on mindfulness, or the ability to remain focused and in the present in a nonjudgmental manner. Given the tendency for distractions to impede on women's sexual functioning (Barlow, 1986; Dove & Wiederman, 2000), the increased ability to minimize distraction and enhance awareness of the body to allow sensorial cues to be detected and integrated into conscious awareness is a major facet of why yoga might be helpful for enhancing sexuality. Notwithstanding this potentially important role of yoga in improving sexual health, most of the literature on the topic derives from nonempirical sources.

## YOGA AND SEXUAL HEALTH: NONEMPIRICAL SOURCES

Among the extensive body of nonempirical literature focused on yoga, there is a vast amount of data linking yoga with improved sexual health, as well as treating yoga as an effective treatment for nearly every sexual ailment.

Yoga theory proposes that certain diseases pertaining to sexuality suggest blocked or stagnant energy in the root *chakra* (*mooladhara chakra*) or the second *chakra* (*swadhisthana chakra*). One way to release this energy is to raise or move one's *kundalinī* through the spine and up to

the brain through the *nāḍīs* (channels through which energy passes through the chakras [Iyengar, 2001, p. 100, p. 368; Kaur Khalsa, 1996, pp. 47–48]). The term *kundalinī* literally means, “the curl of the lock of hair of the beloved.” This metaphor depicts the flow of energy and consciousness that exists within all individuals (Kaur Khalsa, 1996, p. 43). In Tantric practices and Kundalini yoga, yoga is used as a tool to prepare for the movement of *kundalinī* energy. In doing so, one may gain awareness of oneself and release the energy that may be sustaining the source of blockage or stagnation. *Kundalinī* energy has been said to increase sexual pleasure and extend the longevity of sex by facilitating male orgasms without ejaculation (Francoeur, 1992).

*Moola bandha* is another yogic concept that has tremendous utility in women’s sexual response by assisting women to learn sexual control and alleviate sexual problems. *Bandhas* are a means “to lock” or “to bind or tie together, to close” certain areas in the torso in order to intensify the cleansing processes of yoga (Desikachar, 1999, p. 71). The *bandhas* are explained to facilitate proper functioning of the endocrine system. All *bandhas* indirectly influence the pituitary gland and brain. *Moola bandha* is a perineal contraction that stimulates the sensory motor and the autonomic nervous system in the pelvic region, and therefore enforces parasympathetic activity in the body. Specifically, *moola bandha* is thought to directly innervate the gonads and perineal body/cervix. To a lesser extent, the sympathetic nervous system is also stimulated (Buddhananda, 2007, p. 3). In men, practicing *moola bandha* has been associated with relieving spermatthorrea, preventing inguinal hernia, and controlling testosterone secretion. In women, exercising *moola bandha* has been shown to relieve dysmenorrhea, ease childbirth pain, lessen symptoms of menopause, and improve sexual difficulties (Buddhananda, 2007, pp. 33–35). Kraftsow (1999) clarifies that exercising *moola bandha* is similar to the kegel exercises prescribed for women before childbirth and throughout life to reduce urinary incontinence. He describes how *moola bandha* stretches the muscles of the pelvic floor, increases circulation in that area, balances, stimulates, and rejuvenates the area through techniques that increase awareness and circulation. As a result, exercises that utilize *moola bandha* may be helpful in aiding people who lack sexual vitality and have poor sexual functioning (p. 288). In numerous sex therapy centers, the practice of *moola bandha* is used to enhance women’s awareness of their own genital arousal sensations, and in this way, may be a helpful adjunct for improving sexual desire and arousal.

O’Brien (1994) recommends a yoga pose known as the ‘frog pose’ (*bhēkāsana*) to strengthen women’s pelvic floor muscles. The author suggests this exercise for pregnant women preparing for childbirth, but pelvic floor muscles play an important role in sexual health as well. In our experience, such poses may be helpful for women with provoked

vestibulodynia and/or vaginismus given the often weakened nature of these muscles.

In part of their yogic teaching, Swami Satyananda Saraswati (1996), founder of the Bihar School of Yoga in Rishikesh, India, and B.K.S. Iyengar (2001), founder of the Ramamani Iyengar Memorial Yoga Institute (RIMYI) in Pune, India, suggest combinations of yogic tools to prevent sexual problems and maintain overall sexual health. They suggest such techniques may assist in lessening symptoms of HIV or herpes, aiding/preventing erectile dysfunction, dealing with spermatorrhea, reducing symptoms of menstruation and menopause, recovery from miscarriage, and general toning of reproductive organs. For erectile dysfunction, Satyananda prescribes *āsanas*, *prānāyāma*, *Bandha*, and *Mudrā* (pp. 534–535). In his book, Satyananda warns that individuals suffering from specific sexual ailments should seek advice from a competent yoga therapist to get a proper yogic prescription.

An instructional yoga video by Chheda and Khan (2004) claims that yoga results in increased blood flow to the genitals, aids menstrual problems, and increases male and female sexual function overall. The video provides educational information and also demonstrates a complete yoga routine designed to facilitate these sexuality-specific effects of yoga. One might therefore use these techniques in sexual difficulties arising from deficient genital blood flow (e.g., as in irradiated vaginal tissue of gynecologic cancer survivors).

Among introductory yoga books, many mention sexual disorders and advertise yoga as a means of treatment. Claire (2003) claims that yoga increases strength, keeps practitioners centered and present through meditation and breathing, creates relaxation, lowers stress and performance anxiety, and helps the practitioner to maintain attention in sex. The author states that it can resolve premature ejaculation, erectile dysfunction, and orgasm difficulties (Claire, 2003, p. 185). Thomas writes that yoga strengthens and tones the urogenital area, strengthens pelvic floor muscles, massages the prostate gland, strengthens genital muscles, increases blood flow in the genitals, and builds stamina and control, and specific yoga poses are recommended. Unfortunately, no empirical studies are provided to support these impressive claims.

For Indian men who practice *brahmacharya*, or celibacy, certain yoga poses are thought to control (i.e., reduce) erection and desire (Alter, 1997). For instance, there is a central pose known as *siddhāsana* in which the practitioner's legs are crossed while seated during which a celibate man can pinch his penis and scrotum with his heels to control his desire. This type of control is considered a highly desirable state to attain for these men choosing celibacy.

Popular websites also make claims of yoga's effects on sexual dysfunction. For instance, a website called "Health and Yoga Infoplace" contains an entire section on yoga as a treatment for erectile dysfunction, where a

series of yoga poses are described to be an effective treatment for erectile dysfunction (Nagarathana, 2007). Again, unfortunately, no empirical data are provided to substantiate these claims. It should also be noted that while this type of informational website exemplifies how accessible information on yoga has become, not all experienced practitioners of yoga would agree that yoga exercises should be recommended to general populations without the guidance of a yoga therapist.

For women, Ripoll and Mahowald (2002) argue that *batha* yoga can effectively ease the symptoms of chronic pain syndromes such as vulvodynia because of the positive effect of yoga in strengthening pelvic floor muscles. Unfortunately, no empirical data are provided.

### YOGA AND SEXUAL HEALTH: EMPIRICAL STUDIES

Despite the abundance of nonempirical data suggesting that yoga and sex are not only linked but potentially mutually beneficial, very little research has been conducted to substantiate these claims. Our careful review of the literature revealed only one controlled study of yoga as a treatment for sexual dysfunction.

Dhikav, Karmarker, Gupta, and Anand (2007) successfully treated Indian men with premature ejaculation with yoga. Premature ejaculation traditionally falls into the medical domain and is most often treated with serotonergic anti-depressants (Waldinger, 2008). The 68 men who participated in the study were offered a choice between the yoga-based, nonpharmacological treatment and the more traditional pharmacological intervention fluoxetine (Prozac). In the yoga group, men were given a prescribed set of *āsanas* and *prānāyāmas* to practice for 1 hour each day. Differential relaxation techniques, as well as perineal and pubococcygeal exercises, were included in the program. Notably, there was no component of sex therapy or sex education to men receiving the yoga intervention. Remarkably, all 38 men participating in the yoga group had both subjective and statistically significant improvements in their intraejaculatory latencies. There were no side effects or dropouts in this treatment arm. These data provide an excellent example of the potential usefulness of yoga as a nonpharmacological treatment for sexual disorders, and in a compelling way, suggest that yoga can be as effective as traditional western medical approaches.

### THE FUTURE: INTEGRATING YOGA INTO CONTEMPORARY SEX THERAPY

Yoga has a rich history with roots in India but branches in all cultures and parts of the world. The literature demonstrating beneficial effects



of yoga in numerous physical and psychological ailments is compelling and growing and yoga interventions are increasingly incorporated into existing treatment programs because of their demonstrated benefit. In the domain of sexual response, yoga has also been touted as a method for improving genital awareness, stimulating genital blood flow, enhancing relaxation of the pelvic floor, reducing vulvodynia, reducing symptoms of premature ejaculation, enhancing erectile capacity, extending the longevity of intercourse, and fundamentally, of enhancing sexual pleasure. However, the empirical research is limited to one controlled study of yoga for the treatment of premature ejaculation in men. Moreover, there is no empirical research on specific *āsana* for specific sexual problems, despite this practice and teaching for many hundreds of years. Clearly, this is an area of research worthy of future efforts.

One specific practice in yoga, the *moola bandha*, bears particular promise in the treatment of sexual problems, especially in women, where it has been used for centuries. Again, however, there are no empirical data demonstrating its tremendous anecdotal benefits. As a treatment for women with pelvic pain disorders, the *moola bandha* may complement pelvic floor physiotherapy by relaxing and enhancing awareness of pelvic floor tension for women with vestibulodynia and vaginismus. Future research may be aimed at comparing standard care with and without the practice of *moola bandha* instruction for the treatment of dyspareunia.

*Kundalini* yoga also bears great promise in the treatment of sexual problems with its focus on sexual energy and deserves to be studied empirically. The advantage of *kundalini* yoga is that it does not require being a yoga expert or following instructions from a yoga teacher in the long term (although initial instruction by a teacher is required). Practitioners can do so in the privacy of their own homes. Also, because of its holistic nature of integrating yoga with breath work, results are often noted much sooner than other forms of yoga.

With the advent of the age of “evidence-based treatment,” professionals and the lay public want proof that our interventions are effective. Because yoga has been practiced and taught for many centuries, and because of the power of the personal attestation that yoga is effective, it has not been subjected to the scrutiny of empirical testing that many other interventions in medicine have. Those who practice yoga experience the benefits. It is our hope that this experience will ignite an interest in testing and demonstrating the beneficial effects of yoga for many different facets of human sexuality.

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