Traditional taiji & qigong: a simple but profound path to daily tranquility, happiness, vitality and better sleep

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Integrative Healthcare Symposium
February 26, 2016
Goals

- Science
- Tradition
- Take home
Sleep: Active or Passive?
Sleep Physiology

REM Sleep

Awake

Stage 1

Stage 2

Stage 3

Stage 4

TIME (hours)
Functions of Sleep

- Restoration
- Rejuvenation
- Enhances learning
  - Memory
  - Problem solving
  - Reaction time
- Regulates mood
- Immune function
Key Sleep Elements

Timing

Sleep

Medicine

Duration

Quality
Timing = Circadian Rhythm

Sleepiness

OPTIMAL PERFORMANCE

Day 1

OPTIMAL PERFORMANCE

Day 2

Time of day (h)
Integration of Cycles

- Body Temperature
  - 37.5°C
  - 36°C
- Error on a performance task
  - High
  - Low
- Melatonin
- Cortisol
- Growth Hormone

Days: Day 1, Day 2, Day 3
Clock Change and Sleep Loss

Average 10% reduction in Reaction Time After DST in High School Students
Effect lasted for several days

Sleep Duration – Past 50 Years in the U.S.

- Home and Office Computers
- Handheld Devices

70 million adults
Causes of Sleep Loss

- Schedule
- Worries - About sleep
- Leisure – Use of Electronic Devices
  - Effect on MELATONIN
“The Ultimate Home Office”
Food and Sleep

- Alcohol
- Caffeine
- Nicotine
- Chocolate

- Oatmeal
- Cherries
- Banana
- Milk
Approaches for a Better Sleep

- Behavioral Strategies
  - Timed light exposure
  - Regular schedule
  - Nighttime rituals

- Improve Physical and Mental Health
  - Optimize overall health
  - Stress/Stimuli reduction
  - Adequate nutrition
  - Relaxation/Meditation
Sleep Benefits of TaiJI

What Is Taiji/Qigong?

“Multi”:  
- Multidimensional  
- Multimodal

Combined benefit of  
Meditation & Moderate Exercise
Meditation Research

A partial list of positive effects:

<table>
<thead>
<tr>
<th>Emotional</th>
<th>Mind</th>
<th>Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Focus/attention</td>
<td>Pain resilience</td>
</tr>
<tr>
<td>Depression</td>
<td>Information processing</td>
<td>Heart disease</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Decision making</td>
<td>Stroke</td>
</tr>
<tr>
<td>Mood/depression</td>
<td>Memory recall</td>
<td>Immunity</td>
</tr>
<tr>
<td>Emotional intelligence</td>
<td>Creativity</td>
<td>Anti-inflammatory</td>
</tr>
<tr>
<td>Psychological well-being</td>
<td>Increases grey matter</td>
<td>Blood pressure</td>
</tr>
</tbody>
</table>
## Exercise Research

<table>
<thead>
<tr>
<th>Lowered Risk</th>
<th>Mind</th>
<th>Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular disease</td>
<td>Depression</td>
<td>Weight control</td>
</tr>
<tr>
<td>Type II diabetes</td>
<td>Anxiety</td>
<td>Bone/muscle strengthening</td>
</tr>
<tr>
<td>Metabolic syndrome</td>
<td>Mood</td>
<td>Daily tasks</td>
</tr>
<tr>
<td>Some cancers</td>
<td>Brain plasticity</td>
<td>Anti-inflammatory</td>
</tr>
<tr>
<td>Premature mortality</td>
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</table>

“Everybody knows that . . .”
Antibody Response to Flu Vaccine

Lower body (knee extensor) strength & force control improved concurrently

Taiji & Pain: Fibromyalgia

Exercise Intensity

High intensity exercise associated with:

- immunosuppression $^{1-3}$
- higher mortality (v. moderate) $^{4-5}$
- injury

“No Pain, More Gain . . .”
Integrative Approach

- Spiritual: see reality
- Mental: interact w/ reality
- Physical: cultivate vitality

“Balance” => mind & energy
Stronger, Happier & Wiser

Maximizing Human Potential:

- Tranquility
- Happiness
- Cognition
- Cardiovascular
- Immune function
- Sleep

- Balance
- Internal power
- Vitality
- Agility
- Posture
- Sexual function
Training Components

- Static
- Dynamic
- Push-hands (two-person)
Static:
Standing Meditation

- Wuji
- Santi
Santi Foot Position

~ 3°

Left (front)

~ 30°
Static: Sitting Meditation

Functional Meditation:

- See daily reality
- Interact w/ reality
Static: Sitting Meditation

Awareness of daily reality:

- Yin/Yang: difference and transformation
- Everyone is seeking their best interest
- Nothing is personal
- Meaning of life
Static: Sitting Meditation

Principles for interacting w/ reality:

- Gratitude
- Everyone is my teacher
- No expectation
- Moderation/Wu Wei
- Kindness/Golden Rule
- Big Heart
- Righteousness
- Resilience
Static: Lying-Down Meditation

- Nurturing qi in the dantian
- Sinking the whole body
- Moving the “taiji ball”
- Jade girl works the shuttle
Dynamic: Moving Qigong

- Grand opening and closing
- Washing organs
- Collecting qi to the dantian
- Collecting qi from the earth
- Open/close the temple doors
Dynamic: Agility

- Shuffle Feet
- Linking cannon
- Flower Blossoms
Dynamic: Form

1. Raise Hands
2. Lazy About Tying Coat
3. Fist Under Elbow
4. Step Back and Whirl Arms
5. Part Horse’s Mane
6. Wave Hands Through Clouds
7. Finishing Form
Push-Hands

Two-person balance, strength, and reaction training
To improve your health, medicine is not as good as food/nutrition; food/nutrition is not as good as qi(gong); qi(gong) is not as good as spiritual nourishment.
Suggested Routine

- 5 -5 -5 -5
- anytime
TaiJi and Sleep

- Exercise
  - Low-Impact Aerobic
- Meditation
- Relaxation
- Stretching
- Breathing
- Potential to improve
  - Well-being, stress, mood, balance, immune and cognitive function

Trial Design

- Curriculum
- Intervention or interventionist?

“One word from a knowledgeable teacher can save ten years of hard work”
Trial Design: Dosage

\[ TQ_{dos} = \]

\[ [(T_c + T_{SP}) + m(C_{des}, I_{apt}, S_{apt})] = \]

\[ [T_c + f(T_{curr}, T_m, X) + g(\sum_i D_i, \sum_j S_j \psi, P_{pos}, P_{mbs}, P_{phi}) + h(I_k, I_{ped}) + k(S_{att}, S_{mot}, S_{eng}, S_{und})] \]

\[ = \text{Quantity} + \text{Quality} \]


Take Home

- Agility
- Moving Qigong
- Standing Meditation
- Sitting Meditation
- Lying Down Meditation
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Thank You