

a qigong movement set structured around the behaviors of mitochondria

MITOCHONDRIAGONG

close-signaling

pats & smoothies
everywhere circles

respiration

alignment
no-one breathing

fission & fusion

stone in pond
tiger with cubs
waves of ocean
sphere of bear

autophagy

sweeping & clearing
sudden & gradual awakening

motility

wheel turning
swimming turtle

release

bird
dragon

far-communication

bones knocking
backwards step

a qigong practice to support metabolic health with a deep ecology perspective

considering mitochondrial, personal, and planetary well-being
developing mitoception, perhaps the deepest form of interoception
developing open awareness as a synesthetic form of exteroception¹
practicing a movement set that reflects optimal mitochondrial activity^{2, 3}
circulating peacefulness through intention^{4, 5}

we seem to move forward, but we don't go anywhere
we are not drawn by a goal - thus we smile while we are walking Thich Nhat Hanh

how do I know what I call knowing is not failing to know?
how do I know what I call failing to know is not knowing? zhuangzi, ch. 2

In its synthesis of movement, meditation, and intention, of tuning (調) body (身), breath (息), and heartmind (心), qigong can be a wonderful way participate in the flux of life energy that circulates among all of us.

Qi is commonly described as the essential energy that perpetuates all living beings. Mitochondrial activity has been described the same way.⁶

Mitochondria are responsible for cellular respiration. We could call this our original breath.

This is an outline for outdoor qigong practice that brings mitochondria into the foreground. It relies on an integrated approach and fractal perspective, without separating mind-heart & feet, self & other, cell & planet.

¹ Mirra, H. [Holotropism: a multi-dimensional, spacious, edgeless terrain](#)

² Picard M, Shirihai O. [Mitochondrial signal transduction](#), *Cell Metabolism*

³ which is supported by ketosis, a sustainable path of energy transformation
Dowis K, Banga S. [The potential health benefits of the ketogenic diet](#), *Nutrients*

⁴ “yi dao qi dao” (attention path is energy path)

⁵ Trumpff, Caroline, et al. [Brain health is rooted in state of mind](#), Columbia University Medical Center

⁶ Luo J, Shen S, Xia J, Wang J, Gu Z. [Mitochondria as the Essence of Yang Qi in the Human Body](#), *Phenomics*

APPENDIX A

keywords

barefootedness

circadian synchronization

companioning

fāng sōng / 放鬆

hundun / 渾沌

inter- & intra-attunement (mitoception)

metabolic dharma

mitocentric perspective

nonspeciesificity

open awareness

regulation and resonance

unotheringawe

wuwei / 無為

APPENDIX B set – notes

the play (movement set) reflects the eight behaviors of mitochondria: close-signaling, respiration, fission, fusion, autophagy, motility, release, and far-communication. each behavior has two representative movements. the footnotes are links to related movements from various lineages.

close-signaling (mito-nuclear) awareness of life

pats⁷ & smoothies meeting the body. saying hello to the skin and everything internal. hearing the change of the sound of the patting with lightly cupped hands in different areas

everywhere circles⁸ rotation of each and every joint, in both directions

respiration stance shift: feet together

alignment vertical alignment. sky and earth. body as a flexible antenna

no-one breathing connect with a tree or the air, and sense their breath, reciprocal with ours. who is inhaling and who is exhaling? this is an aspect of clarity

shift: feet to shoulder width. a different kind of stability. soft knees, stillness, belly breathing, wuji

fission & fusion

stone in pond metal nourishes water. autumn into winter. qua folding, knees bending, a large stone slowly lowered and released. rising, then the pond ripples in outward circles: first hands graze below the ribs around to kidneys, palms facing down, arms circle to front at heart level, palms facing up, arms open wide

transition: horse stance, hands come towards each other in front of heart, turn and push out

imagination shift: into spring

tiger with cubs⁹ wood element. tiger reaches forward to receive and then gives to cubs behind

shift: arms are tiger's front paws stepping forward a few times, stepping back a few times, hand softens even more, transforming into waves

waves of ocean water element. another name for *making waves* (Daisy Lee)

imagination shift: onto shore into gravity

transition: tunnel wave into sphere

sphere of bear¹⁰ *fifth brocade*. earth element. stomach.

transition: arms are overhead, turn body to center, walk feet in to shoulder distance

⁷ Deer Park Monastery [10 min. video](#) of palpation

⁸ Liping Zhu's beginning set [PDF](#)

⁹ Wudang [1 min. video clip](#) & an [alternate](#) (tiger paws)

¹⁰ Deer Park Monastery [1 min. video clip](#) of bear turning to circle

imagination shift: alighting small fire

autophagy

sweeping & clearing fire element. a variation on *sweeping the dantians* (Daisy Lee)

posture shift: horse stance. exhale and sweep are married; inhale in the interval

sudden & gradual awakening¹¹ fire, heart, free

a variation on the *seventh brocade* - with hands releasing open rather than punching. eyes can open upon release. one hand/side, then the other, then both together.

posture shift: feet together

motility

wheel turning¹² earth element, centering

transition: arms are open; post on right leg and open stance to left. pivot right foot 45° then left foot 90°, while shifting weight to back right leg and lifting left forefoot, bring arms overhead

swimming turtle¹³ water element, kidneys, acceptance

transition: arms are overhead; pivot feet back to parallel while lowering arms to heart level, then step feet together while lowering arms along torso

release

bird¹⁴ metal element, lungs, discernment. variable variation on *phoenix* (Daisy Lee) / *crane* (trad.)

dragon¹⁵ water element, openness, generosity

far-communication (inter-mitochondrial)

bones knocking¹⁶ *eighth brocade*, followed by the lightest of teeth tapping. earth element. underground. bones strengthen. awareness of death

backwards step incorporating the stance of *san ti*¹⁷ into a non-closing closing of the set. stepping back into *san ti* & stillness, and then again. ([Dogen](#) & earlier ancestors.) open awareness

¹¹ Deer Park Monastery [1 min. video clip](#) of 7th brocade & K Suvarnasuddhi [clip](#) of wood element

¹² Mimi Kuo-Deemer [1 min. video clip](#) of 3rd brocade

¹³ Deer Park Monastery [1 min. video clip](#) of swimming turtle

¹⁴ Daisy Lee [2 min. video](#) of phoenix opening

¹⁵ Wudang [1 min. video clip](#) of dragon

¹⁶ CHQA [1 min. video clip](#) of 8th brocade

¹⁷ [text description](#) of *san ti shi* from Sun Tai Chi

APPENDIX C

notes regarding walking and half-smiling (equanimity)

Thich Nhat Hanh, *Peace is Every Step* (NY: Bantam, 1990)

Your steps are the most important thing. They decide everything.

~

In our daily lives, we usually feel pressured to move ahead. We have to hurry. We seldom ask ourselves where it is we must hurry to. When you practice walking meditation, you go for a stroll. You have no purpose or direction in space or time. The purpose of walking meditation is walking meditation itself. Going is important, not arriving.

~

A tiny bud of a smile on our lips nourishes awareness and calms us miraculously.

~

If you can take one peaceful step, you can take two.
You can take one hundred and eight peaceful steps.

~

Stand on one foot, and be aware that it is resting upon the earth; see the great sphere upon which it rests. See it clearly - how wonderfully round it is.

~

And walk as if you breathe with your own feet. Concentrate your mind on the soles of your feet. And walk as if you kiss the earth with your feet. All the pleasant feeling should come through the soles of your feet.

~

this practice set developed in the context of my participation in two consecutive qigong teacher training programs. it is inspired by and conditional on movements adopted from traditional qigong sets and Daisy Lee's radiant lotus long form. just another variation on a moving meditation to quiet the mind and nourish the heart.

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