

The Benefits of Tai Chi For the Older Adult

The benefits of Tai Chi for older adults as an evidence based protocol has increased exponentially during the 21st Century creating quite a bit of buzz around each new randomized clinical trial that has been sponsored by various academic institutions such as Harvard Medical School, Mayo Clinic and the Oregon Research Institute. Many community based programs have been funded by the Centers For Disease Control and the National Institute of Health. Professionals working in the field with older adults have received information about the many benefits of Tai Chi through medical newsletters and blogs, and in professional journals such as The New England Journal of Medicine, American Journal of Public Health, American Journal of Medicine and Journal of the American Geriatrics Society.

The lead studies of Tai Chi have rightly targeted one of the most costly areas of elder care: falls, which have been shown to be extremely expensive and will continue to grow as the population ages. Falls and the fear of falling have a limiting factor in the older adult's quality of life and falling has been shown to increase the likelihood of death within a short window of the initial incident. These studies show that the practice of Tai Chi may improve balance; reduce the fear of falling; reduce fall rates; and increase strength, mobility and flexibility, which also increases psychological well-being.

Many professionals have heard the preponderance of advice about how Tai Chi can help the older adult and have recommended this practice to their patients, clients and loved-ones. However, many have never tried the practice themselves to see how the movements of Tai Chi apply to the cognitive and musculoskeletal systems. Our goal today is to give you a taste of Tai Chi, highlighting its principles in the light of particular movements in the 24 Yang Tai Chi Form. Hopefully this will give you further confidence in recommending Tai Chi for those whose needs have been determined by various functional assessments.

Tai Chi is a body-mind exercise that has roots in multiple Asian traditions: such as martial arts, traditional Chinese medicine and philosophy. Tai Chi training integrates slow intentional movements with breathing and multiple cognitive skills: such as mental focus, heightened body awareness (proprioception) and imagery. Its aims are to strengthen, relax and functionally integrate the physical body and mind, improving health, personal development, and possibly training for self defense.

Tai Chi is a complex intervention with multiple active components. Although it may not appear so, Tai Chi can be an aerobic exercise, especially after one is familiar with the form and practices it with verve. This physical training targets the musculoskeletal system by improving muscle strength, especially in the lower half of the body, and improving flexibility and coordination using the core to generate movement throughout the body. It helps with dynamic structural integration by targeting not only the major muscles, but also the smaller muscles and the connection of the tendons and ligaments.

Though it is working with the physicality of the body, the exercises are not mindless. Tai Chi concentrates on actively relaxing the mind and the body, and does so through a variety of different avenues. As a moving meditation, it focuses on awareness of how the body is feeling and the perception of where the body is in space. Taking time to pay attention to the body in the controlled environment of a class or in a purposeful practice session, helps the body to react to stimuli in the environment, even in the course of everyday life, when the mind's attention might be elsewhere. The body's intelligent interaction in the world is sometimes even faster than if the brain were to engage; reaction is usual faster than planned action. These actions are controlled by the fast twitch muscles of the body, the one's responsible for our "fight or flight" reaction. The classic example of this is from the old West movies where two gunfighters are facing off. The more experienced one realizes there is a lag between deciding to draw and initiating the action, and so they wait for their opponent to draw, knowing their self-preservation reaction which help them to fire a shot off first.

Using intention or what the Chinese call Yi, leads the practitioner to make the Tai Chi movements using a freer, more natural breath. It also helps the practitioner identify situations where they need to pay particular attention to their movements or the possible pitfalls of their environment, thus bringing their mind into focused attention. There is an expectation of relaxation and a belief that the purposeful movement will bring about the desired results. This leads to a growing confidence while doing the exercises, and as well, when moving through daily activities.

Social interactions while doing Tai Chi should not be underestimated. Tai Chi can be done alone, and I teach it in a way that the practitioner can learn it well enough to do so. However, I call Tai Chi an individual exercise done in a group setting. Community between the students develops as they practice and perform a common goal. That goal is to use Tai Chi as a way of taking control for themselves a part of their own health and well-being.

For our purposes today we will examine how Tai Chi helps ameliorate certain fall-related risk factors. All of these benefits of Tai Chi are supported by Western-based scientific evidence. These risk factors are particularly prevalent in the older adult, but can sometimes also being experienced by someone with an inactive lifestyle or who is dealing with a specific medical condition. On the physical side these fall-related risk factors include reduced muscle strength: from inactivity, aging, or unmanaged pain. Poor neuromuscular coordination and reflexes can come about as a natural result of reaching an advanced age, or can come into effect earlier in the life of an adult through diseases such Parkinson's, MS and rheumatoid arthritis. And on the cognitive side, the older adult may have an impaired executive function or can experience fall-related anxiety, especially after one has already experienced a fall.

Now we will examine the 24 Yang Tai Chi Form using it's principles of mind-informed focused-movement to actively counter many of these risk factors we have identified. Tai Chi uses movement, breath and visualization to benefit the stability of the older adult in the key areas of: base of support, center of gravity, center of mass, gait, limits of stability, postural control, spatial orientation and weight-bearing.

Using the 24 Tai Chi Form to Enhance Full Body Co-ordination

Walking Sequences:

Tai Chi Walking: Using these walking sequences helps the practitioner to decide optimum gait, through use of stances alternating with appropriate leg swing and placement of the foot. The cat stance is weighted on the rear leg with an augmenting balance point of the ball of the front foot; it is a position of potential. The bow stance has swung the leg through landing on the heel and rolling down to being flat footed. Landing on the heel promotes the muscles important for dorsiflexion of the foot, important to delay the shuffling that often accompanies poor muscle tone in old age. The bow stance is a position of commitment that has taken the center of mass and moved it from back-weighting balance at the edges of stability, through the center line, and has a forward stance that remains a good base of support while expressing the body's energy in a forward direction.

Swing and Sway Walking: Instead of stopping at forward or backward weighted balance points, these walking sequences takes the practitioner to the limits of their stability, quickly attaining their postural control in that stance and immediately returning and swing over the center of gravity to the opposite extreme. The flow of doing Tai Chi helps the practitioner recognize the extreme position is not a point of stasis, but learn how to flow away. Diagonal foot direction helps to strengthen the ankle, open the hip.

Side Shifting and Stepping: Lateral stepping from a feet shoulder width apart stance to landing on the ball of the foot next to the ankle of the load bearing leg, then switching to the other side has almost a waltz-like feel helping one to find the center of gravity over the base of support. Continuous stepping laterally in either direction, helps the practitioner to find their center of gravity by sitting down into the weight bearing hip and increase their postural control while stepping to the side.

Backwards Stepping: Stepping backwards is probably something the practitioner does the least in day-to-day life, and so is caught off guard when they feel their base move backwards from their base of support. This stepping helps them to feel the sensation of sitting down into the hip of the backward stepping leg, making it less likely to tip over backwards from the upper part of the body.

Benefits of Each of the Gestures of 24 Form Tai Chi (in order):

Feet Together: Paying attention to body's condition. Noticing any sway of the body. Preparing the mind, focusing the intention (Yi) to do the form.

Open Tai Chi: Stepping out to feet shoulder width apart, also known as the Wuji position, empty stance. Notice enhanced stability with wider base. Inhalation lengthens the spine, exhalation relaxes all the muscles down the body.

Raise Hands to Greet the Universe: Centering the body and the mind by centering the breath, and beginning to match the breath to the movement of the body.

Hold the Tai Chi Ball: Centering the body noticing the base of support, center of gravity and mass, and the equal weighting in the legs.

Part the Wild Horse's Mane: Ipsilateral movements of the body, both in a position of centering and in expression energy outward.

White Crane Spreads its Wings: In the cat stance, the stance of potential, able to move in any direction because the back leg is the majority load bearing.

Brush Knee: Body has been divided in to four sections, upper left and upper right, lower left and lower right. The expression of each distal quadrant of the limbs is performed contralateral diagonally across the quadrants.

Play Guitar: Learning to sit into the back hip as a base of support, augment by the dorsiflexion of the opposite foot.

Repulse Monkey: Counter balancing forward and rearward (dorsal and anterior) movements of the limbs while stepping backwards.

Grasping the Swallow's Tail: Moving across the base of support to the edges of stability and finding a way to circle the energy and body in the opposite direction at the apogee of the initial movement; diagonally and forward and back.

Wave Hands Like Clouds: Lateral use of Distal body parts for counter-balancing while stepping to the side.

cont. Benefits of Gestures:

High Pat on Horse: Moving across the base of support to the edges of stability and finding a way to circle the energy and body in the opposite direction at the apogee of the initial movement; diagonally and forward and back.

Kick with Left and Right Heel: Finding balance on one foot while expressing energy out through the other.

Snake Creeps Down: Extreme use of distal body part to anchor the rest of the body's movement into the opposite direction.

Golden Cock Stands on One Leg: Shifting the weight forward and lifting the back heel to center mass over one foot and finding the balance point on that foot.

Fair Lady Works at Shuttles: Centering body's mass while expressing energy out through arms and hands.

Needle at Sea Bottom: Centering in stance of potential (cat stance).

Appears Close-Up & Fan Through Back: Weight shifting and exploring spatial orientation.

Parry & Punch: Using centrifugal swirling of arms to balance the body as it steps forward and winds-up into delivering straight line force.

Closing Tai Chi: Drawing back all of the flowing, circular energy that has been played with throughout the form and storing it in the Dan Tian (the center or core) for future use.

Key Resources

Books

“The Harvard Medical School Guide to Tai Chi: 12 Weeks to a Healthy Body, Strong Heart, and Sharp Mind” by Mark Fuerst and Peter Wayne (Examining Tai Chi’s benefits in light of evidence-based scientific trials)

“T’ai Chi for Dummies” by Therese Ikonian

“The Complete Idiot’s Guide to T’ai Chi & Qigong” by Bill Douglas

(Good books for suggesting Tai Chi to beginners, not to learn the form, but understand the basic concepts of Tai Chi)

“Taijiquan: Through the Western Gate” by Rick Barrett

“Taijiquan: The Art of Nurturing, The Science of Power” by Yang Yang

(Approaching the concept of wellness through a holistic practice like Tai Chi, instead of Western medicine’s typical approach of specialization which involves the separation of various systems of the body)

Online

New England Journal of Medicine: Tai Chi and Postural Stability in Patients with Parkinson’s Disease <http://www.nejm.org/doi/full/10.1056/NEJMoa1107911>

Harvard Medical School: An Introduction to Tai Chi

<https://www.health.harvard.edu/exercise-and-fitness/an-introduction-to-tai-chi>

NIH - National Center for Complementary and Integrative Health: Tai Chi & Qigong

<https://nccih.nih.gov/health/taichi>

Curriculum Vitae for James Lusk

Teaches Tai Chi, Qigong and Meditation through his studio “Steal The Sun Tai Chi” in the greater Portland area for the past 14 years, the most recent 10 years as a full time profession. www.StealTheSunTaiChi.com

Currently teaching 180 students in Community Centers, Senior Centers, Retirement Communities and Health Facilities with 80 percent being over the age of 55.

Certified Professional Senior Fitness Instructor by the American Senior Fitness Association since 2007.

Certified Tai Chi Instructor by the Guang Ping Yang Tai Chi Association since 2012.

Tai Chi teacher at March Wellness (the region’s only Certified Medical Fitness Center by the Medical Fitness Association) at Oregon Health Sciences University since 2009.

Certified teacher of “Tai Chi: Moving for Better Balance” by Dr. Fuzhong Li of the Oregon Research Institute. Further 50 hours of training by Dr. Li in order to participate as a teacher of Tai Chi during a three year period for three scientific studies:

Tai Chi and Postural Stability in Patients with Parkinson’s Disease:

Examining in a single blind, randomized controlled trial, whether Tai Chi can improve postural balance and lower-extremity muscle strength and reduce frequency of falls among early to moderately advanced Parkinson’s patients. Funding: National Institute of Neurological Disorders and Stroke. Key Findings: Published in the February 9, 2012 issue of the “New England Journal of Medicine.”

Translating & Implementing Falls Prevention Research through Clinical Practice:

Investigating whether evidence-based Tai Chi falls prevention programs can be disseminated through healthcare provider referrals of older patients who are at risk of falling. Funding: Centers for Disease Control and Prevention.

Translating an Effective Falls Prevention Program into a Community-based Practice: Investigating whether an evidence-based Tai Chi falls prevention program can be disseminated through a broad spectrum of community-based senior service providers who often serve low income, under-served community-dwelling older adults. Funding: National Institute on Aging.

Master-teacher of “Tai Chi: Moving for Better Balance” for the the Oregon Health Authority involved in the Portland Metro area for training and monitoring teachers of “Tai Chi: Moving for Better Balance” and providing consultation and program fidelity for a three year period during a national study in three states funded by the Centers For Disease Control.

Stress-reduction workshop leader for Multnomah County and City of Portland working groups, AARP Conferences, Buddhist Temples, Catholic retreats, Providence Health Groups and regional businesses.