

# Tai Chi: Moving for Better Balance

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# Objectives

- What is TCMBB?
- Application in Communities
- Experience Moving for Better Balance



# Fuzhong Li, PhD

- Quintessential researcher
  - Tai Chi since 1999
  - over 15 years grant funding from NIH and CDC
  - List of publications [www.tcqmbb.com](http://www.tcqmbb.com)
- Oregon Research Institute
  - Systematic, ongoing research
- *Collaboration with PTs for specific BALANCE focus.*
  - Jan Voit, Moving for Better Balance trainer

# Overview

- Balance training program
- Enhancement of traditional Tai Chi
  - movements are transformed and reconfigured
  - therapeutic activities for improved balance



# Program Basics

- Eight Form core routine
  - Adapted from contemporary 24 form Tai Ji Quan routine
  - Built in Exercise variations
  - Mini Therapeutic movements subroutine
- Together create a simple, *functional*, set of Tai Chi based moves

# Evidence Based

- Tai Chi and fall reductions in older adults
  - 2005 landmark study, randomized controlled trial
- "Tai Chi and postural stability in patient's with Parkinson's Disease"
- "Implementing evidence based fall prevention program in outpatient clinical setting"
- "Tai Ji Quan and global cognitive function in older adults with cognitive impairment"
- "The effects of Tai Ji Quan training on limits of stability in older adults"
- "Preventing falls after cancer: tai chi versus strength training"

# Endorsement

- American and British Geriatric Societies
- Administration on Aging/ National Council on Aging
- Centers for Disease Control and Prevention
  - Funding through 2019 from Centers Disease Control
- All Tai Chi programs are not equal
  - specifically designed program
  - reproducible
  - evidence based

# Fall Prevention

- In US one third of people over age 65 fall each year
  - 2-3 times more likely to fall again
  - 10-20% of falls cause serious injuries
  - falls are leading cause of hospitalizations
- In WA 1 in 5 over age 65 report a fall in past 3 mos
- Fall frequency increases with age
- Cycle: fall - fear of falling - decreased activity - increased risk of falling - fall



# Physical Activity- Fall Prevention

- Research demonstrates Physical Activity is the single most effective strategy for fall prevention.
- Most effective Physical Activity
  - at least 50 hours to have effect on reducing falls
  - must be challenging balance exercises

# Cost Effective

- CDC cost-benefit analysis: best return on investment. Reduce falls. Save money
- No equipment required
- Portable and scalable
  - acute care, inpatient rehab, clinic, community



# Outcome Measures

- Functional reach
- Berg Balance Scale
- Romberg
- Timed Up and Go
- Falls Efficacy Scale – self report fear of falling
- Gait speed
- Limits of Stability - Force plate



# Multisystem Training

- musculoskeletal
- cognition
- sensory
- integrated experience
  - improved functional tasks
  - reduced falls

# Training Goals

- Improve
  - strength
  - balance
  - gait
  - functional mobility
  - multitasking
  - cognition
- Reduce
  - fear of falling
  - risk of falling



# Training Goals

- Postural stability
  - static and dynamic
- Mindful control of positioning in space
- Functional walking activities
- Movement symmetry and coordination
- Ankle range of motion
- Lower extremity strength

# Training Emphasis

- Trunk driven movements
- Ankle sway
- Weight shifts
- Ankle joint movements; heel strike, heel pivot, push off
- Eye-head-hand coordination
- Anticipatory and compensatory postural control
- Various cueing strategies, cognitive challenge

# Flexible Program

- Seated
- Sit to stand
- Chair-supported
- Unsupported
- Variety of challenges at each step
- Fun and easy to progress
- Home exercise program





# Eight Form Routine

- Form One: Move a Ball
- Form Two: Part Wild Horse's Mane
- Form Three: Single Whip
- Form Four: Wave Hands Like Clouds



# Eight Form Routine

- Form Five: Repulse Monkey
- Form Six: Brush Knees
- Form Seven: Fair Lady Works at Shuttles
- Form Eight: Grasp Peacock's Tail



# Mini Therapeutic Movements

- Body sway around ankle joints
- Eye-head movements
- Sit to and from stand
- Step and turn
- Chair up and walk
- Multidimensional head movements

# Mini Therapeutic Movements

- Single leg stance with Brush Knee
- Stepping exercises
- Pushing hands
- Sensory integration exercises
- Stepping maneuver around a chair

# Current and Future Projects

- Ongoing research including "Translating an effective falls prevention program into community based practice"
  - program dissemination through community based senior service providers. funded through 2019
- Ongoing trainings
  - Partnership with Dept of Health: continue to train new instructors
  - Courses for community instructors and healthcare workers

# Summary

- Evidence based Balance Training Program
- Fuzhong Li, Oregon Research Institute, ongoing research
- Application in acute care, inpatient rehab, outpatient, home health, ***community classes***
- Fun and effective for mind and body

# In Your Community

- Refer Older Adults to current classes
- Take a course and become an instructor
- Educate peers on the value of Tai Chi for fall prevention



# Resources

- Washington site: [www.betterbalance.net](http://www.betterbalance.net)
- Contact: [jan@betterbalance.net](mailto:jan@betterbalance.net), [info@betterbalance.net](mailto:info@betterbalance.net)
- National site: [www.tjqmbb.org](http://www.tjqmbb.org)





Questions?

Thank you!