CHAPTER 6

YOGA AND CHRONIC ILLNESS

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Yoga is no longer a fringe, odd specter in American society, but rather so much a part of mainstream culture today that major medical centers around the country, local healthcare centers, and neighborhood Yoga centers offer Yoga as a mind–body practice to support health and healing. Although Yoga has existed in various forms for around 2,500 years, the phenomenon of Yoga for health and healing is a modern characteristic of Yoga (Alter, 2005; De Micheli, 2008; Singleton, 2008 2010). While Yoga has always offered the promise of freedom from suffering (Miller, 1995; Feuerstein, 1998), only recently has Yoga literature addressed medically defined chronic illness. We see today a field of “yoga therapeutics” in which yogic practices are prescribed to “heal,” and sometimes “cure,” specific chronic disease conditions (Swami Satyananda, 1997; Iyengar, 1979, 2001. As a health practice, it is both reflective of and a catalyst for a growing body of scientific research on Yoga that suggests a valid evidence-base for the beneficial effects of Yoga on a wide range of chronic health problems (Khalsa, 2004), including cardiovascular disease (Raub, 2002), cancer (Bower et al., 2005), diabetes (Upadhyay et al., 2008), arthritis (Haaz & Bartlett, 2011), asthma (Vempati et al., 2009), depression (Pilkington et al., 2005), and anxiety (Kirkwood et al., 2005). But scientific research on its health effects occurs against the sociocultural backdrop of Yoga schools promoting Yoga as a healing pathway in which healing is conceived of as “a holistic tool that teaches [one] how to live a better life and cope with difficulties” (De Micheli, 2008, p. 25). These two intricately interrelated contexts both shape ways in which Yoga today represents and responds to chronic illness. We examine this modern phenomenon of Yoga for its healing potential as it intersects with chronic
illness, with particular consideration of the historically spiritual purpose of the Yoga traditions.

A major impetus in the acceptance of Yoga in the modern world of health-care has been a growing scientific understanding of the role of the mind in health and disease. However, while a consensus on the facticity of the mind–body connection is evident, there continues to be debate about how to theorize mind–body interrelations because the theoretical grounds on which our knowledge of cognition and the mind is based are rapidly shifting. A primary challenge is that theories of embodied cognition must explain interconnections between mental and physiological processes in ways that avoid reductionism (see Varela et al., 1991). In the midst of this changing paradigmatic, landscape it is no longer meaningful to conceptualize and treat chronic illness in the limited terms of the pure physicality of the body.

We analyze ways in which theories of embodied cognition might clarify what De Michielis (2008) calls “synergetic” theorizations in yogic milieu today, by drawing out relational and nondual realities and meanings of practice that are relevant for well-being. This perspective could potentially inform our understanding of the phenomenon of alleviation of suffering through yogic practice, and specifically Yoga’s process of placing attention to a spiritual object or reality. While different streams of yoga offer differing accounts of human nature, there is widespread agreement throughout various yoga traditions that the mind is embodied (Feuerstein, 1998). As an alternative to information processing models of mind, or theories that separate cognition from physicality, embodied theories of cognition attempt to reconcile the dualism that plagues psychology and cognitive science by locating cognitive processes in the body, and in the body’s greater physical and cultural environment (Lakoff & Johnson, 1999; Varela et al., 1991; Wilson, 2002). An embodied approach to healing, shaped by yogic knowledge, offers potential for understanding chronic illness and Yoga’s spiritual path for responding to it, and offers promising explanatory and predictive possibilities in both scientific and contemplative fields, especially on the grounds where they meet (see Varela et al., 1991; Goldberg, 2005).

While scientific studies investigate the mechanisms and health outcomes of the practice of Yoga in chronically ill populations, we analyze the meanings of health, illness, and healing in contemporary Yoga with a specific focus on how Yoga represents and responds to chronic illness. We raise specific questions about the meeting between Yoga and chronic illness, and about the spiritual dimensions of Yoga’s influence on health: How does Yoga’s spiritual purpose translate into a valuable health practice? What kind of spirituality operates in Yoga therapies as a healing force? What is the role of expectation in curing or healing chronic illness? Why does Yoga appeal to people who are suffering from physical and mental maladies? Is there something about the spiritual purpose of Yoga that speaks to people’s suffering in a way that standardized allopathic medical treatments do not? Our methodological approach engages these questions through a textual analysis of selected Yoga literatures, current popular literature on Yoga therapeutics, and relevant scholarly and scientific publications on Yoga, stress, and chronic illness. From this analysis, we suggest that modern Yoga depicts chronic illness not only as a condition of physical disease, but also as a state of suffering that can be relieved through Yoga’s spiritual path as a “science of right living.”

**Yoga as a Spiritual Pathway for Ending Suffering**

Modern Yoga (Alter, 2004; De Michielis, 2004) or postural modern Yoga (Singleton, 2010) often draws on the *Yoga-Sutras* (YS) of Patanjali, widely considered to be the primary text of classical Yoga, for authority and authenticity (Singleton, 2008). While it is not our purpose to comment on the veracity of claims by modern authors of Yoga who maintain that modern methods are rooted in classical teachings, this linkage between today’s living praxis and a classical historical text requires examination. The *YS* represents a major pillar of the Dharmic traditions and plays an important role in shaping the theoretical landscape of modern Yoga as a significant religio-philosophical influence (De Michielis, 2008). In addition, classical Yoga elaborates a psychological system of the nature of suffering and pathways for alleviating suffering, and this psychological process presumably operates within the body and breath-based methodologies unique to contemporary Yoga practice (De Michielis, 2004; Alter, 2004; Singleton, 2010), as an essential means of transforming chronic illness. Therefore, we analyze the psychological aspects of suffering and its alleviation found in the *YS* as they relate to the body and disease conditions in order to illuminate the multidimensionality of Yoga and disease conditions in order to illuminate the multidimensionality of Yoga.

Note that our focus on the *YS* is not meant to suggest that other streams of Yoga are not visible in Yoga today. Tantric and Vedantic conceptions and methods of devotional practice also remain influential, for example, as do the karma (action) Yoga teachings of the Gita and even Buddhist Yoga (De Michielis, 2004; Strauss, 2005; Stern, 2006). These various approaches to Yoga each bring a different emphasis in terms of texts, theory, and methods of practice (Feuerstein, 1998). However, it is beyond the scope of this project to analyze the specific influences of each type and stream on Yoga therapeutics. Instead, we focus on the *YS* to draw out aspects of Patanjali’s Yoga psychology of suffering and its liberation that appear to remain as elements in today’s discourse of healing in Yoga therapeutics and influence how Yoga depicts itself as a pathway for healing chronic illness.

**Yoga’s Cognitive-Motivational Framework of Suffering and Liberation**

According to classical Yoga, the most basic cause of suffering is living in spiritual ignorance (*avairya*) (YS 2.4), constituted in a distorted orientation toward self and reality, through a fundamental misidentification with the mind and one’s materiality (YS 2.24). In this view, suffering is intimately tied to the Sankhya-Yoga (see Larson, 1979) theory of reality and its two principles of *purusa* (consciousness or spirit) (YS 2.18) and *prakriti* (matter, nature, or psychophysical being, which includes mind) (YS 2.19) (Whicher,
Avidya occurs when a person identifies with prakriti to the exclusion of purusa (YS 2.4–2.5; 2.17; 2.24). From this unaware state an egoic sense of self (asmiita) arises, in which one perceives the world through self-reference (YS 2.5–2.6; 4.4). When operating out of egoism, a person is motivated to seek pleasure because of basic attachment (raga) (YS 2.7) and an emotional temperament ruled by desire, and to avoid pain because of an aversion (dvesa) (YS 2.8) to unpleasantries, dissatisfaction, and pain, all enacted through a clinging and grasping to life (abhinivesa) (YS 2.9). These motivational forces are the basic causes of affliction (kleshas) (YS 2.3), and lead to further suffering. Moreover, suffering is endemic to the human experience because kleshas color the mental processes, thus making mental life largely painful (ahisya puri) (YS 1.5). Yoga also suggests that past actions affect present suffering, since it presumes that the mind retains samkaras (impressions left by past actions) as residue of karma (actions) (YS 1.18; 1.50; 2.12–2.15; 4.7–4.9).

In classical Yoga, the primary motivation of Yoga practice is to overcome suffering (YS 2.2; 2.16). Actualizing this goal requires a shift in the cognitive-motivational orientation of normal waking life described above. This shift occurs through the attainment of spiritual knowledge (YS 1.3; 1.16–1.23; 1.49). YS 1.2 defines the core meaning of Yoga as a quieting of the mental fluctuations (citta-varittinrothila); thus, overcoming suffering requires quieting of the mind, or cessation of the afflicted mental processes (false identifications) that are associated with the samskrat mind. The samskrat mind is the accumulation of reactions and impressions from all past actions that color present moment perception and propel action. The mental quieting illuminates the cognitive realities of the samskrat self and the true self (YS 4.25). A deep understanding of the yogic path of liberation from suffering depends on one’s view of self and reality, and one’s relationship to reality.

Yoga’s process of liberation, often described in terms of “purification” or “cleaning” of the mind, emphasizes the cognitive-motivational shifts that occur as liberation proceeds, and the shifting relational reality that occurs as self-reference changes (Mishra, 1963). In this process, mind becomes unbound by the worldly forces (guna) as attention is directed inward; the self becomes liberated or free from attachments and ego boundedness. Methods of liberation mentioned in the YS include kriya (cleansing), isvara-pranidhana (devotion), karma (action), and addihivyoga (eight-limbed yoga).

Ultimately, practice is rooted not in striving for some goal but in attaining awareness through observation and perception. Awareness changes the relationship with pain, body, feelings, and thoughts, through a process of detachment. Awareness and detachment are freeing because they bring about a cessation of the misidentification with the material reality of body and mind, and result in a shift in one’s sense of self. Spirituality is thus direct knowledge of an inner life free from egoic, samskrat, and kleshis bonds, and becomes the basis of a person’s cognitive-motivational framework for acting and being in the world. The spirituality of classical Yoga is the realization of oneself as consciousness rather than solely one’s psychophysical being.

**SCIENCE, YOGA, AND POTENTIALS FOR HEALING**

A distinct shift has occurred in the discourse and culture of Yoga as India and the West have co-mingled in modernity. The Western intellectual streams of rationalism, positivism, and empiricism have influenced how modern authors of Yoga describe Yoga’s purposes, purport its methods, and even interpret classical texts. Scholarship from the humanities suggests that it is out of this transnational transformation that modern Yoga has integrated the concept of healing into its discourse on suffering by tying the spirituality of Yoga to science (Alter, 2004; De Michelis, 2004; Harrington, 2008) and by situating and modifying practice within the global health context of physical culture (Singleton, 2010). This modern movement broadens and deepens the implications for the impact of Yoga in society by theoretically relocating the locus of one’s spiritual reality and asserting claims about Yoga’s effect on the body as well as the mind, and, consequently, its effect on health and chronic illness.

De Michelis (2004) has proposed that this modern discourse pivots on Swami Vivekananda’s (1977) interpretation of Patanjali’s YS, because it was the first Yoga text to link Yoga with science, and specifically the science of healing. While Vivekananda focused on meditation, he also focused on the prana model of Yoga—with the concept of prana translated as breath, life force, or more scientifically as bioforce—in a way that gave new weight to the practice of pranayama (breath control), and therefore to the physicality of the body and its role in the spiritual purpose of Yoga (De Michelis). The idea of prana as a balanced or imbalanced bioforce is central to understanding health and disease from the perspective of Yoga therapeutics. This embodiment of traditionally metaphysical concepts and the secularization of Yoga’s path of liberation through realization (what is now thought of as ‘healing,’ as what is being “realized” has changed over time and culture) have contributed to the rise of Yoga’s use in the management of chronic illness.

A central consideration in understanding the use of Yoga to manage chronic illness is the way in which translated ideas of yogic power (such as seeing the cosmic reality of “prana” in physical terms of breath) problematically link metaphysics and biology. Alter (2004) focused on the work of Swami Kuvalayananda to illustrate how using science to anchor the worldview of Yoga can confute the truths of each and thus alter the integrity of both, while simultaneously advancing the reach and utility of Yoga globally. Because the scientific method requires reliably seeing effects in the body’s physicality, Swami Kuvalayananda’s discussion of the scientific effects of Yoga on various medical conditions engaged analogies between the differing worldviews of Yoga and science, and involved extensive arguments presenting convergences between the two systems. However, Alter suggested that because the two systems have vastly different metaphysical understandings about human nature and reality, interpreting Yoga from the worldview of science resulted in confused translations of Yogic concepts. Specifically, this approach problematically casts the body in purely physicalistic terms in which...
the healing potential of Yoga is found in its apparent effect of curing physical disease.

However, the medicalization of Yoga’s healing nature sets up false expectations about the therapeutic potential of Yoga, because it misplaces the value of Yoga. “Healing” is often understood as physicalistic transformation—healing signifies that the body (or mind) becomes well. Rather than seeing Yoga in terms of its potential to “cure” physical ailments, however, Yoga’s healing potential should instead be viewed as experientially meaningful acts that are transformative, and thus therapeutic, through their facilitation of a perceptual shift in self-understanding. It is this esotericized view of healing (De Michelas, 2004) that potentiates Yoga’s liberation as healing, where the value comes from a practitioner’s direct knowledge and awareness.

It is important to recognize that this view comes close to ascribing the liberative process to the translated secularized notion of “self-realization,” an approach that “ambiguously reflects many of the patterns of Yoga’s textual— and ‘spiritual”—popularization and medicalization as both have developed over the past seventy-five years” (Alter, 2004, p. xiii). This ambiguity arises from interpretations of contemporary Yoga literature regarding asana and the physical body, and modern concerns about health that link these notions with classical understandings and Patanjali’s Yoga to support the theory that liberation is healing. These interpretations mistakenly attribute the notion of healing to classical Yoga; however, healing is a modern notion in the Yoga context not traceable to classical writings (Alter, 2004; De Michelas, 2004). Yet analyzing the YS’s spiritual approach to suffering in terms of “therapeutics” (Fields, 2001) may still offer a useful heuristic or interpretative framework without making this erroneous assertion.

Physical ailments (YS 1.30), and unsteadiness of the body, irregular breathing, and depression (YS 1.31), are all explicitly referenced within the YS, with the implication that these conditions can be overcome through Yoga. Our assertion that overcoming these conditions is “healing,” and thus that Yoga is therapeutic, considers the function of these conditions (as obstacles and distractions to liberation) in light of current theoretical propositions about the body and cognition, especially in the secularized culture of medicine today. Therefore, while we agree with the basic theory of liberation as healing, we offer instead an interpretation that considers the ongoing agency of the body as an embodied consciousness as the cause of yoga’s healing potential.

Legitimately bringing Yoga and chronic illness together requires a careful consideration of terminology, and rethinking ways in which meanings from different Yoga traditions are linked together in theory and practice today. This approach aims toward a more solid theoretical framework for the therapeutic “healing” potential of Yoga that clarifies previously confused philosophical and biological notions without drawing its authority from the historical (religious) tradition of Yoga. We suggest that interpreting Yoga’s liberation as spiritual healing from an embodied cognition perspective functions to ground yogic praxis in an emerging perspective on the mind that is theoretically syncretic. This perspective offers medicine a way of tempering the focus on physical cure by broadening the concept of suffering, and by shifting approaches toward its alleviation.

HEALING CHRONIC ILLNESS THROUGH EMBODIED SPIRITUAL PRACTICE

Whereas pre-modern Yoga was recognized as a meditative path of spiritual liberation, Yoga today is widely undertaken as a postural practice (Singleton, 2010) valued for its health benefits (Alter, 2004). Out of the global transformation of modern Yoga, a proliferation of Yoga practice manuals have promised health (since the 1950s) and offered explicit instructions for using Yoga to manage asana (translated as posture, or comfortable posture) and pranayama (breath control), and to a lesser extent, meditation, as therapeutic or healing pathways. Amongst Yoga authorizers in the twentieth century, the practice and teaching lineages of Krishnamacharya (1888–1989) and Swami Sivananda (1887–1963) in particular have centrally shaped the world of Yoga therapeutics and its embodied approach to Yoga (De Michelas, 2004; Strauss, 2005; Stern, 2006; Singleton, 2010) (see Appendix A for annotated list of important books and articles in the field of yoga therapeutics). Recently, however, there have been some reversals of this secularized and medicalized trend toward seeing Yoga in physicalistic terms. Donna Farhi (2000) and others have called for Yoga teachers and students to “reclaim” the “spiritual message” (p. xvi) of Yoga that has been lost over the past several decades in the effort to popularize Yoga. Newcomb (2005) suggests that this spiritual exploration of Yoga is fairly widespread in the secularized religiosity of Yoga amongst practitioners, even amongst the most postural types of yoga such as the Iyengar school. Thus a central tension evident in modern Yoga involves the expression of the health or spiritual dimensions of Yoga, or how to integrate the two, and is variously expressed in the teaching of the body- and breath-centered innovations. We draw from the genre of contemporary writings on Yoga therapeutics to glean how modern Yoga represents and responds to chronic illness, and place its themes and meanings within the context of embodied theories of cognition as a scholarly frame of reference for understanding Yoga’s potential for alleviating the suffering of chronic disease.

CHRONIC ILLNESS AS RELATIONAL STRESS AND EMOTIONAL REACTIVITY

Passages gathered from modern therapeutic Yoga texts suggest that emotional reactivity and stress are “primary” factors in chronic disease (Shankardas, 2002), and tie emotion and stress to the body. For example, Iyengar (2001, p. 160) writes, “emotional tension and muscular tension are closely related,” and “turbulent emotions and physical ailments
are directly connected." Furthermore, he suggests that "according to yogic science, the health of the psyche is reflected in, and partly created by, the health of the body. Affliction and sorrow are often physiologically manifested as physical pain. Psychological pressures bring stress to bear on the anatomical body, the bodily organs, and on the nervous system." Shankardevananda (2002, p. 21) echoed this view, proposing that, "every thought and emotion we have, in some way affects the body."

Modern yogic literature catalogs a range of the ways in which stress affects the body and creates conditions for disease to manifest. These all center on the effects of stress as it is processed through the nervous system and on the connection of the nervous system with the body. Most immediately, stress manifests as muscular-skeletal tension in the body’s muscles, joints, etc., as “[m]ind-complexes] can cause great bodily changes and muscular tension" (Shankardevananda, 2002, p. 21). When people remain unaware of their emotional life, “stress will manifest itself physically and emotionally through contracted body muscles, tense facial expressions, and undesirable behavioral patterns,” and stress may be felt in “stiff muscles and joints, atrophy of skeletal bones, slowing down of bodily systems, or sluggishness in the vital organs” (Iyengar, 2001, p. 160).

These texts suggest that chronic stress creates habits in the body that result in imbalance in bodily systems, thereby affecting their functioning. For example, stress is related to the chronic illness of asthma, in that “muscle fibers in bronchial passages constrict for several reasons, including via autonomic nervous system stimulated by tension and other stresses” (Shankardevananda, 2002, p. 12). Devi (2000) explained that “physical and mental stress accumulate” (p. 1) and that “to avoid feeling pain, our emotional hearts contract” (p. 15). She went on to suggest that “anger, hatred, and fear can be the underlying causes of many of our modern-day chronic diseases [and that] if the emotional component is not positive, it must be dealt with in ways appropriate to expression, not repression,” and that “sometimes when the negative becomes in control you may rid yourself of one disease yet cause another” (p. 56). These illustrations suggest that Yoga therapeutic interprets the suffering of chronic illness in terms of stress habits. These stress habits affect the balance of the body’s systems by creating tension, constriction, and contraction in any number of organs, tissues, and overall processes, the accumulation of which results in chronic disturbances.

The observation that Yoga therapeutic conceptualizes chronic illness in terms of reactions to stress may not be surprising, since stress has become of major scientific interest over the past several decades, especially as a factor in health (Antonovsky, 1979; Heim, 2000). Also, it seems inevitable that the “de-stressing” discourse of science would become a central theme in Yoga therapeutic because a characteristic feature of modern Yoga is the incorporation of the discourse of science into its own narrative (De Michal, 2004). What is not necessarily clear, though, is the impact this narrative has made in the field of healthcare. In what ways, if at all, does (or should) the modern narrative of Yoga as therapeutic counterbalance the dominant paradigms of science and medicine in shaping today's cultural and secular norms specifically regarding conceptions of the body's relationship to suffering?

While Seyle (1982) first conceptualized stress in human physiology in purely physical terms—that is, as a temporary physiological state of an organism's bodily reactions to stress-inducing circumstances—others have focused on the role of cognition in perceptual processes associated with physiological stress reactions (Lazarus & Folkman, 1984; Lazarus, 1999). Specifically, current views of stress use both of these conceptualizations of stress to frame it in terms of appraisal processes that are situationally activated in the person’s mind and have neurobiological correlates. Because a basic relativity underlies appraisal, relational appraisal may be a better way of theorizing mind–body interactions. Yoga therapeutic also represents chronic illness at a deeper level in terms of the causes of stress. The texts suggest three primary causes of stress: an individual’s thoughts, modern culture, and spiritual disconnection. As Yoga therapeutic suggests that these three underlying causes of stress play a fundamental role in the suffering and healing in chronic illness, it becomes critically important to consider the way in which these three factors interrelate and affect embodied cognition (in which both the physicality of the body and lived experience constitute conditions of health and disease). It may be useful to consider both scientific and yogic conceptions of cognition, especially as cognition relates to the body, one’s environment, and one’s consciousness, in order to better understand these interrelationships.

A dominant theme in Yoga suggests that a person’s own thoughts are a primary cause of stress: “As you think, so shall you become” is a popular saying among Yoga enthusiasts. Both Yoga therapeutic (as implied above) and health psychology suggest that thoughts may be alternatively stress-inducing or healing. For example, Lazarus (1984, 1999) suggested that the way that we appraise situations and think about them causes the experience of stress. Kendall-Tackett (2010) explained that negative emotions such as depression, anxiety, hostility, anger, shame, pessimism, and hopelessness (what Lazarus [1999] called the “stress emotions”) negatively affect health by inducing the production of pro-inflammatory cytokines, which play a role in such chronic diseases as heart disease, cancer, and diabetes.

The scientific study of the role of the mind in stress and chronic illness is examined through the interdisciplinary field of psychoneuroimmunology (PNI). PNI investigates ways in which stress, especially psychological stress, triggers an inflammatory response in the body that may cause the deleterious long-term effects on the immune system that result in chronic illness (Malarkey & Mills, 2007; Kendall-Tackett, 2010). Harrington (2008) suggested that the “cure within” discourse of the role of the mind in health and disease has become assimilated into our cultural history as stories that become embodied and take on life and meaning in various ways. In fact, the discourse of the intimate connection between mind and body in health has become so much a part of the culture of yogic healing that the concept and term “psychoneuroimmunology” appear in modern Yoga literature. For example, Kraftszow expressed the basic premise of PNI that, “the link between
conscious mind and unconscious body responses work in both directions: thought-emotion-body" and weaved into his Yoga writings the scientific view that "psychoneuroimmunology research points to a strong link state of mind (including habits of thought and emotional response) and physical health." Similarly, Shankardevaanda (2002, p. 4-5) identified a shared perspective between the two paradigms of Yoga and science that, "the science of psychoneuroimmunology agrees with the yogic view that the mind is a more important cause of allergic diseases."

Modern Yoga literature also identifies modern culture as an overarching cause of stress, and emphasizes that how each individual perceives his or her environment determines whether that individual experiences stress. For example, Iyengar (1979, p. vii) stated that "the strain of modern life can lead to physical pain and illness, as our bodies' well being is neglected in the race for material success. The stress of modern life can also lead to mental suffering like feelings of inadequacy, isolation, or powerlessness." He elaborated by suggesting that individuals' responses to cultural and environmental pressures generate (or does not) the experience of stress. By focusing on the way that people respond to these cultural and environmental problems, Iyengar illustrated how it is really the functioning of the individual's cognitive system, as it relates to the cultural, social, and physical environment, that affects one's state of suffering.

Theories of embodied mind from cognitive science also situate the mind in environment and culture. Lakoff and Johnson (1999) suggested that cognition is based in the body, by way of the sensorimotor system shaping the conceptual inferences that we make. Thus, the body and its movement in the immediate environment is the primary agent in forming how individuals think and reason about themselves and the world. Interpretive inferences are made from individual observations. The person and environment interact, and the person appraises what the situation signifies for personal well being. But appraisals are not constituted wholly within the person and the person's reaction to situations. In Lazarus' (1999) person-in-environment view of psychological stress, appraisal is an evaluative process that occurs in the mind, in which relational meaning is constructed between goals and beliefs. Thus, the experience of stress occurs when an individual appraises a situation or environmental context as unable to support his or her goals, or as in conflict with beliefs about self or the world. From this perspective, stress can be interpreted as a kind of embodied suffering that is caused by the body's perceptual reaction to environmental pressures.

A less emphasized but discernible theme in Yoga therapeutic literature is that perception hinges on an individual's present-moment lived awareness of his or her spiritual goal or purpose (or lack thereof). Thus, spiritual disconnect is recognized as a fundamental cause of the stress that may underlie chronic illness. Using the example of chronic back pain, Devi (2000) suggested that while some may see a back pain as a simple back pain, this view is not correct, since even this seemingly simple kind of chronic condition is composed not only more broadly in term of "how we use or abuse the

muscles, how we think, feel, eat, sleep, and rest," but also in terms of whether we "acknowledge the essence of who we are" (p. 5).

This discussion of the causes of stress is important because how individuals conceptualize psychological stress helps determine which scenario—health or disease—occurs in different bodies, and under what circumstances. Also important to the course stress takes in a person's life is the way in which an individual deals with stress and its effects. Understanding Yoga therapeutics' account of the causes of stress may help clarify the theoretical grounding of Yoga's embodied response to suffering, with particular consideration given to the idea embedded within the modern yogic notion of healing that managing both the causes and the symptoms of stress and emotional reactivity is what constitutes true healing. What follows is a discussion of how yogic processes may "de-stress" a person (i.e. undo the perceptual experience of stress, including relieving physically felt tensions, to the extent that stressful experience has negative consequences for the body and health) and the negative effects of previously experienced stress (in terms of undoing the damaging effects in the body and habits of mind).

YOGA AS A WHOLE SYSTEM FOR HEALING CHRONIC ILLNESS

Our analysis of contemporary writings on Yoga therapeutics suggests that Yoga's response to chronic illness involves practicing Yoga in ways that "balance" the person's "whole system," including the body, by cultivating awareness through various yogic methods. Which methods are to be employed depends on the specific chronic condition and characteristics of the individual person, but almost all texts emphasize postural movements and breathwork. Based on observations of how Yoga is "performed" today (Strauss, 2005, Singleton, 2010), it would be tempting to conclude that Yoga is solely about the physicality of the body. A purely physical perspective on health and disease necessitates medical treatment for cure of physical illness. However, many modern Yoga texts suggest that the therapeutic value of Yoga is not just physical, but mental, emotional, and spiritual, as well. From this perspective, we posit that the body is a locus of experience, experience that may be felt not only as physical sensation, but also as mental, emotional, and spiritual experiences, often simultaneously. Thus modern Yoga responds to chronic illness through postural and other yogic practices that operate on these interrelated dimensions of the human experience, through an embodied reality of self and being, Yoga therapeutics effects a remediation of stress and its causes through this multidimensional approach. As Persson (2010) suggested, this response implicitly recognizes the coextensive phenomenological nature of interrelationship between embodied beings and the world.

In order to understand Yoga's impact on chronic illness, it is important to consider the ways in which Yoga therapeutics' interpretation of embodiment ties the body to both spirituality and healing. Our analysis suggests that body-based methods of Yoga can be understood as healing because they bring a lived spirituality into the body. This embodied spirituality occurs by
practicing with (spiritual) awareness of the moment-to-moment experience of self, including body sensations, emotions, thoughts, sounds, etc. In this view, stress and related chronic illness is "healed" by reConnecting with spiritual self or center, and by reConnecting consciousness and awareness with embodied, transformed cognition. This experientially felt spiritual reConnection re-establishes an embodied equilibrium, and sometimes results in curing the associated physical disease. Thus, while Yoga's response to suffering has traditionally been a spiritual process, today's Yoga advocates physical practices as a way of experiencing an embodied spirituality.

Yoga, however, is more than a set of physical practices and postures. A healthy diet, ethical conduct, and service to humanity must accompany physical postural practice, and pranayama and meditation, as components of a whole system "treatment" program for specific chronic illnesses. Devi (2000) organized her chapters around these central concepts, noting, for example, that the modern diet of rich foods, high in meats and dairy products, may be linked with many chronic illnesses. Numerous texts recommend a vegetarian diet for those practicing yoga (Karmananda, 1983; Satyananda, 1997; Desikachar, 1998; Shankardevananda, 2002). Devi (2000) also emphasized how practicing the Yogic ethics of service and consideration of habits in relating to others may facilitate liberation from suffering.

Yoga's response to chronic illness brings spirituality into the body through a whole system of lifestyle transformation that links cognitive process with physical action, and associates both with the concept of "liberation from affliction" found in the YS. This linkage of spirituality to embodiment brings into focus the non-conceptual potentialities of cognition and perception. As in classical Yoga, modern therapeutic Yogic texts suggest that the focus of one's attention is the key factor in the spiritual path of healing. Turning attention inward to perceive direct experience, rather than toward some transcendent reality, has become the fundamental process of therapeutic Yoga, and this process is regarded as central to healing. Healing is dependent on the cultivation of awareness and the ability to perceive internal states—direct experience of the mind and the body. This awareness is believed to "foster awareness of emotions and stress reactions as they arise" (Karmananda, 1983, p. 63), which enables greater conscious control over actions, and empowers sufferers to rethink and alter harmful and unhealthy habits. Shankardevananda (2002) described awareness at "the simplest level as bare attention, the noting of events without attachment or aversion," and that success is attained when "one ceases to be the sufferer" and becomes "the observer," noting bodily changes, mental states, and feelings, without identifying with them" (p. 42; emphasis added). Rather than being a fixed characteristic, "awareness is a skill . . . that must be developed!" (Shankardevananda, p. 42). Karmananda (1983) explained that without developing this ability, "most of the potential of Yoga is lost!" (p. 45). Explaining the healing power of awareness, McCall (2007) wrote that "students of therapeutic yoga are taught to tune in to subtle sensations of their muscles and joints, as well as the inner experience of the mind" (p. 19), and suggested that "the more we can turn our awareness inward, turn the senses internally, the more they are replenished and rejuvenated. The internalization of attention is also the bridge to the healing power of yoga" (p. 57).

This cognitive-motivational framework, found in Yoga's therapeutic literature, helps explain how Yoga is valued today as a way to relieve the suffering associated with chronic illness, both physically and spiritually, and explain, in part, how Yoga has found its way into the culture of modern medicine.

Awareness may be cultivated through any number of yogic practices. In classical Yoga, the predominant methods of amplifying awareness were meditative and meditation remains a primary method of relieving suffering in Yoga today. But the same approach of inner awareness is also recommended in modern Yoga therapeutics as a way of undertaking postural practice. Perhaps the most recognized form of this mode of practice is the "mind–body" methodology of intentionally and physically moving the body with awareness of breath, in order to re-establish the body's homeostasis set point. Because the postural practice of Yoga so widely popular today is a recent innovation of methodological approach to Yoga, and because of its use in Yoga therapeutics for managing chronic illness, it is important to understand how modern authorizers of Yoga (especially those who emphasize posture in their practice) view the role of asana and pranayama in the healing process.

The practice of asana corrects defects of body and body system imbalances, but must be practiced through the focus on body awareness in order to produce the greatest effects (Satyananda, 1997). Readjustment of the physical body occurs through stimulation of the body's own regenerative processes. But asana also creates energy in the body. The concept of bioenergy is referenced regularly in various texts; regulating this "force" is believed to adjust organ function through the regulation of nervous impulses and blood flow, elimination of bodily disease and imbalance, and generation of "an enormous amount of energy" (Iyengar, 2002, p. 155).

A number of texts also suggest that an individual's approach to form, rather than focus on the form of the asana itself, brings awareness into the body. Inquiry, or personal reflection, into one's own physical, emotional, and psychological comfort and awareness promotes attention to the body as a whole, interconnected with mind, as an essence or being-ness. "Forms become vehicles for experiencing one's essential nature rather than goals themselves" (Farhi, 2000, p. 15v). This approach treats the body holistically by integrating breath and mind into asana to achieve maximum therapeutic benefit. Practicing reflectively facilitates the process of Yoga practitioner meeting self.

Texts also suggest that the healing effect of Yoga may lie in controlling the senses. Practice involves drawing the five senses of perception inward, rejuvenating the body by reuniting with spiritual awareness. Controlling the senses also allows mastery of ego, as ego disconnects a person from his or her emotional center. Yoga therapeutics sees "body and mind in a state of constant interaction," and "does not demarcate where the body ends and the mind begins" (Iyengar, 2001, p. 11); therefore every aspect of the body is pervaded by consciousness. Asana is a way to develop the internal awareness that
must permeate each movement of the kriya, with the body as the element of cognition. The infusion of consciousness into every cell of the body occurs through focusing the mind’s attention completely in the body. Perceiving clearly through the body links the embodied mind with the non-conceptual process of embodied perception, and this is why the “cure” for suffering is awareness, observation, perception, and direct experience: action follows from cognitive stance. Thus, the modern method of physical Yoga generates a clarified understanding of self, by recognizing a psychosomatic dimension of living, while one is doing a physical thing, the acting and behaving can be performed consciously, with presence and awareness.

This discussion has focused on the central theme in modern Yoga writings relating to chronic illness: the promise of a cure for a wide range of disease conditions. Shankardevananda (2002) stated that, “through Yoga and the cultivation of awareness which comes from Yoga, we are able to deal with, and occasionally remove, the sources of sickness and not just the symptoms” (p. 7). In this context, cure is defined in terms of relieving the sufferer from symptoms, eliminating the physical disease, and preventing future episodes. Cure means an end to the cycle of deep mental and emotional reactions, and freedom from drugs (since drugs are most often used to treat or manage symptoms, but do not eliminate their future occurrence, or resolve the underlying condition).

In Yoga, though, cure also involves the transformation of the chronically ill person from the position of sufferer who needs to be treated, to a position as self-healer (Harrington, 2008; Shankardevananda, 1997). In this transformation process, attitude is a prime factor in the cure, since expectations of cure can create further tensions. A positive attitude, in the yogic sense, promotes viewing situations as opportunities for learning rather than as annoyances or in terms of desired outcomes. The person seeking relief of suffering must be sincere and committed to the yogic process without becoming attached to the outcome of becoming disease-free. This interpretation of cure also identifies relaxation as the starting point for curing ailments and imbalances but not the final goal, since repressed tensions, emotions, and memories may arise in a state of relaxation. Such arisings are seen as signs of progress toward the integration of spirituality into daily being.

Attitudinal shift is seen as central to alleviation from suffering and suggests that the modern yogic notion of “cure” seems more akin to the concept of “healing” suggested in New Age alternative healing literature (Helman, 2000). In this context, biomedicine cures physical disease whereas holistic medicine heals illness (De Michis, 2004). With this distinction, cure is a resolution of the physiological imbalance(s) whereas healing has a broader meaning that encompasses the whole person (mind, body, spirit, social, etc.). An interesting concept of healing emerges from this understanding in that “healed” could mean that the person continues to live with the physiological imbalance but is no longer suffering in an existential sense.

Thus, the Yoga therapeutic approach of grounding spirituality in the body as a pathway for healing informs a broader concept of health than typically understood in medicine today. In this approach, the concept of health is not centered on an absence of disease symptoms; rather, it involves optimizing the functioning of every body system, establishing emotional well-being, and developing spiritual resilience. As Yoga depicts the individual as more than just a psychophysical being, this view of personhood provides theoretical grounds for broadening the concept of individual health “to apply to the well-being and freedom from suffering of the whole person” (De Michis, 2004, p. 7).” De Michis suggested that it is legitimate “to speak of health with respect to this spiritual Self, and of ultimate liberation from suffering as healing on these grounds.” But Alter (2010) argued that the self-healed through therapeutic Yoga should be seen as “a field of agency” (p. 311) that exists relationally; a person is continuously engaged in environmental and cultural happenings. In this sense, Yoga depicts chronic illness not only as a condition of physical disease, but also as a state of suffering that can be healed through Yoga’s spiritual path. Because it focuses on the underlying causes of ailment and suffering, Yoga as a whole system interprets disease as nature’s mechanism to rebalance and heal the body.

Yoga’s classical purpose of sighting the soul, which evolved into the medieval hathayoga purpose of restraining the energy, has shifted to the contemporary purpose of “healing” that draws from both and integrates each into an embodied spirituality, avoiding problematic duality between inner and outer reality. Yoga therapeutic texts present a view of Yoga as more than just a treatment (in the sense of targeting a specific illness) but as a consciousness (in the sense of transforming one’s personality and character while leaving the essence through modifications of lifestyle). Thus Yoga is a transformative spiritual process. Such transformations take time, and may not immediately, or ever, cure the disease condition, but provide an avenue for liberation from the kind of mind-body suffering that comes with chronic illness. Yoga can, in fact, be understood as a way to alleviate suffering wherever it exists, including cases of chronic illness.

EMERGENCE OF YOGA THERAPEUTICS WITHIN INTEGRATIVE MEDICINE

Over the past century, Yoga has transitioned from operating as an esoteric mode for “alternative healing” to aligning with counter-culture ideology as an “alternative medicine” and finally becoming a fairly ubiquitous “complement” to standard medicine (Berliner & Salmon, 1980). The numbers of people practicing Yoga today are not insignificant. A 2001 epidemiological study counting Yoga as one of 20 CAM (Complementary and Alternative Medicine) therapies, for example, found that over two-thirds of the American adult population has used some type of CAM therapy at least once in their lives (Kessler et al., 2001). Specifically regarding Yoga, a Harris Interactive Service Bureau poll conducted in 2003 found that over 7 percent of US adults (or 15 million people) practiced Yoga regularly (Lamb, 2004). Over the past decade, Yoga has become an “integrative” component of overall treatment
of illness in standard medicine within even the most elite academic medical centers and teaching facilities. The Consortium of Academic Health Centers for Integrative Medicine currently has over 50 member institutions. Yoga is taught in the vast majority of these centers. According to the National Center for Complementary and Alternative Medicine (NCCAM), the 2007 National Health Interview Study found that Yoga is one of the top ten complementary health practices used among US adults.

Chronic illness affects approximately 133 million Americans—almost 45 percent of the adult US population has at least one chronic illness (Wu & Green, 2000). People who suffer from chronic illnesses may seek out the practice of Yoga with a variety of motivations. While the traditional purpose of Yoga is spiritual liberation, De Micheli (2004) and Strauss (2005) pointed out that not everyone who practices Yoga practices it for this purpose. Many practice just for stress relief that comes with the solace of practice. Others may desire alternatives to their current lifestyle in the hope that making changes could bring about a healthier body and a greater sense of well-being. Still others may hope that Yoga can potentially cure them of their suffering and diseased condition. Literature written by modern Yoga masters and a growing evidence-base of scientific research suggests that any of these outcomes could be a possible consequence of taking up yoga in earnest. These goals could be summed up by the two main expectations of spiritual liberation or health improvement, with the main difference being the underlying motivation of the Yoga practitioner. When a person desires spiritual liberation, the motivation is to experience freedom. However, a desire for improved health involves a motivation to change and heal. This desire to change the reality at hand may function as discontentment that further contributes to suffering.

Chronic diseases are generally considered on a spectrum of “curability” from both allopathic and yogic perspectives, with some diseases considered incurable (e.g. coronary heart disease). In these cases, symptom management is the goal of treatment. For diseases considered curable (e.g. primary hypertension), there may be a standard treatment regimen given to all patients. For those diseases falling somewhere in between (e.g. asthma), there is some question about whether there can be a cure or not. Which diseases are considered curable, though, differs between these two perspectives, with Yoga therapeutics suggesting a greater potential for curability through its methods.

A measure of caution is warranted, though, when Yoga therapeutics is used to achieve health. Expectations of cure may result in harmful consequences if a Yoga teacher or a health care provider promises cure of disease through Yoga. Promises of “success” set up anticipation and belief in the patient about future outcomes, expectations that could undermine the crucial yogic process of detachment from a desire for certain results. While cure of disease through yogic processes may occur, the mindset and expectations with which one commits to the Yogic path are centrally important to attaining (or not) any goals sought with its practice. Attachment to health or to a certain state of the body can produce a seed of dissatisfaction that perpetuates suffering. Additionally, the authority of the physician or provider who recommends a

Yoga course could create expectancy that results in adverse outcomes for the patient, who might think that lack of a cure is reflective of personal fault or incorrect practice. These kinds of self-critical and doubtful thoughts are themselves symptomatic of the kind of suffering that leads to psychosomatic illness. The point of Yoga is to remain detached from the outcome so that cure or complete alleviation of the disease condition is no longer the measure of suffering or well-being. A failure of Yoga to cure may also result from limitations of the Yoga teacher or therapist. Some Yoga masters may have more knowledge of what—and how—to teach the sick person than the average Yoga therapist or health-care provider has. Moreover, failure to cure may be a result of timing, if therapy is started too late in the disease process. Yoga does not work overnight.

Clearly, in cases where Yoga does not cure physical disease, it can still offer significant relief from suffering, in the form of liberation from the existential suffering that occurs in spiritual disconnection or lack of awareness. Yoga can provide a different way of looking at pain and suffering, which in itself can alleviate suffering. The basic realization that "I" am not my body, or my thoughts, or my sensations of pain, is in itself healing. This perspective is what might often be considered as secular spirituality. Since spirituality is still not widely accepted within medicine, this perspective raises the question of what it means for modern medicine (especially in its secular context) to attribute a spiritual cause to chronic illness, and to offer a secularized spirituality of embodied practice as a potential treatment.

We propose that those who offer Yoga in the medical setting and elsewhere as a means to treat chronic illness temper the focus on cure of physical ailments and emphasize healing from the more holistic perspective, that fosters a non-dual, perceptual relationality to self and the world. This approach would be more meaningful, useful, valuable, and potentially more effective in promoting overall health and well-being. Rather than concentrating exclusively on eliminating disease, cultivating a basic realization of selfhood—that thoughts and pain are not the fullness or wholeness of a person’s identity—offers a powerful and legitimate way to contend with the health-care crisis of chronic illness today.

Additionally, consideration of the secular culture of medicine raises the question of whether there is less alleviation of suffering if the expectation is of a cure rather than spiritual liberation. As a response, Yoga therapeutics promotes liberation as a process. In addition to a realization of wholeness and dis-identification from the illness condition, liberation involves an ongoing practice of incorporating this realization into each and every waking moment. While the former approach may offer health benefits of stress relief, the latter provides additional possibilities for those who wish to take on Yoga with a spiritual purpose. Sustaining continuous awareness is additional “healing” work. The field of palliative care provides a clear example in which movement away from an emphasis on or effort to cure opens a door for patients to potentially dissociate from identification with the disease and refocus on self, and certainly promotes healing and acceptance (in the final stages of life’s experience).
While a “healing” perspective and patient-centered holistic health care is an approach widely espoused within health-care institutions, its adoption remains limited. Yoga is still seen as a culturally relative and individual practice, rather than in universal (humanistic) terms. What does liberation mean in this sense? Reflecting its adaptability to each unique historical era and cultural context, the spiritual system of Yoga has been translated into a form of practice acceptable in the secular context of medicine. What if this holistic view—that “I am not my pain”—which provides relief from existential suffering, was applied within medicine beyond the context of Yoga therapies, to the extent that it was taught in the health sciences and available widely in hospitals? This is one vision for integrative medicine. The growing recognition that self-knowledge is an important aspect of good health across diverse cultural contexts may lead to the promotion of this kind of knowledge in health-care settings. A holistic or whole systems approach to medicine moves consideration of health beyond physical and psychological symptoms to include the spiritual dimensions of meaning, values, purpose, connectedness, and happiness, all within culturally and environmentally situated contexts that implicitly affect quality of life (Manahan, 2011). People suffering from chronic illness who engage with Yoga in these contexts may experience relief from at least some aspects of their debilitating conditions, and gain a new perspective on an embodied reality that enriches and potentially transforms their lives in a meaningful way.

**APPENDIX A**

Selected annotated list of important people and works from the practice and teaching lineages of Krishnamacharya (1888–1989) and Swami Sivananda (1887–1963) that have centrally shaped the world of Yoga therapeutics:

Swami Sivananda, a former physician, became a Yoga master who wrote and traveled extensively teaching on the therapeutic functions of Yoga.

Selected list of Swami Sivananda’s disciples who have made significant contributions to how Yoga is practiced and understood in its therapeutic applications:

1. Swami Satyananda Saraswati (1927–2009) founded the Bihar School of Yoga
   a. *Asana Pranayama Mudra Bandha* (first published 1969), one of the most well-known systematic yoga manuals; lists indications and contraindications regarding medical conditions, along with practice instructions of each individual practice, and contains an index of recommended Yoga practices for a number of specific health conditions.
   b. *Constipation and its Cures; Health and Diet; Practice of Nature Cures: A Boon to Diabetics.*
   c. *Yogic Management of Common Diseases; Yoga and Cardiovascular Management*, co-authored with Dr. Swami Karmananda.

2. Swami Satchidananda (1914–2002) founded Integral Yoga and taught both Nischela Joy Devi and Dr. Dean Ornish. Both have gone on to play major roles in bringing Yoga into healthcare settings as part of an integrative approach to chronic illness:
   a. Nischela Joy Devi (*The Healing Path of Yoga: Alleviate Stress, Open Your Heart, and Enrich Your Life*, 2000) and


Krishnamacharya revolutionized Yoga by transforming its dominant culture to postural practice, though still retaining its devotional character. His students include:

1. T.K.V. Desikachar (1938–), Krishnamacharya’s son and founder of the Krishnamacharya Yoga Mandiram. Author of *Health, Healing & Beyond: Yoga and the Living Tradition of Krishnamacharya*, first published in 1998. Numerous students of Desikachar are currently leaders in the field of Yoga Therapy:

3. B.K.S. Iyengar (1918–), widely viewed as the most renowned and influential authority in the world of yoga therapeutics today, studied with Krishnamacharya in his early days.

a. Most well-known books: Light on Yoga: Yoga Dipika (about asanas or postural practice) and Light on Pranayama: The Art of Yogic Breathing (about yogic breathing techniques), each offering a therapeutic index identifying specific asanas and pranayamas indicated and contraindicated for a wide range of illness conditions; Yoga: The Path to Holistic Health specifically addresses common specific chronic illness in individual chapters.

b. Numerous students of Iyengar are currently leaders in the field of Yoga therapeutics: Mukunda Stiles: Structural Yoga Therapy: Adapting to the Individual (2001); Ayurvedic Yoga Therapy (2008).

4. Srivatsa Ramaswami, Author of Yoga for the Three Stages of Life: Developing Your Practice as an Art Form, a Physical Therapy, and a Guiding Philosophy; The Complete Book of Vinyasa

Selected other recent publications on Yoga therapeutics:

- Yoga and Ayurveda: Self-Healing and Self-Realization by David Frawley.
- Cure Back Pain with Yoga by Loren Fishman and Carol Ardman.

REFERENCES


