



SYMPOSIUM

Symptom management strategies with Tai Chi for stroke rehabilitation

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Background

- Cerebrovascular disease
- individuals with stroke would suffer from disease associated symptoms which influence their functioning in everyday life.
- symptom clusters were usually known to be sharing similar underlying mechanisms.
- It is clear that the development of effective stroke rehabilitation involves interdisciplinary team approach to manage physical, social, cognitive, and psychological functioning in this population.



Tai Chi

- a low intense aerobic exercise
- addresses the integration and balance of mind and body
- fundamental principles of slow, smooth, and continuous movement control, and the transfer of body weight while maintaining an upright and relaxed posture.



Seated Tai Chi

- shares the common Tai Chi principles
- while being modified to adjust the movements for patients with physical and psychological disability.



Purpose of the symposium

- to present the scientific evidence for the use of Tai Chi as a new approach of stroke rehabilitation.

Features

**Underlying
Mechanisms**

**Health
benefits**



Symposium schedule

- Symptom clusters of stroke patients by rehabilitation stages
- Introduction of seated Tai Chi as a new approach for stroke rehabilitation
- pilot study on the effect of seated Tai Chi on physical functioning among individuals with stroke
- Audience participatory session to practice together few movements of seated Tai Chi
- Q&A session



Learning Objectives

- The learner will be able to understand tai chi applied stroke rehabilitation and its beneficial health outcome
- The learner will be able to understand exercise precaution of seated tai chi program applied to stroke patients



Symptom Clusters of Stroke Patients by Rehabilitation Stages

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Introduction of seated Tai Chi as a new approach for stroke rehabilitation

Rhayun Song, PhD, RN
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Stroke

- Stroke prevalence
 - 759,000 people in the USA
 - 2nd leading cause of death in Korea
 - 3rd leading cause of death in China



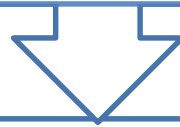
Comprehensive Stroke Rehabilitation Program



Comprehensive Stroke Rehabilitation

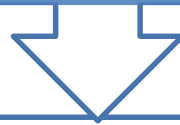
Symptom cluster

Cerebrovascular risk factors



Symptom management

Behavioral modification



Improved ADL

Improved Quality of life and mental health

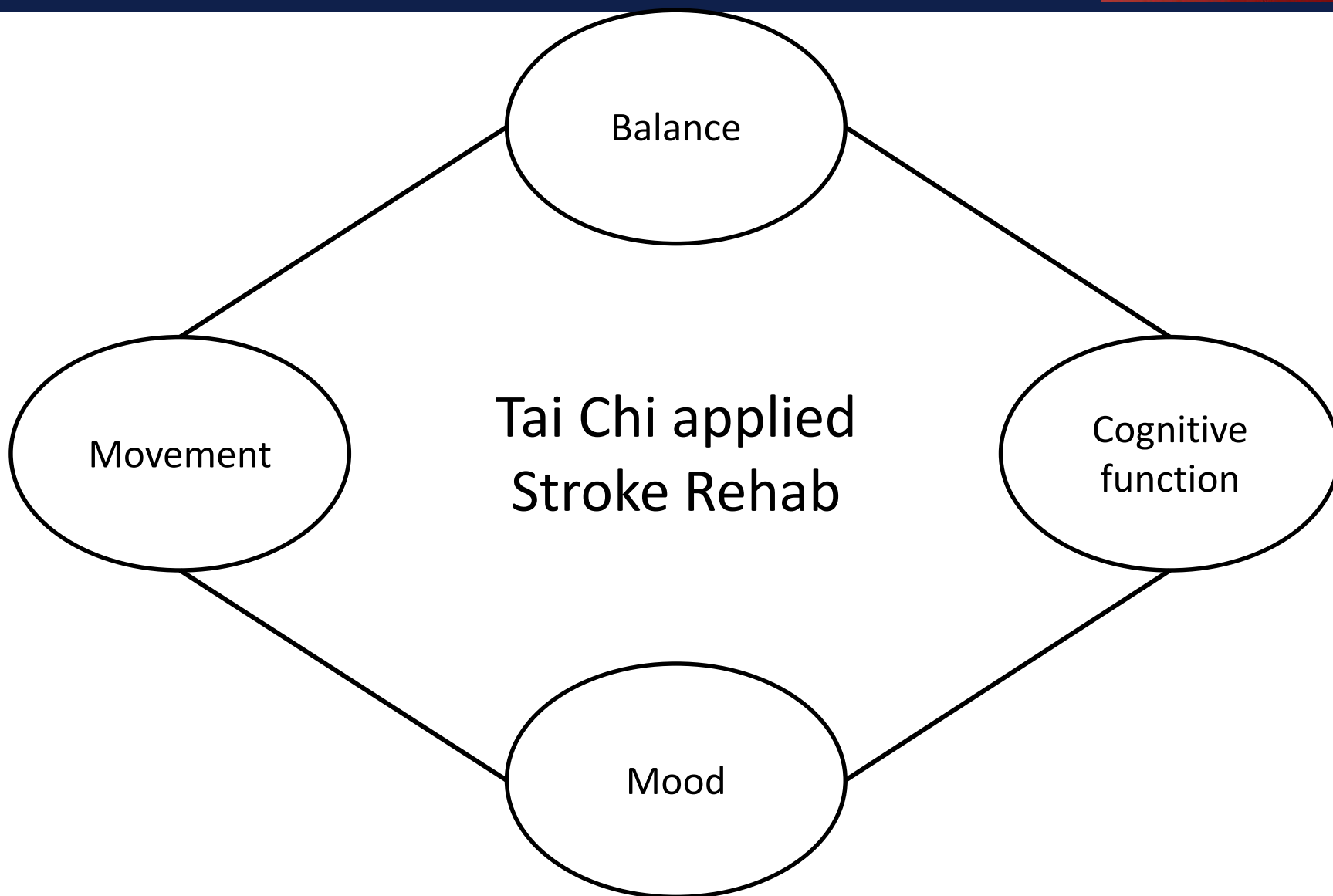


Figure. Expected outcome of Tai Chi applied stroke Rehab program



Tai Chi for an Exercise Alternative



Features of Tai chi from health perspectives

Tai Chi

Low intense aerobic exercise

Qi-gong breathing

Slow consistent movement with control

grounded lower posture

Weight transfer from empty to full steps

Mindfulness



Motor control and health benefits

Features

- Coordinated movements of upper and lower body
- Slow and circular with controlled movements
- Straight body posture
- No bound movements
- Small steps to avoid injuries

Health Benefits

- Arthritic symptom management
- Flexibility
- Balance
- Low drop-out rates without exercise-induced side effects



Weight Transference

Features

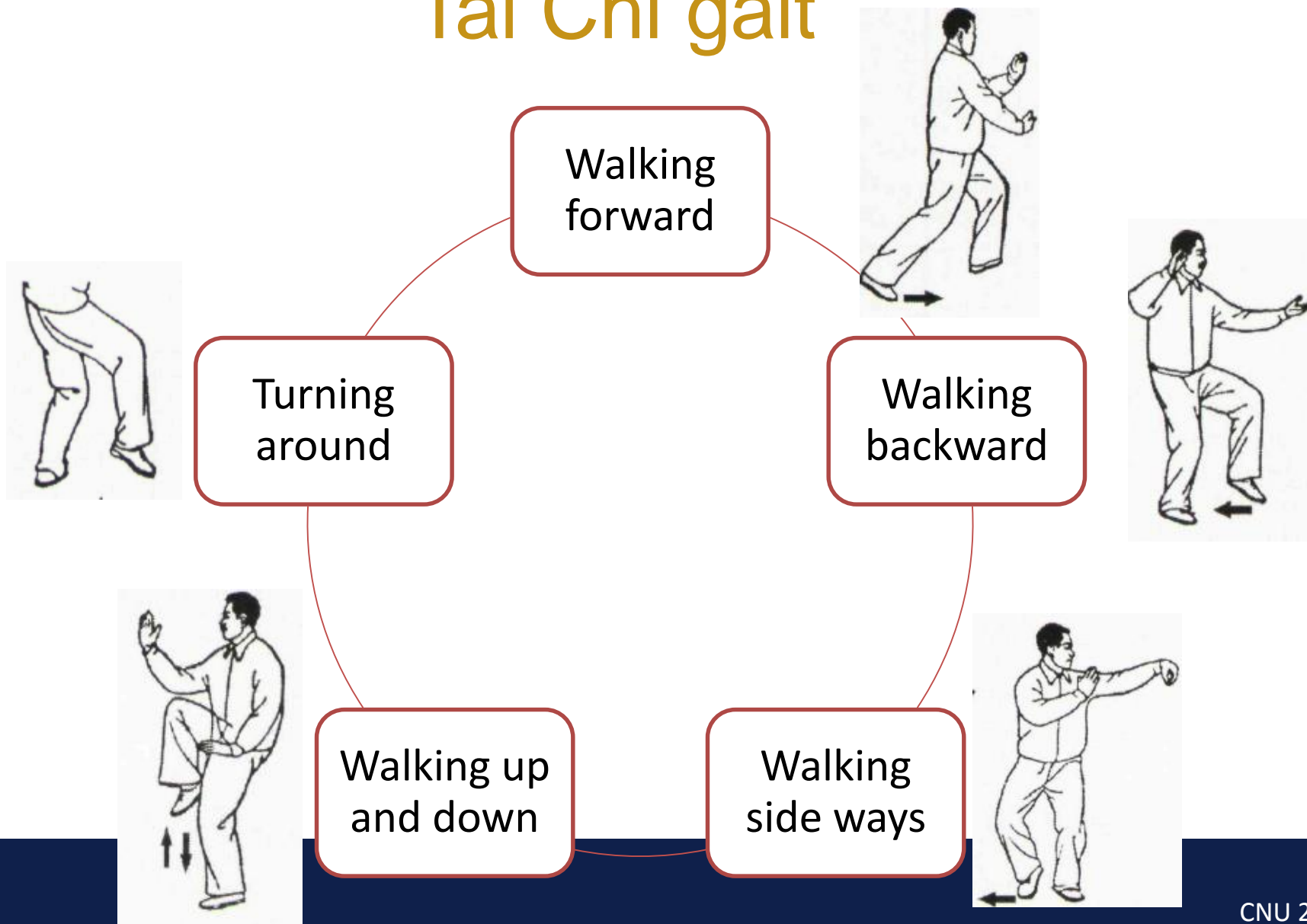
- Single leg stance
- Double leg stance
- Empty stance to full stance
- Compared to normal walking, Tai Chi involve a longer duration single-leg stance (Wu et al., 2004)

Health Benefits

- Balance both static and dynamic
- Muscle strength of knee flexion and extension, ankle dorsal and plantar flexion, hip flexors and abductors



Tai Chi gait





Tai Chi gait

- Duration of single-limb left and right support in TC (1.95 seconds) vs. in normal walking (0.40 seconds)

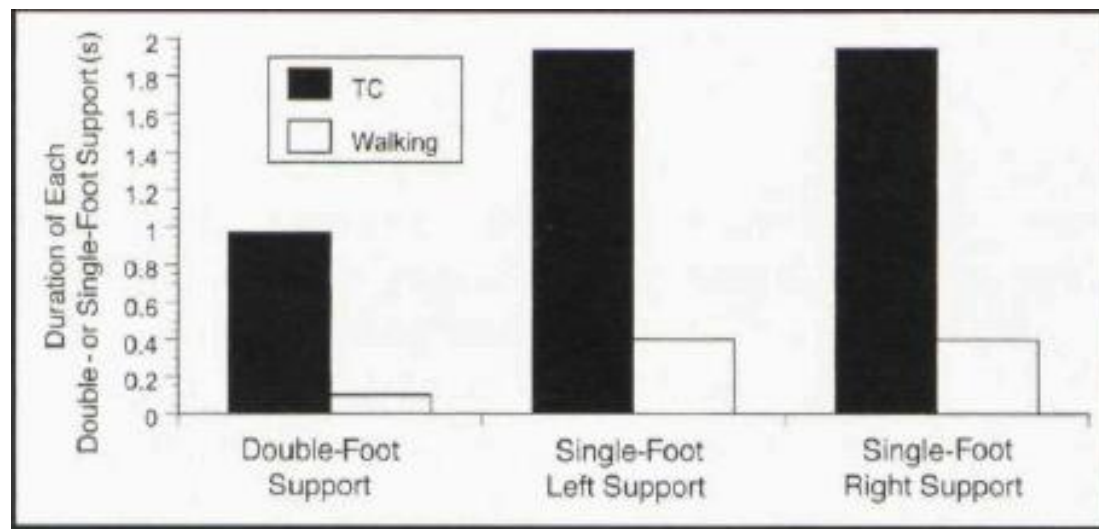


Figure 4.

Comparison of duration of each double- and single-foot support (in seconds) during Tai Chi (TC) and normal walking.²



Mindfulness

Features

- Mind-body connection
- Meditation music
- Zing (靜) : Calm & Mental tranquility

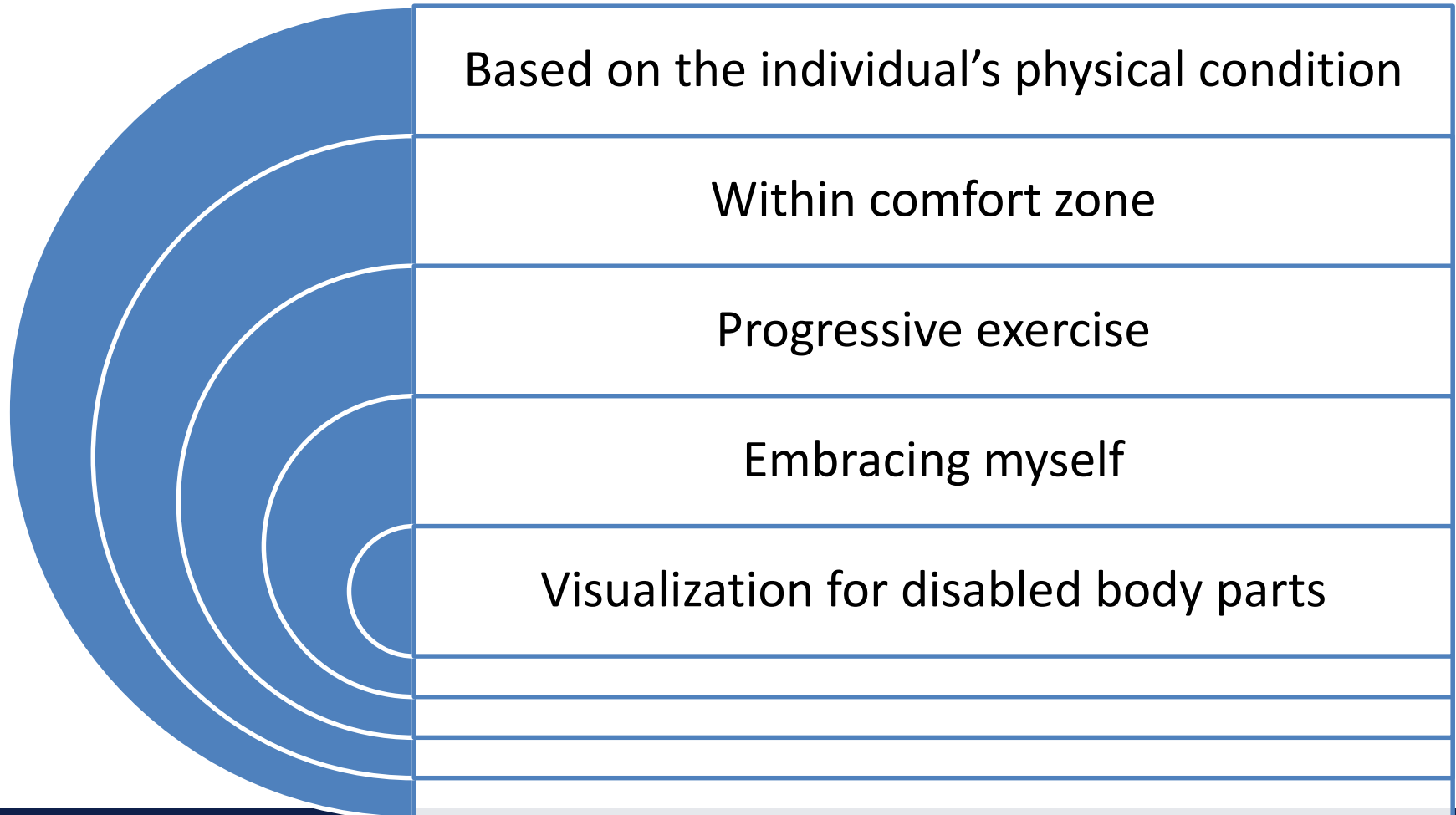
Health Benefits

- Stress reduction
- Situation awareness to prevent fall episode
- Quality of life

Further studies are required to examine whether the psychological benefits of Tai Chi are related to its Qigong components



Concepts of Seated Tai Chi





Pt Condition

Tai Chi Principle

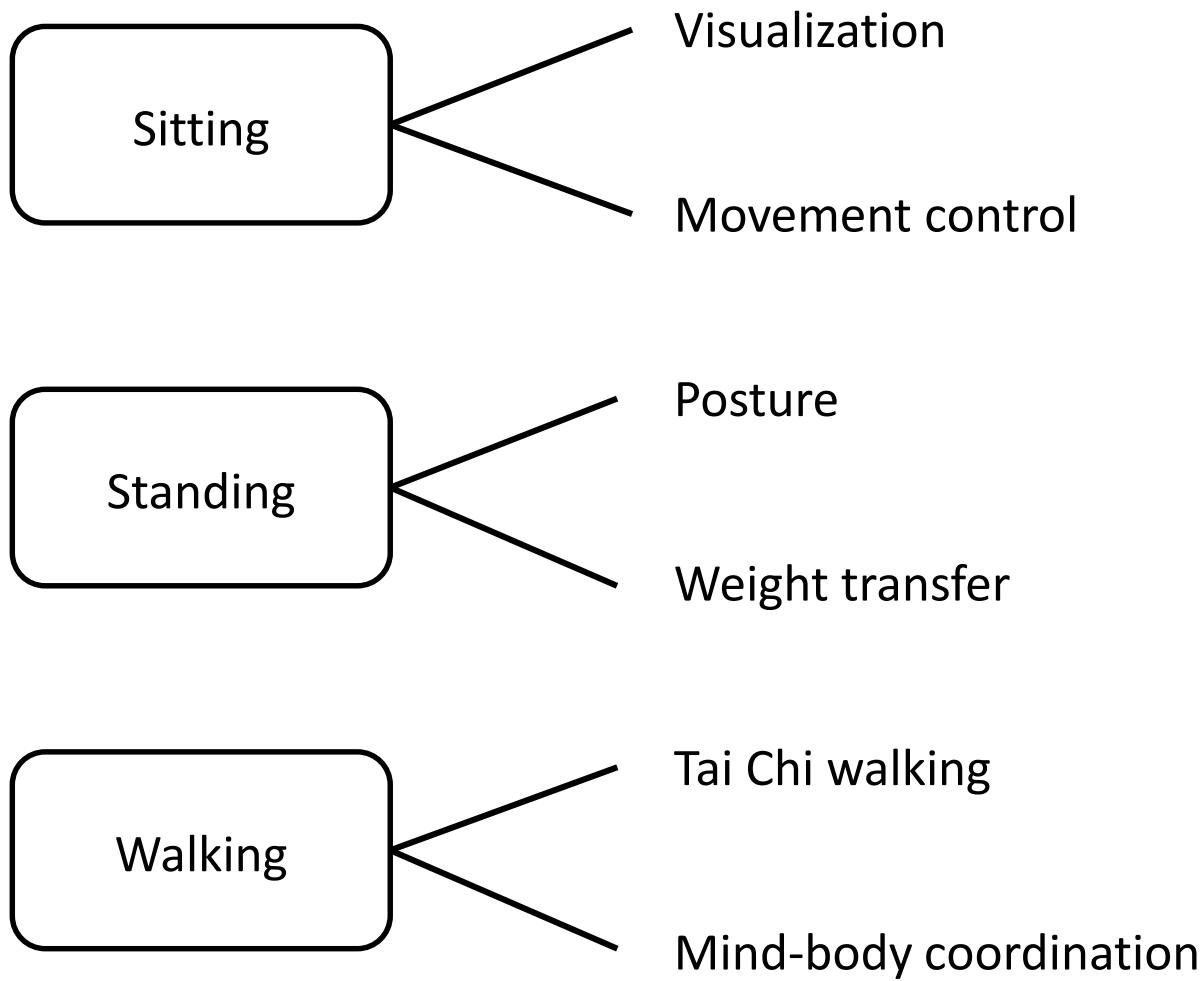


Figure. Tai Chi principles for each phase



Let's practice

- ✓ Tai Chi greeting
- ✓ Tai Chi walking forward, backward, sidesteps
- ✓ Commencement
- ✓ Open and close movement
- ✓ Waving hands in the cloud
- ✓ Closing