

Introduction

Chronic pain consists of a complex interplay between biological and psychological aspects, resulting in therapeutically challenging conditions to control. Clinical trials and observational studies provide encouraging evidence suggesting that Tai Chi/Qi Gong, a multi-component traditional Chinese mind-body exercise, has multiple benefits for patients with a variety of chronic disorders, particularly those with chronic pain. Combined, both physical and mental components of **Tai Chi** uniquely promote the integration of mind and body to improve function, self-efficacy, psychological well-being, and life satisfaction. In addition, Tai Chi slows the progression of the disease and the disabilities associated with chronic pain (Wang 2008; Wang 2011; Wang 2012; Wang et al. 2010a; Wang et al. 2004; Wang et al. 2005; Wang et al. 2009b; Wang et al. 2010b).

In general, Tai Chi is a style of **Qi Gong** that can be described as a graceful, slow, gentle moving meditation which utilizes deep breathing and relaxation. Tai Chi is a mind-body exercise that originated in China as a martial art and is thought to have been created by Sanfeng Zhang in the twelfth century. The martial art is now the most popular mind-body exercise in the world (Birdee et al. 2009; Clarke et al. 2015; Wang et al. 2014). Tai Chi was developed in Daoist monasteries and its ultimate goal was enlightenment. The practitioner must regularly follow the fundamental principles of Qi Gong practice, which include regulating the body, mind, Qi, spirit, and the breathing.

Qi Gong is a powerful system of healing and energy medicine from China. It uses breathing techniques, gentle movement, and meditation to cleanse, strengthen, and circulate the life energy (Qi, phonetically pronounced “chi”). Qi Gong includes not only healing exercises and meditations but also

any practices that contribute to physical, mental, emotional, and spiritual balance to promote health.

Unlike some Qi Gong methods that exercise specific systems or parts of the body (e.g., the nervous system, endocrine system, heart, or kidneys), Tai Chi involves the whole mind and body. It treats health systemically, restoring the body to its original “program,” uncorrupted by stress, pollution, and disease. It is considered a complex multicomponent intervention integrating physical, psychosocial, emotional, spiritual, and behavioral elements (ChinaSports 1983; Wayne and Kaptchuk 2008). These include a number of essential components from both external and internal exercises such as mind-body interaction, breathing regulation, hand—eye coordination, visualization, and relaxation that leads to better health and vitality and a tranquil state of mind. The most important aspect of Tai Chi/Qi Gong is that it can calm the mind and relax the body. In addition, this practice can help the patients sense the Qi (internal energy) circulating within the body to achieve pain relief and peace of mind from meditation.

As a form of physical exercise, Tai Chi/Qi Gong enhances cardiovascular fitness, muscular strength, balance, physical function, and neuromuscular activity. Tai Chi might buffer the immune alterations through relaxation, stress reduction, improved mood, and moderate physical activity for patients with chronic pain (Morgan et al. 2014; Wang et al. 2004).

Thus, Tai Chi/Qi Gong might modulate complex factors and improve health outcomes in patients with chronic pain conditions. Tai Chi/Qi Gong can be safely recommended to patients with chronic pain conditions as a complementary and alternative medical approach to affect patient overall well-being (Wang 2008; Wang 2011; Wang, 2012; Wang et al., 2010b; Wang et al., 2009b; Wang et al., 2010a).

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The overall field of Tai Chi/Qi Gong contains many essential components for treating chronic pain. In this chapter, we offer a description of particular elements of our rationale and expertise, as well as information common to the overall field. This section highlights the current body of knowledge about the role of this ancient Chinese mind-body medicine as an effective treatment of chronic pain conditions that can lead to better informed clinical decision-making for our patients.

History and Overview of Tai Chi/ Qi Gong

Originating as a Chinese martial art, Tai Chi/Qi Gong has been practiced in China for many centuries. Dating back 3000 years, Tai Chi/Gi Gong has been recognized as one of the most effective ways of self-healing in order to maintain health. However, this treasure was not revealed to the general public until the beginning of the twentieth century. While accounts of Tai Chi's history often differ, the most consistently documented history points to, Sanfeng Zhang a Taoist monk in the twelfth century, as the founder. Zhang developed an initial set of exercises

that imitated the movements of animals. It is said that he observed five animals—tiger, dragon, leopard, snake, and crane—and concluded that the snake (see Figure 14.1) and the crane, through their movements, were the ones most able to overcome strong, unyielding opponents. Zhang brought flexibility and suppleness to the martial arts, in addition to some key philosophical concepts. The effectiveness of Qi Gong has been proven in China by its beneficial impact on the health of millions of people over thousands of years. The focus of Taoism, China's original religion/philosophy, is to develop the life force, or chi and the yin/yang concept to the world (ChinaSports; Rones 2007; Rones 2011; Wang et al. 2004).

The term "Tai Chi" has been translated in various ways, such as "internal martial art," "supreme ultimate boxing," "boundless fist," and "balance of the opposing forces of nature." The techniques include bending, expanding, condensing, extending movements of the body, and regulating breathing. They also include various forms of meditation, sitting, standing and moving slowly, which



Figure 14.1

Snake creeps down.
(From Yang Style Tai Chi Chuan, photograph by Clifford J. Snider.)



Figure 14.2
Tai Chi move: White crane
spreads its wings.
(Photograph by Clifford
J. Snider.)

is a unique characteristic of the Tai Chi form and practice (ChinaSports; Rones, 2007; Rones 2011; Wang et al. 2004).

A person practicing Tai Chi moves the body in a slow, relaxed, and graceful series of movements. These movements comprise what are called forms (or routines). Some movements are named for animals or birds, such as “White Crane Spreads Its Wings” (see Figure 14.2). The simplest style of Tai Chi uses thirteen movements; more complex styles offer dozens.

There is always some controversy concerning which styles represent the “truest” Tai Chi. During its development over the past 400 years, Tai Chi has evolved into many different styles including **Chen**, **Wu** or **Hao**, **Sun**, and **Yang** styles. Each style has its own characteristics, is based on the same principles and theory of traditional Chinese medicine, yet differs in the structure of the form and the requirements of the body. Among those styles, Chen style is the oldest, while Yang style is the most popular. The Yang style consists of a classical long form of 108 postures or a simplified short form of twenty-four postures. It is claimed to be the best style for

beginners because it has more accessible stances and is easy to learn and practice (ChinaSports 1983; Rones 2007; Wang et al. 2004).

Various forms and styles of Tai Chi have been formulated and modified for different reasons such as general health promotion and easier learning, but the general principle and theory remain the same. Tai Chi can be practiced in almost any setting because it requires no equipment and minimal space for patients with chronic pain (see Figure 14.3). The following concepts are universally important to both Tai Chi instructors and patients.

The Mind-Body Prescriptions

Tai Chi training is different from most ordinary martial arts, or ordinary sports for that matter. Tai Chi mind-body exercise is systematically based on the mind, energy, and intention, not muscle or sensitivity, not speed or brute force; relaxation not tension; and a calm, still mind rather than a violent, aggressive one. Therefore, these qualities promote a more spiritual tone than many other varieties of martial arts do.

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Figure 14.3
The bench/chair twist.
(Photograph by Clifford
J. Snider.)

Sidebar 14.1 Patient Interviews

In response to the question, “Do you feel different about yourself or your pain since receiving this care?” a 35-year-old woman with fibromyalgia replied: “I see my pain as a sensation trying to communicate something to me. It causes me to stop what I’m doing and pay attention to my body. I see the sensation as an asset to my overall health instead of a constant nuisance. The pain is an indicator that I need to pay attention to something going on inside of me. Once I pay attention, I can make a choice in how to respond to the pain.”

The Meaning of Tai Chi

To implement and integrate Tai Chi principles, we must focus on how to optimize hundreds of important yin-yang relationships within ourselves. We do this by standing, sitting, and using moving techniques in order to:

- make the body conscious
- separate any pair of specific yin-yang relationships into their constituent parts

- comprehend how internal energy/chi and the physical tissue of the body work with/against each other
- navigate the relationships between intent and the manifestation chi or physical movement.

The Meaning of Chi (Subtle Energy)

Tai Chi mind-body exercises help to develop the subtle chi-energy. Chi is a strong life force that makes a human being alive, alert, and present. The “life force” is found in most of the ancient cultures of the world. A weak life force results in sluggishness and devolves into chronic pain. Energy can be increased in a human being. Consequently, the development of chi can make an ill or weak person vibrant and robust, having both physical and mental capacity (Rones 2007; Yang 2010).

The Mind and Body are composed of Chi

In the West, many people think that the body, thoughts, and emotions are separate entities. The body is real because it is physical matter, but thoughts and emotions are only creations of the mind and can be changed.

According to Chinese medicine, both the body and mind are composed of “Qi” and are controlled by the state of that Qi. Qi-energy operates in the body and mind at much more refined levels. Through the medium of chi, the mind can affect the physical body for good or ill. Balance and smooth flow of chi in one creates balance and health in the other. Imbalance, agitation, and uneven flow creates imbalance in one; Qi/energy, discomfort, and illness in the other. Thus, mental and emotional stress creates physical illness.

Balance Yin and Yang

On the philosophical side, Tai Chi involves the opposite forces of yin and yang, as well as the balance and integration of both. From many Western perspectives, night-day, up-down, strong-weak, right-wrong, man-woman, etc., connote parts that oppose each other. From an Eastern perspective, these opposites naturally complement each other, rather than oppose or conflict, and have a common source that is beyond dualistic opposites. This source is called Tai Chi. Tai Chi has many methods that are extremely effective in helping maintain the balance of yin and yang, which, from the position of traditional Chinese medicine, determines the state of one’s health (ChinaSports 1983; Wang et al. 2004; Wayne and Kaptchuk 2008).

Imbued over thousands of years of East Asian culture and philosophy, Tai Chi now is considered a complex, multicomponent intervention. It integrates physical, psychosocial, emotional, spiritual, and behavioral elements that promote a mind-body interaction for health (ChinaSports 1983; Wang et al. 2004).

Theory and Philosophy in Treating Pain

“Tai Chi” is an abbreviation for Tai Chi Chuan in which the practice for treating chronic pain is bisected into separate concepts and definitions. First, the words “Tai Chi” denote the philosophical and spiritual concepts of the theory, while the suffix “Chuan” literally means fist or boxing,

and alludes to the martial arts or warrior aspects of the theory.

Tai Chi has become widely accepted as the most popular martial Qi Gong exercise for health. In Tai Chi, each movement flows naturally, smoothly, and effortlessly into the next. The entire body is always in motion, with the movements performed gently at uniform speed. It is considered important to keep the body upright. Many Tai Chi instructors use the image of pearls on a string ascending from the soles of the feet to the top of the head (see Figure 14.4); the mind extends from the center of the earth and up into the heavens. In addition to movement, two other essential elements in Tai Chi are breathing and meditation. A conscious mental process using certain techniques such as focusing attention or maintaining a steady posture helps suspend the consciousness of thoughts and relax the body and mind. In Tai Chi practice, it is necessary to concentrate, to cancel distracting thoughts, and to breathe wholesomely in a deep, relaxed, and laserly focused manner. Tai Chi instructors believe that this breathing and meditation contains a multitude of benefits which include massaging the internal organs, aiding the exchange of gases in the lungs, improving the digestive system, increasing calmness and awareness, and strengthening balance (ChinaSports 1983; Rones 2007).

To understand the philosophy of Tai Chi, one needs to observe that the practice adheres closely to the theory of yin and yang, the foundational concepts of Chinese philosophy. The yin-yang theory represents all phenomena in the universe; individually yin and yang are monitors of opposing concepts. Yin is believed to have the qualities of water, such as coolness, darkness, stillness, inward/downward directions, and tends to be feminine in character. **Yang** is believed to possess the qualities of fire such as heat, light, action, upward/outward movement, and tends to be masculine. The Chinese have long believed that the universe and human-kind are formed from opposing forces that should

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Figure 14.4
Yang-style Tai Chi sword
“big chief star.”
(Photograph by Clifford
J. Snyder.)

counterbalance each other. In this belief system, each person’s yin and yang need to be in perfect balance in order to thrive, survive, and be healthy.

Consequently, from the traditional Chinese medicine perspective, disease or pain is understood as a loss of balance between the yin and yang. This destructive imbalance leads to the blocking of flow of “Qi,” also known as vital energy, along pathways (channels) known as meridians. Specifically, certain concepts from Chinese philosophy which are the key beliefs in Tai Chi/Qi Gong act within that construct by normalizing the free flow of “Qi” throughout the body for pain reduction. Practitioners believed that the careful, controlled breathing of Tai Chi might result in a rested body, a peaceful mind,

and progressive relaxation that might break the arthritis “pain cycle.” Pain, stress, melancholy, and depression all might interfere with typical functional capabilities (Wang et al. 2010b).

Tai Chi is a Qi Gong training that leads to a calm and peaceful mind as well as a relaxed, healthy body. These elements are most critical to health, both mental and physical. Tai Chi was developed following the natural cultivation and training procedures of Qi Gong, also known as the five regulations listed below:

- *Regulating the Body:* A deep level of physical and mental relaxation is emphasized in the first step of learning Tai Chi. It is believed that once one relaxes deeply, the blood and Qi circulation can begin to flow smoothly.

- *Regulating the Breathing:* Breathing plays a very important role in Tai Chi/Qi Gong practice. The Tai Chi philosophy has many breathing techniques performed in various postures while shaping the Tai Chi form. Breathing should be deep, relaxed, and regular. Over time, with practice, the breathing can be longer, deeper, quieter, and more peaceful. Holding different positions while sustaining deep breathing over time will fortify the lungs and improve their capacity. The breath is a pathway linking the external and the internal universes, and serves many purposes in Tai Chi. This pathway makes it possible for the Qi to circulate smoothly, and helps the mind to focus and lead the Qi, whenever desired, to reduce both physical and mental stress (Rones 2007; Wang et al. 2010a).
- *Regulating the Mind:* Regulating the mind is a key element for achieving optimum health in the practice of Tai Chi. Recognizing the emotional mind, learning to have a calm mind, as well as reduce stress, greatly improves health outcomes.
- *Regulating the Qi:* A relaxed body, a peaceful mind, and correct breathing can direct the Qi to any place in the body.
- *Regulating the Spirit:* The final stage of Tai Chi practice is regulating and evoking the spirit while strengthening the spiritual center.

From the Western Medicine perspective, evidence suggests that Tai Chi/Qi Gong mind-body exercise might influence the brain, the central nervous system, and the immunological functions, as well as neurochemical and autonomic processes (Morgan et al. 2014). For example, it has been hypothesized that Tai Chi regulates the nervous system, thus promoting and activating pain-killing biochemicals such as endorphins and immune system cells (Morgan et al. 2014). In addition, studies have shown that Tai Chi/Qi Gong might

alter brain chemistry by modifying the release of neurotransmitters and neurohormones and thus affect segments of the central nervous system related to sensation and involuntary body functions, such as immune reaction (Morgan et al. 2014).

Sidebar 14.2 Research

In a recent chronic pain hypothesis proposed by Mosely and Vlaeyen (2015), the authors summarize the literature: “people in chronic pain have lower proprioceptive acuity, disruptions in perceived size and alignment of body parts, and show poor ability to mentally maneuver the painful body part” (Mosely and Vlaeyen 2015, 37).

Indeed, both the physical and mental components of the mind-body interaction play major roles in diminishing the sensation of pain. Tai Chi/Qi Gong is a form of physical exercise, which might enhance cardiovascular health, muscular strength, balance, coordination, and physical function. Strong evidence from other studies suggests that mechanisms might exist by which the brain and central nervous system influence immune, endocrine, and autonomic functioning, which is known to impact health outcomes. Neurochemical and anatomical bases might exist to explain the effects of mind-body approaches. (Irwin and Cole 2011; Irwin and Olmstead 2012; Irwin et al., 2007; Irwin et al., 2003; Wang 2012; Wang et al. 2010a; Wang et al. 2011). From the psychological and psychosocial perspectives, improving self-efficacy, social function, and depression can help patients build confidence, reach out for support, and overcome the fear of pain, which by itself causes physical malfunction and debility (Wang et al. 2010b).

Thus, Tai Chi/Qi Gong, beyond its universally accepted multicomponent mind-body theory based on historical multidimensional principles, has also become an accepted and welcome therapeutic for addressing stress management, relaxation, and coping skills. It might be the appropriate adjunctive treatment for pain-related disorders

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and a variety of chronic pain conditions. It has been shown to be safe and to promote aerobic cardiovascular fitness, muscle strength, emotional functioning, and quality of life in patients with chronic conditions (Wang et al. 2003; Wang et al. 2004; Wang et al. 2005; Wang et al. 2009b; Wang et al. 2010b; Wang et al. 2009a; Yeh et al. 2008; Yeh et al. 2009). In fact, Tai Chi is practiced preferentially in the United States among individuals with musculoskeletal pain and mental health conditions (Barnes and Nahin 2007; Birdee et al. 2009; Wang et al. 2010a; Wang et al. 2010b).

Over the past decades, Tai Chi has proved to be a useful treatment with potential therapeutic benefits in other chronic rheumatic pain conditions, such as rheumatoid arthritis, osteoarthritis, and fibromyalgia (Wang 2008; Wang 2011; Wang 2012; Wang et al. 2005; Wang et al. 2009b; Wang et al., 2010b). Because of its powerful mind-body attributes and the positive results gained from clinical trials, the use of Tai Chi is justified for the treatment of chronic pain. The practitioners utilize the relevant Tai Chi/Qi Gong principles and techniques to alleviate pain and improve physical and mental health.

Sidebar 14.3 Research

In its 2012 guidelines for nonpharmacologic care of osteoarthritis, The American College of Rheumatology includes Tai Chi as an effective treatment approach for osteoarthritis (OA) of the knee (Hochberg et al. 2012, 469). The National Institute of Health's National Center for Complementary and Integrative Health states that Tai Chi and Qi Gong are safe health practices for OA (NIH 2015).

Methodology

In this section, we offer a description of particular elements of our rationale and expertise, as well as information common to the overall field. Specifically, we present information on how our patients improve through our teaching experience, and how our actual practice better informs clinical

decision-making. The mind-body-Tai Chi program highlights the role of the mind and spirit as healing tools; many Tai Chi practitioners attempt to address both mind and body, emphasizing the individual approach and the individual's journey.

A mind-body-Tai Chi approach could easily be integrated into conventional treatment approaches for chronic pain in clinics and especially households. Most importantly, a mind-body-Tai Chi approach empowers individuals to play an active role in their own personal journey to better health, an action which is beneficial to all involved (e.g., patients, family, nurses, and doctors). Additionally, we present information on assisting healthcare practitioners with referring patients with pain to Tai Chi.

- *Patient Safety:* Patient safety is a primary concern when implementing a specialized practice such as Tai Chi into a treatment plan for people suffering from pain. The risks for Tai Chi mind-body exercise are minimal; however, there is some potential for injury from the exercise, including muscle soreness (mild muscle pain or discomfort occurring after exercise), muscle tears, strain, sprains, and joint pain. In case of injury during exercise, patients will be asked to immediately notify the Tai Chi masters if their pain symptoms do not remit promptly with rest and conservative measures. Warm-up and stretching before exercise are integral to the training program, as these maneuvers are recognized as preventing further injury. Thus, they are incorporated into the exercise routine; instructors will inquire about the occurrence of potential side effects at each class and take necessary measures. The instructors will specifically ask patients about adverse events that might be associated with Tai Chi exercises (i.e., falling down, joint swelling, muscle ache).
- *Patient Education:* Patient education helps ensure safe participation in a Tai Chi program.

In the first session of the group intervention, the Tai Chi instructor explains the mind/body exercise theory and procedures of Tai Chi. They briefly discuss the historical background of Tai Chi during the introductory class as well as at least one essential principle, explaining why it is important. We provide printed materials about the Tai Chi mind-body program for patients with chronic pain and other disease conditions, such as osteoarthritis, rheumatoid arthritis, and fibromyalgia.

- *Belief and Outcome Expectation:* Before the group session begins, we interview patients to learn their disease conditions, diagnoses, previous treatments, symptoms, and treatment goals. We also provide questionnaires to assess patients' beliefs and outcome expectations to estimate if their ideas will affect their treatment outcomes.

Treatment Goals and Strategy

We prepare, organize, and review our teaching curriculum, homework, and any other materials relevant to the Tai Chi treatment. We use our findings to generate treatment goals and strategies for one or more sessions. At the beginning of class, approximately ten patients will be briefed on the lesson for the day, including how many movements will be learned. For the remaining sessions, each patient practices Tai Chi/Qi Gong under the instruction of the Tai Chi instructor in a group setting. Every session will include the following components:

- warm up, self-massage, and a review of Tai Chi principles (10 minutes)
- Tai Chi movement (30 minutes)
- breathing technique (10 minutes)
- relaxation (10 minutes).

Each component of the program derives from the classical Yang style of Tai Chi which contains 108 postures.

Treatment Methods

Tai Chi is designed to affect a person on any level one chooses or allows. It physically strengthens the body while encouraging flexibility and ease of movement. It is designed to increase internal energy of "chi" flow within the body, thereby increasing vitality. It will clean, relax, and focus the mind, promoting creativity, sensitivity, and optimism. It provides emotional balance and spiritual guidance. A convenient aspect of Tai Chi it is that most people are able to do it.

Sidebar 14.4 Research

Tai Chi Research Intervention (Rones 2007): Selection of ten forms from 108 postures of Classical Yang style Tai Chi Chuan. Because of time limitations in executing a study on the use of Tai Chi, and based on the literature, we developed a ten-form protocol for working with patients with pain. We condensed the 108 forms to ten forms that could be learned by patients with chronic pain within 12 weeks, during which time total contact and training was restricted to 1 hour sessions, twice a week. The ten forms were selected because: (1) they are easily comprehensible, (2) they clearly represent progressive degrees of difficulty concerning postural stability, with weight-bearing moving from bilateral to unilateral supports, and (3) they seem to emphasize increasing magnitude of trunk and arm rotation with diminishing base of support and, as such, potentially improve physical function without excessively stressing the joints (Rones 2007).

Important principles of Tai Chi

To fully derive the benefits of Tai Chi it is essential to incorporate certain philosophical and ethical principles into the Tai Chi form. The practice of Tai Chi teaches the patient to realize relaxed, smooth, and graceful movements. The feeling of the chi circulation, balance, body connectedness, body awareness, and structural alignment increases as one integrates each principle. The Tai Chi masters will teach patients to absorb just one principle per

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week and allow that particular principle to become a habit so that it *no longer requires conscious effort*. All Tai Chi forms tend to operate on the following three principles:

- The extended and relaxed body: Awareness of trunk alignment and deep breathing are necessary prerequisites to achieving a proper posture before forms can be practiced and learned.
- The alert but calm mind: One becomes more aware of the presence and movement of the body within its own space.
- The well-coordinated body movements require sequencing of segments:
 - Keep the knees aligned with the feet: This is important because the knee was not designed to bear much weight or torque (see Figure 14.5).
 - The tip of the tongue touches *the roof of the mouth*: This action connects the main chi pathway that is called the “Small Heavenly Circle.”
 - Lightly close the anal sphincter: This completes the “Small Heavenly Circle” pathway. If the anal sphincter is open the chi will not accumulate nearly as quickly.
 - Push the lower back out and keep the buttocks tucked in: Over time, dropping the tailbone down versus tucking it in; relaxed versus coerced. Feel the weight of the body in the heels. This structurally connects the upper and lower body. It stabilizes one’s balance and allows the leverage and power of the movement to come from the legs. It also allows the chi to circulate upwards from the feet to the head and back down to the feet.



Figure 14.5
Holding the heavens.
From Martial Chi Kung/
Yang Style Tai Chi Chuan.
(Photograph by Clifford
J. Snider.)

- Tuck the chin in and push up the *crown point of the head*: This motion stabilizes the head and permits the chi to flow up the back of the neck.
- Let the shoulders and elbows drop and sink: This motion structurally connects the arms to the torso and allows the chi to flow to the hands (Rones 2007).

Home practice and self-care

Ending on an affirmative note, we review what was taught during the class period, and discuss homework and what will happen at the next lesson. We encourage patients to form “buddy” groups to practice together during the week (see Figures 14.6 a and b) and to check on each other if they miss class—social interaction is an excellent way to help patients follow through with their exercises when not in class. We inspire and motivate patients to stay on and to practice after class. This gives patients something to look forward to in their next lesson. Note: this is not a general exercise program for the public, but *with* some modifications could easily be used as one.

Practical Aspects of Accessing Tai Chi/Qi Gong Treatments

From the results of our previous work as well as the work of many others, Tai Chi appears to provide both *physical and mental benefits* for a variety of chronic pain conditions (Wang et al. 2004; Wang et al. 2010b). The physical component provides exercise that is consistent *with recommendations* for elderly subjects (muscle conditioning and aerobic cardiovascular exercise), while the mental component has the potential to improve psychological well-being, life satisfaction, and perceptions of health (Wang 2011; Wang 2012; Wang et al. 2010a; Wang et al. 2004; Wang et al. 2005; Wang et al. 2009b; Wang et al. 2010b); Li et al. 2005; Li et al. 2012; Li et al. 2008; Wayne and Kaptchuk 2008).

Evidence suggests that the acceptance of integrative therapies, particularly Tai Chi/ Qi Gong, is growing (Clarke et al. 2015). Patients and providers alike are increasingly interested in integrative therapies because of the potential as effective remedies for reducing pain while simultaneously improving physical and psychological health and well-being.



Figure 14.6a

Tai Chi move: cloud hands.
(Photograph by Clifford J. Snider.)

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Figure 14.6 b
Holding the heavens.
From Martial Chi Kung/
Yang Style Tai Chi Chuan.
(Photograph by Clifford
J. Snider.)

The principal barriers preventing patients from accessing these treatments in the United States include uncertainties about the methods and costs, and where to find these services. Thus, it is important that the evidence behind these treatments be discussed openly with patients so that they can make an informed decision. Many health insurance plans are beginning to include some discounts or rebates for these services, or even benefit coverage, as the evidence for efficacy grows.

Sidebar 14.5 Patient Interviews

When asked, “Is there anything I haven’t asked about your experience that you feel is important to share with referring healthcare providers?” a 28-year-old man receiving care for pain replied: “Pain can be all-consuming. It can be the first thing that you think about when you wake up, the last thing you think about when you go to sleep and something that prevents you from getting a good night sleep. It can become a full-time job trying to manage your pain and I can understand why people with chronic pain become dependent on narcotics, are disabled to the point where they can’t work and are labeled by the health care system as ‘drug seekers’ and by society as ‘deadbeats.’ These (Cont.)

Sidebar 14.5: Patient Interviews (Cont.)

words might be strong but as a healthcare provider, I hear them every day as they are muttered by colleagues, nurses, and ancillary medical staff. I am fortunate because I have the financial resources and work flexibility to manage my pain in a more positive and therapeutic fashion but I am also aware that I am in the minority. Expanding medical benefits costs money that we don’t have. Information can be free. I didn’t know that these resources were available to me until I asked and looked. Perhaps more outreach to primary care providers and to the general public would help.”

Finding an experienced provider of Tai Chi/Qi Gong therapies might be difficult. A growing number of physicians are receiving dual training in both Western and Eastern medicine, which benefits patients who are uncertain how to integrate the two philosophies. When selecting a provider offering Tai Chi treatments, the two most important characteristics for patients and referring providers to consider are general experience as well as experience in treating chronic pain disorders. Tai Chi should not be a replacement for conventional Western care or be used to postpone seeing a Western doctor about a medical condition.

Standards for training Tai Chi instructors do not currently exist, so providing patients with access to experienced Tai Chi instructors is essential. Ideally, instructors should have at least five to ten years of experience working with patient populations. Additionally, patients should inquire as to ways the therapy might be modified to accommodate their conditions. For example, some Tai Chi forms require deep knee bending, which could be painful or harmful to patients with knee arthritis. We expect that experienced Tai Chi instructors will be able to embrace this issue and find ways to adapt their principles in a safe manner while preserving the therapeutic value and philosophy of the therapy.

As the demand and evidence for integrative medical therapies grow, educating healthcare providers and patients about the known evidence and clinical implications for these remedies is vital. Healthcare providers should be able to discuss the evidence behind these treatments with patients to enable them to make informed decisions. Furthermore, by providing practical information about methods, costs, and experience, providers can effectively encourage their patients to explore the options for integrating Western and Eastern medicines.

Case study

Mary's story was published in the New York Times 2010 (Wang et al. 2010b). A 59-year-old, retired phone company employee from Massachusetts, Mary was one of sixty-six participants in a research study conducted by Tufts University in 2008. We measured the fibromyalgia impact questionnaire (FIQ) score between baseline and the end of the 12-week intervention. The FIQ is a well-validated multidimensional measure for participant-rated overall severity of fibromyalgia. It includes intensity of pain, physical functioning, fatigue, morning tiredness, stiffness, depression, anxiety, job difficulty, and overall well-being. (Burckhardt et al. 1991) The total score ranges between 0 and 100, with

higher scores indicating more severe symptoms. After 12 weeks of Tai Chi intervention (condensed the 108 movement Yang style long form to ten forms), patients with fibromyalgia, a chronic pain condition, did significantly better in measurements of pain, fatigue, physical functioning, sleeplessness, and depression than a comparable group given stretching exercises and wellness education. Tai Chi patients were also more likely to sustain improvement 3 months later.

The therapy impressed Mary, who said that before participating in the 2008 study, "I couldn't walk half a mile," and it "hurt me so much just to put my hands over my head." Sleeping was difficult, and she was overweight. "There was no joy to life," she said. "I was an entire mess from head to foot." She had tried and rejected medication, physical therapy, swimming, and other approaches. "I was used to being treated in a condescending manner because they couldn't diagnose me: 'She's menopausal, she's crazy.'" Before the study, "I didn't know Tai Chi from a sneeze," said Ms. Petersen, who had diabetes and other conditions. "I was like, 'Well, O.K., I'll get to meet some people, it will get me out of the house.' I didn't believe any of it. I thought this is so minimal, it's stupid." After a few weeks, she said she began to feel better, and after 12 weeks "the pain had diminished 90 percent." She has continued Tai Chi, lost 50 pounds and can walk 3 to 7 miles a day. "You could not have convinced me that I would ever have done this or continued with this," she said. "I wouldn't say it's a cure. I will say it's an effective method of controlling pain."

At the 6-months follow up, Mary continues to practice Tai Chi (5 classes/wk, practice at home). Her pain relief from fibromyalgia is significant and she is experiencing improvements in related areas: more flexibility, range of motion, strength, improved energy, and no headaches in the last 2 months. Anxiety is no longer a problem and her sleep has improved and is more restful (6-7 hours). She has a more positive attitude, and her pain medications

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are significantly reduced: Advil (<1/week). Her primary care physician for 7 years is so impressed with her improved condition, on all levels, that she asked Mary to share her story and offer hope to other patients with fibromyalgia.

Conclusion

Overall, based on the current body of knowledge on the therapeutic benefits of Tai Chi/Qi Gong for pain and symptom relief, Tai Chi/Qi Gong training might provide an ideal form of exercise for individuals suffering from chronic pain. Our chapter not only offers a brief history and a theoretical conceptual overview of Tai Chi/Qi Gong, but also elucidates the methodology for implementing complementary and integrative approaches into clinical practice. Therefore, integrative approaches combine the best of **conventional medicine** and the wisdom of traditional Chinese medicine. These modalities might lead to the development of better disease-modifying strategies that could improve symptoms and decrease the progression of chronic pain.

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