

REHAB SUMMIT

PreConference Lab: Tai Chi to Improve Function & Prevent Falls

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PreConference Lab: Tai Chi to Improve Function & Prevent Falls

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Financial: Ralph Dehner has an employment relationship with Mighty Vine Wellness Club. He receives a speaking honorarium from PESI, Inc.

Non-financial: Ralph Dehner is a member of the American Occupational Therapy Association; the American Council on Exercise; International Association of Reiki; and Tai Chi for Health Community of America.



Tai Chi to Improve Function & Prevent Falls

By
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Ralph Dehner

- Master/Trainer – Tai Chi for Health Institute
- Authorized Teacher – Traditional Tai Chi Forms
- OTA – Cincinnati State
- B.S. – Holistic Studies/Wellness Management
- Certified Personal Trainer

Topics

- What is Tai Chi?
- How does work it for fall prevention?
- Fall Prevention – risk factors
- Evidence Based Tai Chi Program
- Other Benefits
- Let's do it!







What is Tai Chi

- Tai Chi Chuan, Taijiquan – Supreme Ultimate Boxing
- Internal martial art
- Competitive sport
- Health care practice
- Many styles
- Modified styles

EXERCISE:TAI CHI TO SLOW AGING

Tai Chi often is described as "Meditation in Motion" but **Harvard Women's Health Watch** says this low-impact exercise could be called "Medicine in Motion".

Compelling evidence shows it prevents and treats -- often better than standard therapies -- an array of age-related health conditions. It stabilizes bone density, lowers blood pressure and cholesterol and improves Parkinson's patients' well-being. Even if you do well on typical treatments, adding Tai Chi can improve quality of life, says Peter Wayne, assistant professor at **Harvard Medical School**.

According to the U.S. Centers for Disease Control and Prevention:

- One-fourth of Americans aged 65+ falls each year.
- Every 11 seconds, an older adult is treated in the emergency room for a fall; every 19 minutes, an older adult dies from a fall.
- Falls are the leading cause of fatal injury and the most common cause of nonfatal trauma-related hospital admissions among older adults.
- Falls result in more than 2.8 million injuries treated in emergency departments annually, including over 800,000 hospitalizations and more than 27,000 deaths.
- In 2013, the total cost of fall injuries was \$34 billion.
- The financial toll for older adult falls is expected to increase as the population ages and may reach \$67.7 billion by 2020.
- Falls are the leading cause of loss of independence.

RISK FACTORS

- * Fear of falling
- * Impaired Cognition
- * Low Endurance
- * Decreased Strength & Flexibility
- * Arthritis
- * Stroke
- * Osteoporosis

FALL PREVENTION

The Center for Disease Control - Bureau of Injury Prevention has endorsed Tai Chi as a modality "that effectively reduces falls in older adults." Tai Chi was recognized as both an "exercise-based intervention" and an "effective, community-based fall prevention program" in two CDC conference booklets, both are about 100 pages. You can download both from:
<http://www.cdc.gov/ncipc/PreventingFalls/>

Tai Chi Style Adaptations

Tai Chi for Balance- Master Tingsen Xu, Ph.D. & Dr. Steven Wolf

Emery University - 1996, 15 week protocol, reduced fear of falling and a 47.5% reduction in risk of multiple falls compared to education group.



Australian Study

- Spring 2005 "Fall Prevention Newsletter" by Sydney South West Area Health Service.
- Largest fall prevention study in the world involving 712 people.
- 16 weeks of Tai Chi (80% of the participants did the Tai Chi for Arthritis program)
- Reduced the number of falls by almost 35%.
- Reduced risk of multiple falls by approximately 70%.

Australian Study

The study concludes: "Compared with other falls prevention interventions the trial showed that Tai Chi is one of the most effective ways of preventing falls in older people."

What Works

- Tai Chi for Arthritis- Evidence Based Program by CDC for Fall Prevention.
- Developed by Medical and Tai Chi experts to be safe and effective by the Tai Chi for Health Institute.
- Training programs for health care, fitness professionals as well as advanced Tai Chi students.

- The American College of Sports Medicine, in their 2011 Position Stand, *Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory, Musculoskeletal, and Neuromotor Fitness in Apparently Healthy Adults: Guidance for Prescribing Exercise*, recommends people perform 20-30 minutes of neuromotor (functional fitness) training 2 - 3 times a week.

- ACSM states that tai chi is the most widely studied functional fitness program and that it has been shown to be effective in improving balance, agility, motor control, proprioception, and quality of life. Although limited by the number of tai chi studies on younger populations, evidence suggests that exercises, such as tai chi, which involve balance and agility, may reduce anterior cruciate ligament (ACL) injuries and reduce recurrent ankle injuries in men and women athletes. Tai chi really does have something to offer just about anyone.

- Multifaceted physical activities such as tai chi involve varying combinations of neuromotor, resistance, and flexibility exercise.
- Neuromotor exercise training is beneficial as part of a comprehensive exercise program for older persons, especially to improve balance, agility, muscle strength, and reduce the risk of falls.

Benefits of Tai Chi Therapy

- Increases muscle strength which supports and protects joints
- Increases stamina
- Increases flexibility (R.O.M.)
- Helps balance thereby reducing falls
- Improves posture/memory/relaxation

Additional Benefits

- Stress
- Socialization
- Improve Mood
- Fitness
- Flexibility
- Strength

BENEFITS...continued

- **European Journal of Preventive Cardiology, April 4, 2012**
- Older subjects who regularly practice Tai Chi found to have better arterial compliance and greater muscle strength than non-practitioners
- Those practicing Tai Chi for at least 1.5 hours a week for three years showed that the Tai Chi subjects were better in blood pressure, vascular resistance, and pulse pressure. Measurements also showed that both large and small artery compliance was significantly higher in the Tai Chi group (by 40-44%).
- Tai Chi training has been shown to improve cardiopulmonary function in patients with chronic heart failure and myocardial infarction.

Advantages of Designed Tai Chi Programs

- Safety
- Efficacy
- Easy to learn
- Compliance

How it Works

- Mindful weight transference – controlling the movements with the muscles.
- Moving against a gentle resistance.
- Upper and lower body coordination.
- Situational awareness.
- Building confidence.

Let's Do It!



Continuing Education Credits

Access the Rehab Summit Evaluation on August 1st:

- An email will be sent to your registered email address
- An evaluation link will also be available on RehabSummit.com

Once you have completed the evaluation, you can choose to print, download, or email the certificate for your records.

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