AN EXPLORATION INTO

TAI CHI and AI CHI

Benefits of an Ancient Practice in Modern Therapeutic Rehabilitation

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LEARNING OBJECTIVES

- Basic understanding of the history and principles
- Review of current research in therapeutic applications
- Potential benefits for TBI population
- Implementing Tai Chi or Ai Chi into a rehabilitation program
- Experience easy-to-learn Tai Chi movement

WHAT IS TAI CHI?

- Rooted in ancient tradition (Lam & Kaye, 2012)
  - Chinese form of exercise originally created as martial art
  - Dates back 700-1500 years
  - Based of traditional Chinese medicine, Qi Gong, and martial art
  - Five main styles
- Practiced worldwide by millions daily
- Gaining popularity in modern culture

WHAT IS TAI CHI?

THE BASICS: TAI CHI TERMS

Yin and Yang
(Lam & Kaye, 2012)

Chi or Qi = *Life Energy*
(Lam & Kaye, 2012)

Qi Gong = *Method of cultivation of Qi*
(Lam & Kaye, 2012)

THE BASICS: TAI CHI

- Core principles (Lam & Kaye, 2012)
  - Fluid, slow, relaxed, circular movements
  - Mental concentration
  - Weight transference
  - Deep breathing
  - Integration of body and mind

THE BASICS: AI CHI

- Created by Jun Kunno from Japan in 1990
- Simple water exercise and relaxation program
- Created by combining Tai Chi and Qi Gong concepts with Watsu techniques

THE BASICS: AI CHI

- Ai Chi is performed standing in shoulder-depth water using a combination of deep breathing and slow, broad movements of the arms, legs, and torso (Sova & Kunno, 1999, Sova, 2009)
- Ai Chi Posture
- Coordinating movements with deep breathing
- Potential variety

CURRENT STATE OF RESEARCH

- More than 40 million Americans use some form of mind-body therapy for health (National Health Interview Study, 2017)
  - Tai Chi had been referred to as the "New Yoga"
- Research surrounding health benefits is growing exponentially (Jahnke, Larkey, Roger, Etnier, & Lin, 2010)
  - Harvard Medical School leading the charge
    - Estimates over 750 peer reviewed articles
    - More than 175 of the studies are randomized controlled trials

CURRENT STATE OF RESEARCH

- Gaining recognition as an effective form of exercise
- Tai Chi and Ai Chi used today to treat individuals with:
  - Parkinson's disease (Li et al., 2012, U.S. National Library of Medicine, 2012)
  - Stroke rehabilitation
  - Chronic pain (Nahlin, Boineau, Khals, Stussman,& Weber, 2016)
  - Fibromyalgia (Gangaway, 2018)
  - Cardiovascular disease (Yeh, Wang, Wayne, & Phillips, 2009, Thornton, Sykes, & Tang, 2004, Yeh, Wang, Wayne, & Phillips, 2009)
  - Fall Risk (Li et al., 2005, Teixerira, Lambeck, & Neto, n.d., Lam, 2017)
  - Arthritis (Lam, 2017)
  - Osteoporosis
  - Depression
  - TBI (Blake & Batson, 2009, Gemmell & Leathem, 2006, Manko, Ziolkowski, Mirski, & Klosinski, 2013)

TAI CHI and TBI

- Demonstrated improvement of self-care skills (Manko et al., 2013)
- Improvements in self-esteem and mood (Blake & Batson, 2009)
- Decreases sadness, confusion, anger, tension, fear and increases energy and happiness (Gemmell & Leathem, 2006)

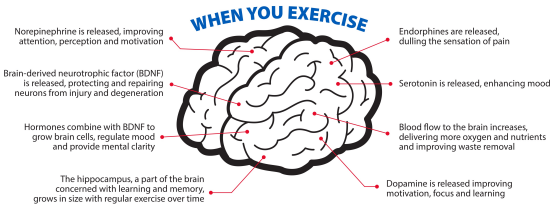
BENEFITS OF TAI CHI and AI CHI

- Improved balance and fall prevention
- Blood pressure reduction
- Improved pain management
- Improved strength, endurance, and posture
- Enhanced proprioception
- Reduced disease symptoms
- Improved mood and self-esteem
- Improved Activities of Daily Living (ADLs)

PHYSICAL ACTIVITY and BRAIN HEALTH

- Established link between the brain and body
- Our brains are "plastic" (Hampton, 2015)
  - Neuroplasticity occurs:
    - At the beginning of life (when the immature brain organizes itself)
    - After injury (the brain can compensate for lost function by creating new neuropathways)
    - Through adulthood (whenever something new is learned or memorized)
- Tai Chi and Ai Chi are a form of exercise for the brain (Holzel et al., 2011, Lazar et al., 2005)

YOUR BRAIN LOVES THE GYM



(Stead, 2014)

INTEGRATING TAI CHI and AI CHI INTO TBI REHABILITATION

- Not a replacement for conventional medical science
- Complementary approach to rehabilitation programs
- Opportunities to impact multiple physiological processes
  - Muscular strength and endurance
  - Cardiovascular endurance
  - Flexibility
  - Range of motion
  - Posture
  - Balance control
  - Self-efficacy and mood
  - Coordination
  - ADLs

FURTHER RESEARCH

- Increase research of Tai Chi and Ai Chi with TBI population
- What is a "dose"?
- What do studies tell us about younger adults?

TAI CHI IN PRACTICE

- Indications
  - Balance deficits, coordination issues, depression/self esteem, need improvement for cardio endurance, posture, muscular strength and endurance
  - Consult with your physician and treatment team
  - Script if interested in a group or individual setting
- Intensity
  - Low to moderate intensities
  - Take breaks if you get tired
  - Even watching/visualizing benefits the mind and body
- Ability
  - Easy to learn
  - Easily modified to meet specific needs

TAI CHI IN PRACTICE

- Equipment
  - Quiet space
  - Soothing music (optional)
  - Comfortable clothing
- Training
  - Tai Chi for Health Institute
- Frequency
  - Two days per week or more (optional)

MODIFIED (SEATED) TAI CHI

- Tai Chi can also be performed in a chair (Guo, 2012, Lam, 2017)
- Engages the upper body and lower limb movements
  - Upper/lower limbs
  - Trunk rotation
  - Hip flexion
  - Postural alignment

AI CHI IN PRACTICE

- Indications
  - Balance deficits, coordination issues, depression/self esteem, need improvement for cardio endurance, posture, muscular strength and endurance.
  - Consult with your physician and treatment team
  - Script for aquatic therapy with emphasis on Ai Chi
- Intensity
  - Low to moderate intensities
- Ability
  - Easy to learn
  - Easily modified to meet specific needs
    - Seated Ai Chi in the pool or on land
    - Ai Chi Ne – two person Ai Chi

AI CHI IN PRACTICE

- Equipment
  - Pool : 86-96 degrees Fahrenheit
  - On land in a seated position
    - Quiet space
    - Soothing music (optional)
    - Comfortable clothing
- Training
  - Aquatic Therapy Rehabilitation Institute
    - Certification as Ai Chi Basic Practitioner
- Frequency
  - Two days per week or more (optimal)

LET'S PRACTICE

- Greeting
- Warm- up exercises
- Qi Gong/Tai Chi movements
- Cool down exercises

Q&A SESSION

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