



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

CGCM 2016



The use of Health Qigong Liuzijue (六字訣) in preventive medicine for hypertension and diabetes

**Preventive Medicine Section
Poster No. 348**

**Venue: 1st Conference Room, CAA
25 Aug 2016 (10:50am - 11:05pm)**

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www.healthclock.net



Coming Book Chapter

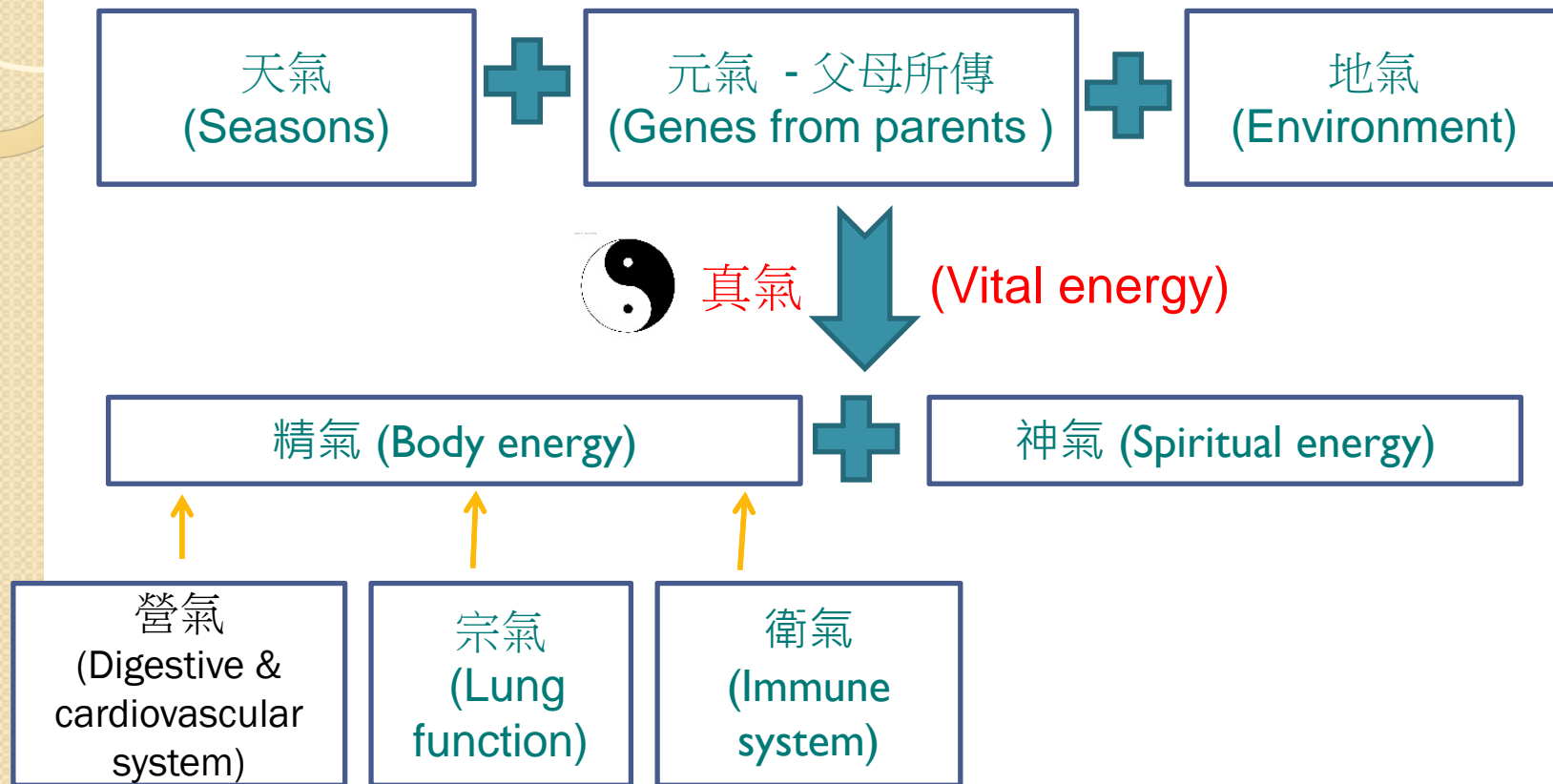
Ng, B. F. L., & Tsang, H. W. H. (2017, Apr).
*East and West lifestyle modification for
health promotion during the ageing
process.* In K.W Tong & K. Fong (Eds.).
Ageing in Community. City University of
Hong Kong Press. Hong Kong.



Objectives:

1. To **summarize** Health Qigong evidence in diseases prevention
2. To **pilot** East-meet west lifestyle modification program through integrating **health qigong Liuzijue (六字訣)** for risk reduction of pre-clinical metabolic syndrome

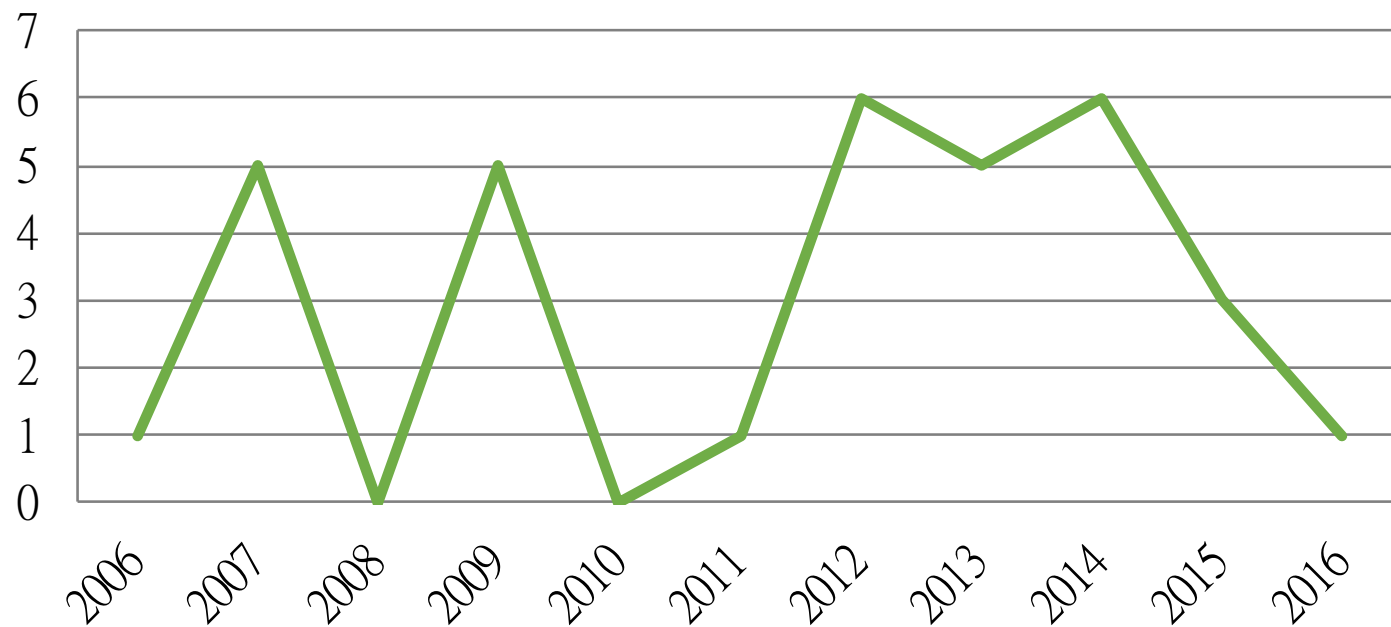
Qi (氣)



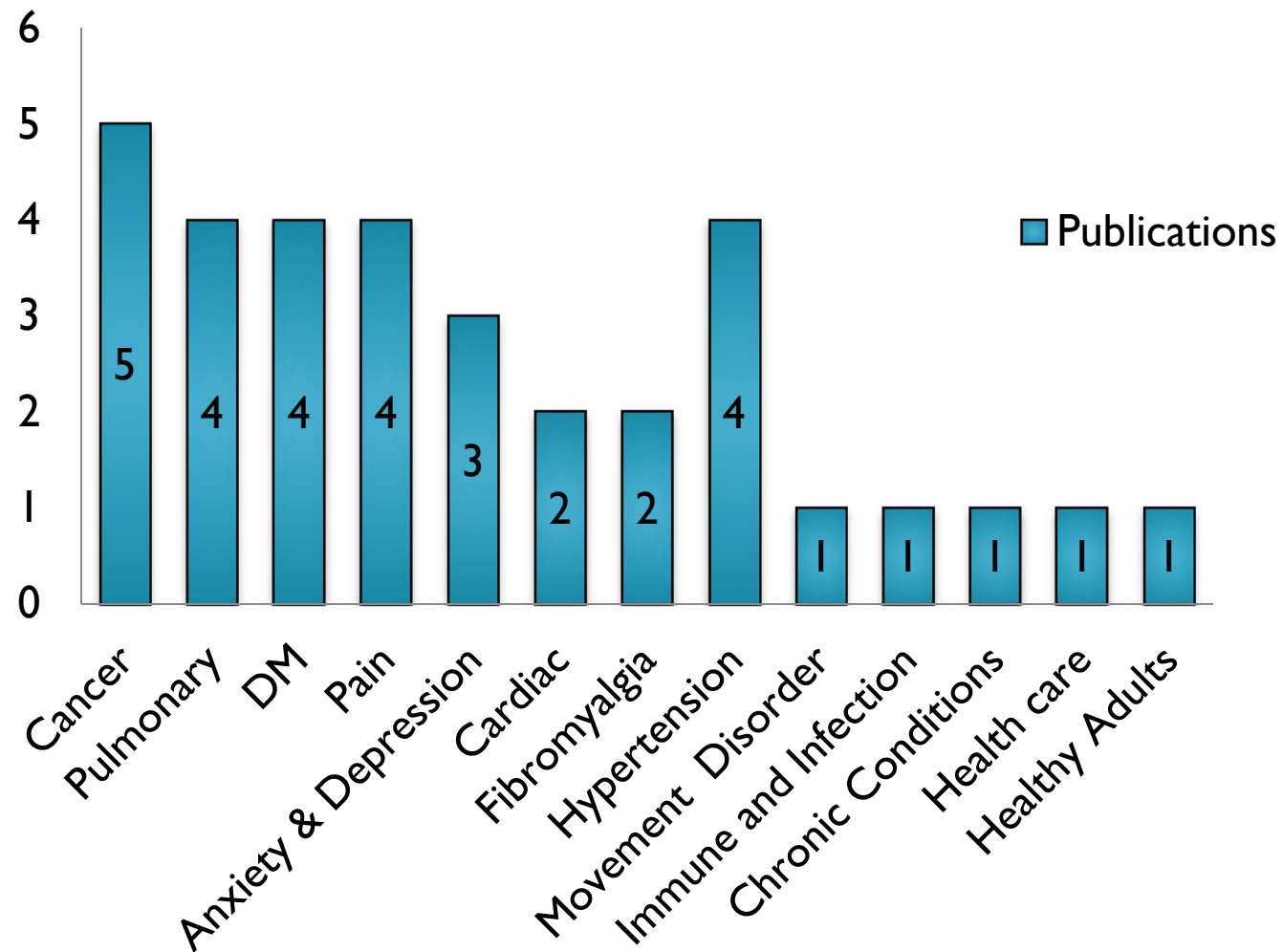
Systematic Reviews

No. = 33 related to Health Qigong

Publications



Study Subjects of Systematic Reviews (系統綜述)



Disease Specific of Health Qigong

SR of Hypertension

Lee, Pittler & Ernst (2007)

Guo, et al. (2008)

Rogers, Larkey, & Keller (2009)

Xiong, et al. (2015)

SR of Diabetes

Xin, Miller, & Brown (2007)

Lee, Chen, & Choi, et al. (2009)

Freire & Alves (2013)

Huang & Yeh (2013)



Photo from HKOTA

Four Common Standard Form of Health Qigong (健身氣功)

Chinese Health Qigong Association 2003



六字訣

Liuzijue



八段錦

Baduanjin



易筋經

Yinjinjing



五禽戲

Wuqinxi

Photo from Chinese Health Qigong Association

Mechanism

- ↓ Corticotrophin
(促腎上腺皮質激素) & aldosterone (醛固酮)
- ↓ C-reactive protein
(inflammation)
- ↓ Cholesterol, BP
- ↑ Adiponectin (脂聯素)
- ↑ Telomerase activity (端粒酶)
- ↓ HPA Axis activity (邊緣系統)
- ↑ Parasympathetic Nervous System Activity
(副交感神經系統)



Photo from HKOTA

Community Training Diagram

健身氣功 六字訣掛圖
Figures of the Liu Zi Jue movements

健身氣功 六字訣

Health Qigong Liu Zi Jue

(預備勢至第四式)
(Ready Position to Routine 4)

Ready Position 預備勢 (1)

Starting Position 起勢 (2-8)

Routine 1 XU Exercise 第一式 嘘字訣 (9-15)

Routine 2 HE Exercise 第二式 呵字訣 (16-28次)

Routine 3 HU Exercise 第三式 呼字訣 (29-31)

Routine 4 SI Exercise 第四式 呿字訣 (32-40)

Repeat Fig. 19-25 重複圖19-25

Repeat Fig. 30-31 重複圖30-31

Photo from HKOTA

Community Training Diagram

健身氣功 六字訣掛圖
Figures of the Liu Zi Jue movements

健身氣功 六字訣

Health Qigong Liu Zi Jue

(第五式至收勢)
(Routine 5 to Closing form)

Routine 5 CHUI Exercise
第五式 吹字訣 (41-51)

Repeat Fig. 35-39
重複圖35-39

Routine 6 XI Exercise
第六式 嘻字訣 (52-59)

Repeat Fig. 44-49
重複圖44-49

Closing Form
收勢 (60-63)

Repeat Fig. 53-59
重複圖53-59

34 34側 35 36 37 38 39 40 41 42 43

43側 44 44背 45背 46側 47 48 49 50側 51 52

53 54 55 56 57 58 59 60 61 62 63

Photo from HKOTA

Western Circadian Concept

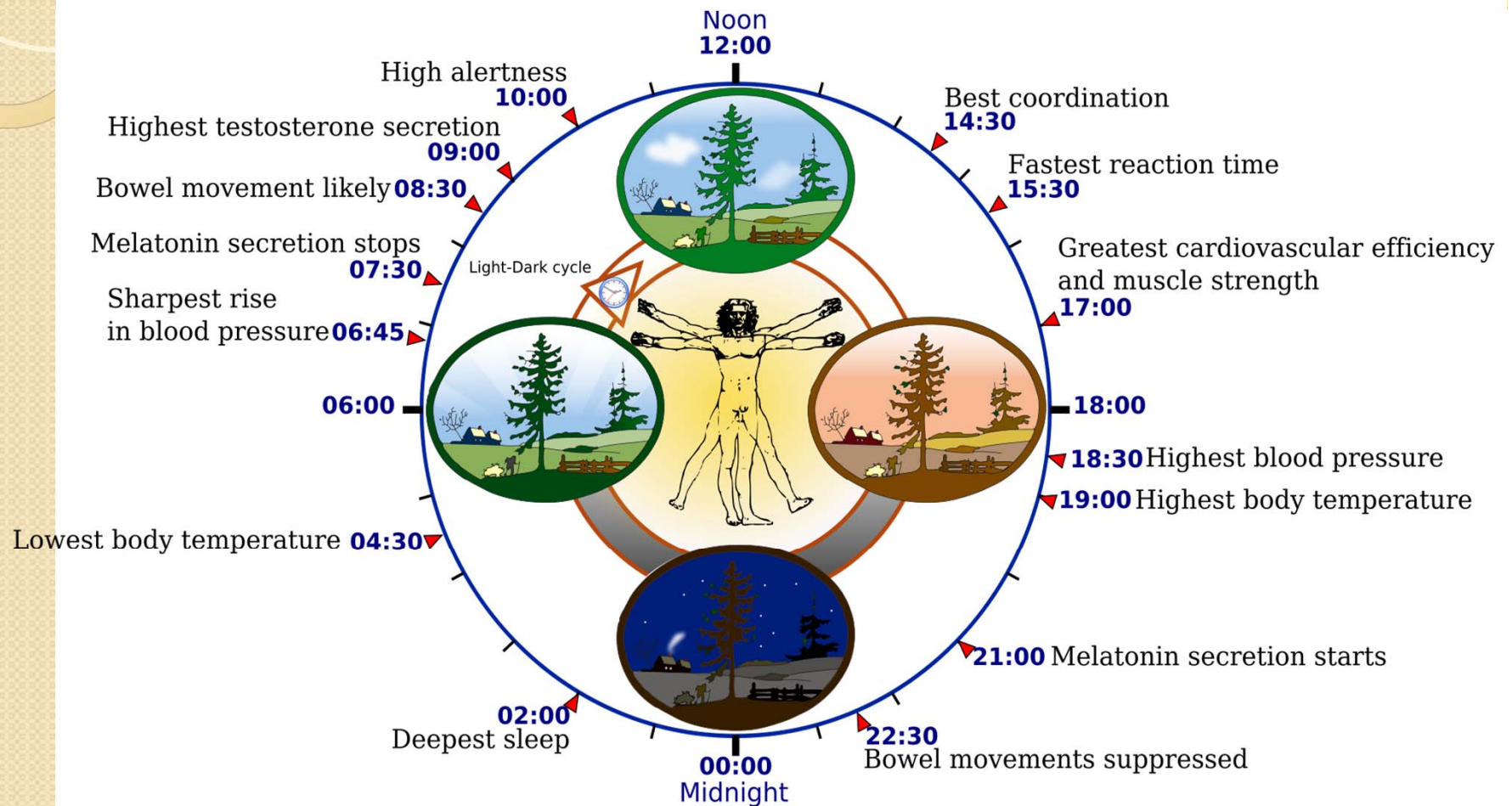
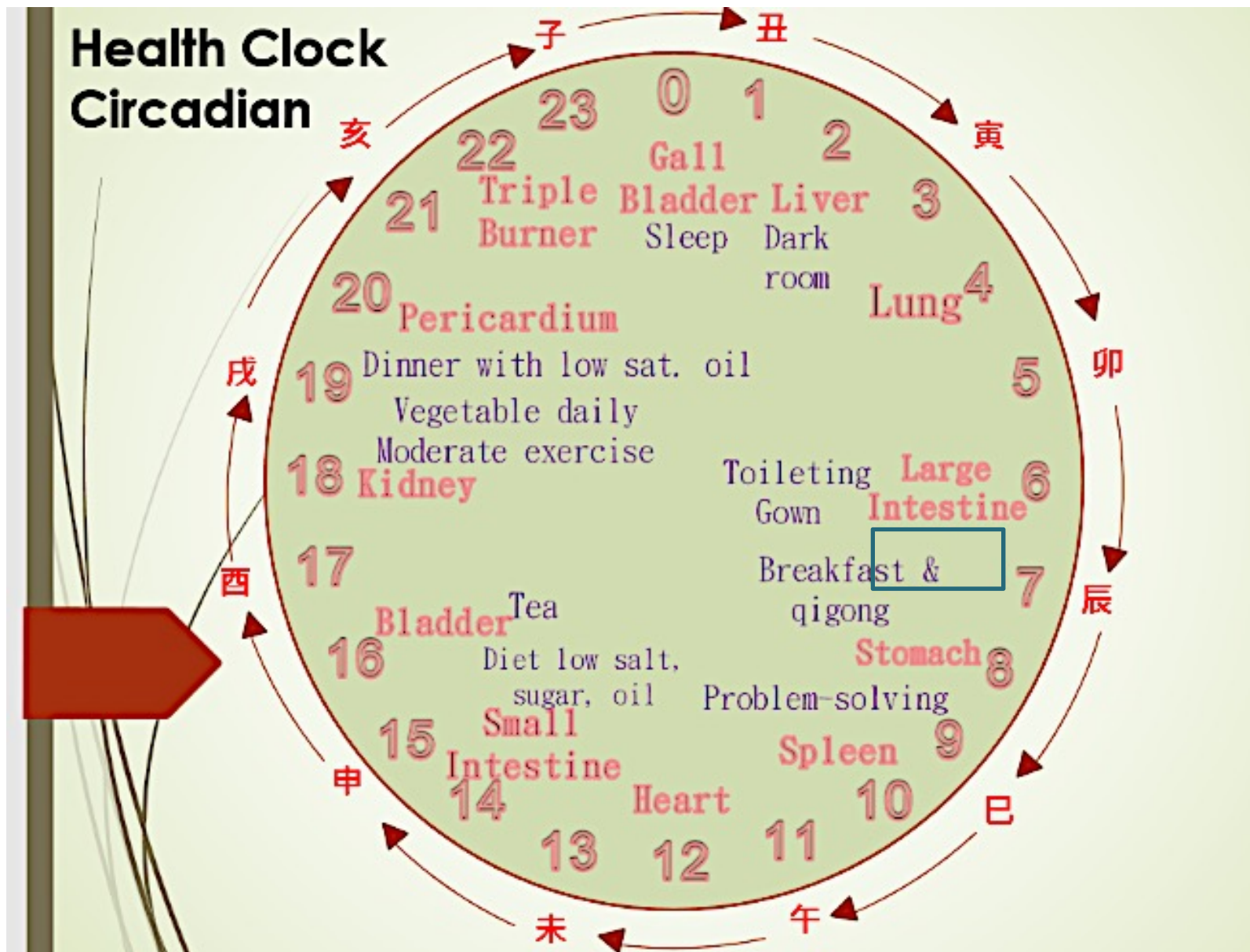


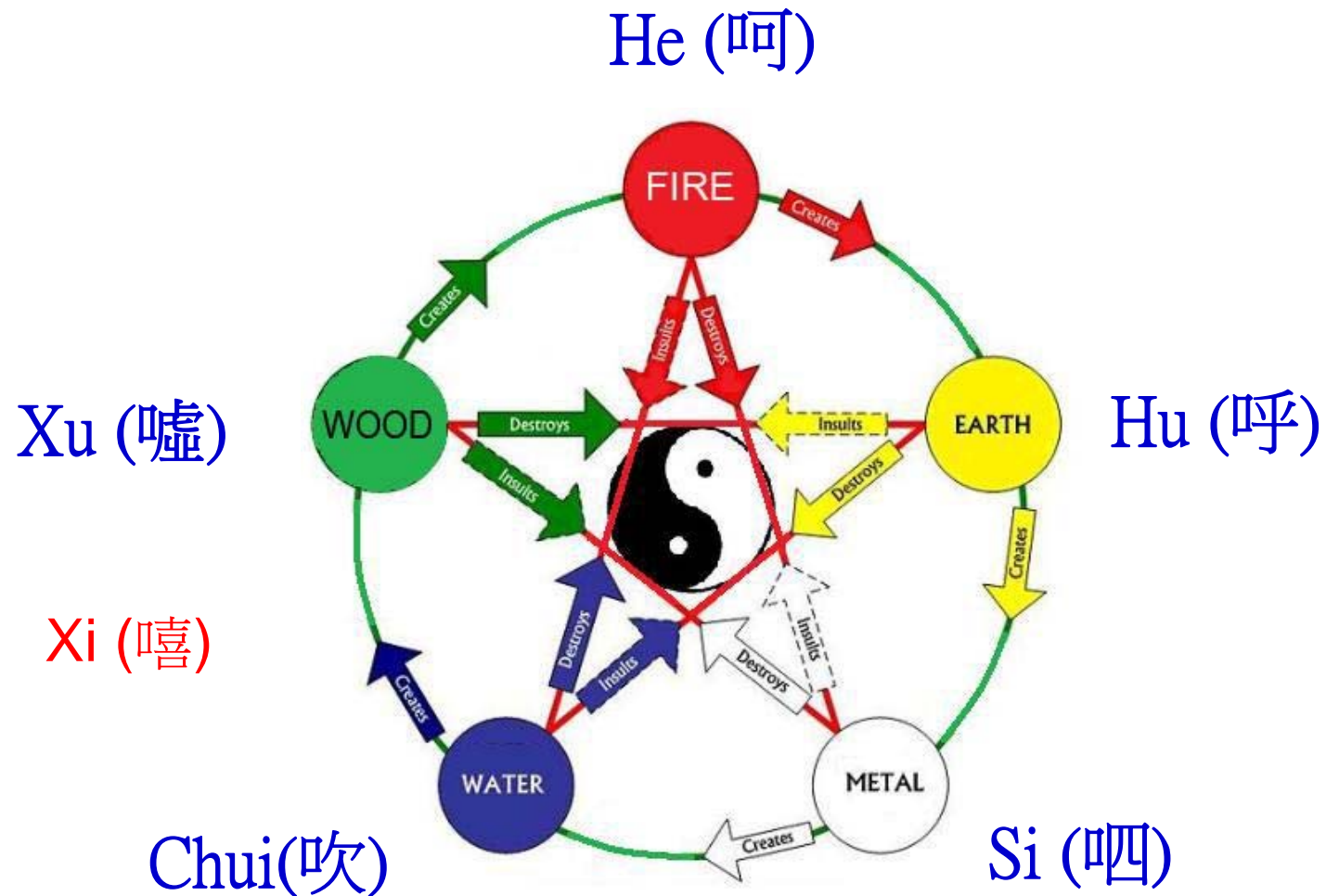
Photo from

https://www.google.com.hk/search?biw=1920&bih=947&tbn=isch&sa=1&q=health+clock&oq=health+clock&gs_l=img.3..0i19j0i5i30i19j0i8i30i19.196384.199443.1.199717.12.11.0.1.1.0.111.742.10j1.11.0...0...1c.1.64.img..2.13.817.DlcTDfdtkLU#imgcr=0EcMTWH9W0TnsM%3A

Chinese Circadian Concept



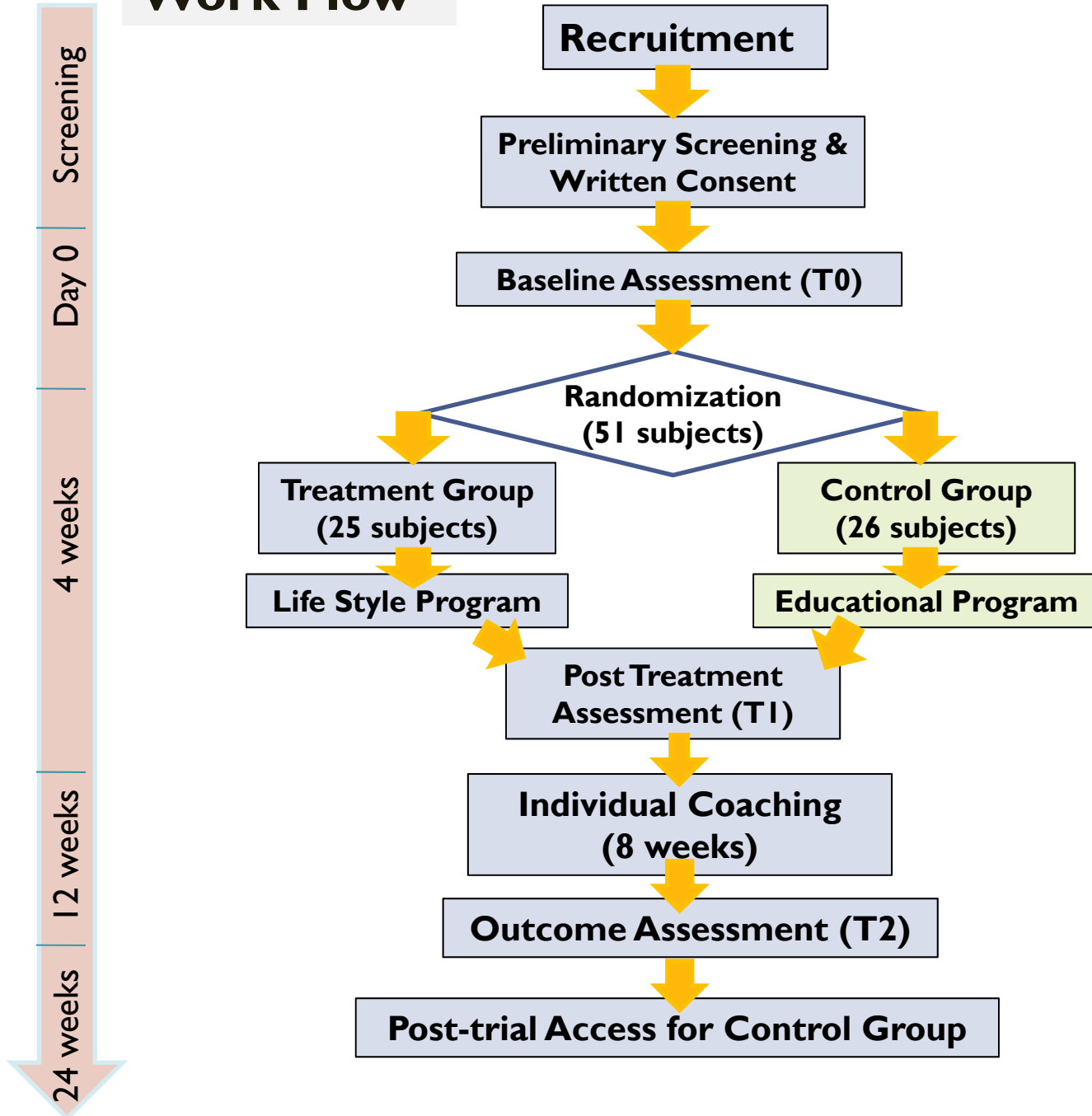
Liuzijue Training Sequence & Five elements



Methodology

- Single-blinded, 2-arm RCT
- Meridian Health Clock Program for treatment group based on *Midnight-noon Ebb-flow* (子午流注) Meridian's time (十二时辰中醫養生) vs control group using education only
- 51 participants randomized into 1:1 ratio
- 40 — 65 years ago community adult with at least one of the risk factors:
 - Systolic BP of $\geq 120 - 159$ mm Hg
 - Diastolic BP of $\geq 80 - 99$ mmHg,
 - BMI > 23,
 - HbA1c > 6.5%
 - Total Cholesterol > 5.18 mmol/L
 - Triglyceride > 1.7 mmol/L
 - LDL > 3.37 mmol/L

Work Flow



Outcome Evaluation Schedule

Assessment Items		Baseline T0	Post Rx T1	12 weeks Rx T2
Biological markers: HBA1c, triglyceride, high-density lipoprotein	Rx.Gp	✓		✓
	Control Gp	✓		✓
Physiological Measures: BP, weight, waist and hip circumference, BMI	Rx Gp	✓		✓
	Control Gp	✓		✓
Self-report scales: QOL, WHO-5, Perceived Stress Scale	Rx Gp	✓	✓	✓
	Control Gp	✓	✓	✓
Lifestyle Diary OQ, Lifestyle Questionnaire (Exercise level, sleep pattern, bowel habit, amount of alcoholic consumption and salt intake)	Rx Gp	✓	✓	✓
	Control Gp	✓	✓	✓
Satisfactory Evaluation				✓
Guess of Blinding				✓

Results

- ↓ Mean BP (2.48/2.08 mmHg) Rx group (NS)
- ↓ HbA1c (0.2%, $F(1, 46) = 6.556, p = .014$),
- ↓ Total cholesterol (0.32 mmol/L, $F(1, 46) = 4.921, p = .032$)
- ↓ % of body fat (.72%, $F(1, 46) = 6.286, p = .016$)
- ↓ Triglyceride ($F(1, 46) = 3.529, p = .067$)
 - Sub-gp baseline and F/U analysis (.69 mmol/L, $t(24) = 4.530, p = .000$)
- ↓ BMI ($F(1, 46) = 1.064, p = .308$)
 - Sub-gp baseline and F/U analysis (.35%, $t(24) = 2.227, p = .036$)
- ↑ Overall QOL Score (.84 vs. -0.08, $F(1.656, 45) = 4.138, p = .026$)

Results – Habit Formation

- 32% of Participants of treatment group reported practising Liuzijue routinely at 12-week follow-up



Photo from HKOTA

Discussion

1. Practice Liuzijue benefit health and worth to consider as regular exercise
2. A health equation is proposed:

$$f_{Health}(Behaviour, t) = \frac{Health_{baseline} + d_{Protective\ behaviour} - d_{Risk\ behaviour}}{dt}$$

Habits: Eating, resting,
qigong, drinking
exercise ...

Way Forwards

- **Understand mechanism and perform circadian rhythm using time-series analysis**

Meridian	and	<u>Liuzhejin</u>
<input type="checkbox"/> Conception Vessel (Ren)	0	0
<input type="checkbox"/> Governor Vessel (Du)	1	1
<input type="checkbox"/> Liver Meridian	2	2
<input type="checkbox"/> Gall Bladder Meridian	3	3
<input type="checkbox"/> Heart Meridian	4	4
<input type="checkbox"/> Small Intestine Meridian	5	5
<input type="checkbox"/> Spleen Meridian	6	6
<input type="checkbox"/> Stomach Meridian		
<input type="checkbox"/> Lung Meridian		
<input type="checkbox"/> Large Intestine Meridian		
<input type="checkbox"/> Kidney Meridian		
<input type="checkbox"/> Bladder Meridian		
<input type="checkbox"/> Pericardium Meridian		
<input type="checkbox"/> Triple Warmer Meridian		

Routine

- 0 - Ready Position
- 1 - Xu
- 2 - He
- 3 - Hu
- 4 - Si
- 5 - Chui
- 6 - Xi

Way Forwards

- More research & technological collaboration, such as Mobile Apps and fitness wrist band, to uncover the “**West-face East (WE) medicine**” (Cheng, 2016) to integrate wisdoms



Photos from

<http://www.aliexpress.com/item/Hot-Smart-Flex-Wristband-Fitness-Tracker-Fuel-Band-Smartband-Wearable-Electronics-Wristband-Activity-Intelligent-Bracelet-WV2/32434456461.html>

https://www.google.com.hk/search?q=%E8%A1%8C%E6%B0%94%E7%8E%89%E4%BD%A9%E9%93%AD&biw=1892&bih=1018&tbm=isch&imgil=njlYteLPR_VitM%253A%253BnOwgcVTrxQuMfM%253Bhttp%25253A%25252F%25252Fwww.9610.com%25252Fxpianqin%25252Fxpqym.htm&source=iu&pf=m&fir=njlYteLPR_VitM%253A%252CnOwgcVTrxQuMfM%252C_%usg=__5sfUQL-TIRoIGbUvkxKZvWrm3dg%3D&dpr=0.9&ved=0ahUKEwic16XFn_DOAhVGoZQKHdvtD2QQyjcIjw&ei=xDXJv5zIDcbC0gTb27-gBg#imgrc=njlYteLPR_VitM%3A

Thank You

Training Video download:

<https://www.youtube.com/watch?v=qg40ykeGw7E>

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www.healthclock.net

