

# Qi Dao



Qi = vital energy, life force; Dao = law behind everything

Nov/Dec 2010

*Qi Dao*, the E-newsletter of World Institute for Self Healing (WISH), designed for all mind-body practitioners or spiritual cultivators, promotes philosophy and methods of self-healing and positive mind power, and shares knowledge and experiences with the like-minded practitioners. Next month *Qi Dao* will be renamed as *Yang Sheng*, published online as an E-magazine. It is FREE to those who are interested in the subjects. All contributions are welcome.

## From the Editor ...



This will be the last issue of *Qi Dao* as the journal will be renamed as “*Yang Sheng*” next year. My time as the Editor-in-Chief of *Qi Dao* is coming to an end. I have enjoyed working with the articles written by all authors, my only regret being not to have met most of them in person. I am leaving as Editor-in-Chief but you’ll still hear from me once in a while as an Associate Editor of *Yang Sheng*.

Kevin Chen was my “boss” at the University of Medicine and Dentistry of New Jersey (UMDNJ) where we did research on Qigong for two years. It was during that time that the first issue of *Qi Dao* was created in January 2006 and distributed.

I have no regrets. My life is changing and I want to evolve more even though I am living at the age of 66. Things will never be the same for me. I am writing my autobiography and concentrating on the word “change” and what a difference it makes to allow it to happen.

There are several thoughts I would like to share with you. All of these are carved in stone and are hanging on the walls of my living room.

“Those who follow the crowd usually get no further than the crowd. Those who walk alone are likely to find themselves in places no one has ever been.”

We must get to know who we are by ourselves, not just who we are with others.

We must go beyond the limits that we set for our lives.

“When I dare to be powerful, to use my strength in the service of my vision, then it becomes less important whether or not I am afraid.”

We get more in touch with who we are and our fears overtake us less and less.

“Only the person who risks is free.”

To follow, to only do things that others have done, this takes away from who we are and we never get to know ourselves or realize our dreams.

And finally, a thought that arose out of a dream that closely reflected my life. I leave this with you to think about: “Listen to your heart.” It is your heart that knows you, knows who you really are. It is your heart that can help you make decisions and it is your heart that allows you to be you.

Listen to your heart! Allow change to happen! Laugh till you cry!

Have a wonderful holiday! And a happy New Year!!

Joy Staller

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## [Featured Article]

## Introduction to Yang Sheng 養生

### The Root of Chinese Medicine and the Foundation of Human Health

Kevin W Chen, MPH, PH.D.

After five years of exploration and development, our e-journal, *Qi Dao*, will be renamed, *Yang Sheng*, and upgraded to both a web-based magazine and an online network. These changes are intended to appeal to a wider audience of people seeking health, happiness and harmony. Why *Yang Sheng*? This article introduces the basic concept of Yang Sheng in Traditional Chinese Medicine (TCM) and bridges our past and future ventures.

#### The Concept of Yang Sheng

*Yǎng Shēng* (養生) may be the most important concept in TCM and Chinese health culture. The Chinese word “Yang” means to nurture, take care of, and nourish; “Sheng” means life, birth, and vitality. Together “Yang Sheng” means to nurture or nourish life — fostering health and well being by nurturing body, mind and spirit in harmony with the natural rhythms, and with universal laws. Sometimes Yang Sheng is also translated as health preservation, life cultivation, or life nourishment.

[The Concise Oxford Dictionary of World Religions](#) (1997) <sup>1</sup> defines Yang-Sheng as “Daoist practices, especially through breathing and directing the breath (ch’i) to prolong life and attain immortality.” This definition reflects the fact that many books about and techniques of Yang Sheng have roots in Daoist philosophy or practice. However, Yang Sheng is not just practiced by Daoism, but by many different schools of health, such as Confucianism, Buddhism and martial-arts traditions. More importantly, some of the oldest classic works on Yang Sheng, such as *Yellow Emperor’s Internal Classic*, appeared before Daoism was formed, representing the general wisdom of Chinese health. So Yang Sheng can not be simply labeled as Daoist practice.

Yang Sheng as a health discipline is taught in most TCM schools in China. According to the definition in a recent textbook of “Life-nurturing Science in TCM”,<sup>2</sup> Yang Sheng is “the type of subjective and objective behaviors with which people take care of their life consciously through various means and methods, which is the reappearance or application of their deep understanding of the laws of entire life developments. ...It is also a mind-body health activity achieved through material and spiritual unification.”

*Life is about balance and harmony. Yang Sheng is a common accessible practice for ordinary people to cultivate health and harmony through daily activities. Rather than treating disease, the focus is on maintaining balance through an awareness of our connection to nature, to our own bodies, and to the spirit.*

*Life is about balance and harmony. Yang Sheng is a common, accessible practice for ordinary people to cultivate health and harmony through daily activities. Rather than treating disease, the focus is on maintaining balance through an awareness of our connection to nature, to our own bodies, and to the spirit.*

Health preservation (instead of disease treatment) is a central feature of TCM practice, and is significantly different from western medicine, which focuses on disease, illness, and dysfunction.

Yang Sheng is a way of life for all people at all times. It is a powerful practice that can preserve and improve health when engaged in daily.

#### The Contents of Yang Sheng

There are many books on the subject of Yang Sheng in Chinese, and the contents may vary from one text to another. In general, Yang Sheng activities can be applied through the entire span of human life; from birth, growth, aging to death. It refers to activities used to enhance health and achieve longevity by various methods and comprehensive techniques, such as cultivating spirit, adjusting diet, exercising the body, regulating the



Calligraphy of “Yang Sheng” by Master Zhongxian Wu

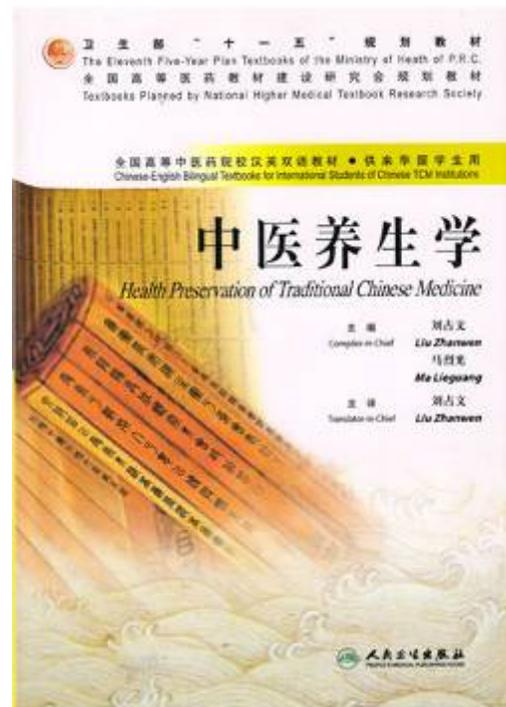
moods, moderating sexual life, adapting to the climate, and so on.

The appendix includes a brief table of contents from the recent official textbook, “Life-nurturing Science in TCM” (Liu et al. 2007)<sup>2</sup> used in China, which gives the reader a general idea of how Yang Sheng science has been taught in Chinese medical schools. I chose this textbook as an example because it was published in both Chinese and English by the most authoritative Chinese publisher in health (the People’s Medical Publishing House) for foreign students in TCM schools. It is interesting to notice that Yang Sheng science is a required course for all foreign students who study Chinese medicine in China, but it is just an optional course for Chinese students who grew up in China. This policy may reflect the fact that knowledge of Yang Sheng has been taught through the Chinese socialization process in daily life; young Chinese learn about Yang Sheng through osmosis, or daily socialization, therefore, may not need to take a full academic course for it (This may not be true in modern China).

Unfortunately, if you read only the definition of Yang Sheng Xue (Life-Nurturing Science), or just the table of contents, you may be easily misled on what Yang Sheng is really about, since 70 to 80% of the contents in Yang Sheng books are about physical health or bodily preservation, such as diet, environment, adjusting to climate, sexual activities, exercises, bathing, leisure activities, medicinal, massage and techniques to take care of specific body parts and so on (some people even misspell Yang Sheng as body-nurturing (养身).) However, Yang Sheng inherently includes three interrelated components: nurturing body, mind and spirit, as all of them are necessary components of a healthy life. As pointed out in Tina Zhang’s article, “nurture life is mainly accomplished by cultivating one’s mind. If the mind is calm and clear, the spirit is pure and healthy, when the spirit is healthy, how can the illness enter you?” However, cultivating the mind and nurturing spirit is the subject of Qigong study in TCM, which is covered by a different textbook<sup>3</sup> in medical schools. Therefore, I would like explore why the contents of Yang Sheng have mostly been bodily health, whereas the key to successful Yang Sheng is actually cultivating the mind and nurturing the spirit.

Since Yang Sheng is the common practice to cultivate health and harmony through daily activities, and maintain balance by concentrating on well-being rather than treating sickness, we need to first understand the Chinese concept of “health” before we can understand the key to Yang Sheng. According to the *Yellow Emperor’s Internal Classic*<sup>4</sup>, good health is a state of “harmony” -- a healthy life “takes harmony as ultimate, and takes peace as expectation” (以和为贵, 以平为期). It also stated, “A peaceful man will not get sick” (平人者不病也). What is a peaceful man (平人)? Wang Bin in the Tang dynasty made a good note on this as “not excessive and not insufficient” (不太过也无不及), which clearly marked out a moderate and harmonious state in life. The classic book *Zhong Yong* (中庸) stated, “no expression of happiness, anger, sadness and joy, is called moderate, while being expressed with restriction, is called harmony.” Here we can see the key to good health is a state of moderation and harmony.

What are we harmonious with? What will happen if the harmony is broken? These are the broad questions of the entire TCM system – good health is the result of harmony with the heaven, earth and humanity (天地人和). To be harmonious with heaven, we need to change clothing and adjust to the environment to synchronize with different climates or seasons; otherwise, our body may be invaded by wind, damp, cold or heat qi and become sick. To be harmonious with the earth, we need have a balanced diet, and restrain ourselves from any excessive consumption of the five tastes (sour, sweet, salty, bitter and spicy – TCM considers all foods or tastes the combination of these five basic tastes), otherwise, our body will lose balance, and develop illnesses such as obesity, heart disease and diabetes. To be harmonious with our fellow humans, we need to adjust or constrain the five poisoning (negative) emotions – complaining (blaming), hate, sorrow (annoyance), anger, worry (fear) (怨、恨、恼、怒、烦)<sup>1</sup> so that we can get



<sup>1</sup> The five poisoning (negative) emotions and their effects on health are based on Wang Fengyi’s (王凤仪) theory of Personality-Law Healing Philosophy (性理疗病), which is slightly different from the popular TCM theory on the seven emotions leading to various sicknesses.

along with others peacefully. According to TCM, many sicknesses are the consequences of excessive emotions, which can hardly be treated by any known medicine or simple formula. Complaint hurts the spleen, hate exhausts the heart, sorrow depletes the lung, anger hurts the liver and fear/worry affects the kidney.

When our lives are in discord with heaven, we could catch a cold or suffer heatstroke, which can be easily treated. When our lives are in discord with the earth, imbalanced intake of the five tastes, we may end up with high blood pressure, high blood sugar and/or high cholesterol -- very common in modern society. We could develop chronic sicknesses, which are more difficult to heal, but still treatable by medicine. However, when our lives are in discord with other humans due to the five poisoning emotions, it becomes a personality and character issue, and there is simply no medicine or formulas that can effectively treat these disorder(s).

Recent studies have reported that 80% of all visits to primary-care doctors in the U.S. were related to psychological distress,<sup>5</sup> and 70% of all cancer patients had emotional disturbances 2-3 years before their diagnosis. The only known ways to treat the symptoms due to discord with humans is through mind-body cultivation, such as meditation, Qigong, Taiji, Reiki and Yoga practice, to develop a detached attitude and to cultivate an empty mind (恬淡虚无). This was why there were so many different mind-body cultivation traditions in Chinese history as most of them tried to achieve balance and harmony with the inner self through cultivation, which may have eventually led the practitioners to the level of emptiness or nothingness. I have heard many stories of personality changes after qigong or mind-body practices. In the addiction treatment facility where I worked, counselors told me that the clients tended to be much less likely to become angry or to fight with each other after starting the daily qigong meditation program.

### **The Purpose of Yang Sheng – Health and Longevity**

The purpose of Yang Sheng is always to maintain health and achieve longevity. Regarding the subject of longevity, those who are familiar with Chinese literature may notice three important areas or “secrets” that frequently appear in Chinese classic Yang Sheng works, they are nutrition (food), circulating qi (qigong) and within-bedroom (sex) – in Chinese: 饮食、行气、房中。

Nutrition (饮食) is obviously about what to eat as we are what we eat. However, for the purpose of slowing down the aging process, it is important to know not only what to eat, but also what not to eat, as well as how we can live well without eating much – fasting or Bigu. Modern medical research has confirmed that reduced calories-intake or energetic fasting can significantly slow down the body’s aging process.

Circulating Qi (行气) refers to the mind-body exercises that are popular practices in Chinese history, including many forms like Qigong, Taiji, meditation, breathing work, guided imagery and so on. These exercises focus on the integration of body-mind-spirit, cultivation of oneness or emptiness through regulating breathing, body and mind, and intend to eventually achieve a state of harmony and peace within, or reach a high level of spirituality. Some Daoist schools directly call their mind-body exercise or techniques “life-nurturing arts”.

Within-bedroom (房中) is a civilized Chinese term for sexual intercourse, which emphasizes the importance of sex in human health while refraining from excessive sex. Modern medical research has confirmed that a good sexual life will help increasing immune system, producing significant hormones, reducing stress or depression, and burning extra calories. However, according to the Yang Sheng principle, excessive sex will definitely hurt life force, especially for men. The key is how and when to have sex that really nurture your health. What modern medicine has not proven, but Chinese culture has recorded, is that there is a significant yin-yang qi exchange in sex, Daoist techniques of lasting intercourse without ejaculation, and the hormones produced during sex, if utilized properly, could nourish the brain and slow down the aging process...

These three secrets for longevity are highly correlated, but not equally important in practice. According to most experts in Yang Sheng, circulating Qi should be the key or the dominant technique for all longevity practices. If you can circulate Qi well through mind-body exercise, you will be able to achieve harmony in body-mind-spirit, and reach balance in your internal qi system, which will automatically adjust your diet or nutritional habits (the body knows what is good or bad for it), and offer you the capability to fast naturally (energetic fast is important part of Daoist and Buddhist practice). If you mastered the qigong techniques, you would be able to effectively absorb Yin to supplement Yang for men (or absorb Yang to supplement Yin for women) during sexual intercourse, and return the body essence (special hormones) to nourish the brain (还精补脑). Although the arts of Yang Sheng for longevity in

Chinese history have always had three branches or components, the mind-body exercise, Qigong, has always been the key to mastering the other two components, and is the crown of the longevity secrets.

I would like to introduce a past Daoist qigong practitioner, Master Li Qinyun of Sichuan, as an example of achieving longevity by applying the three secrets. This photo of master Li was taken in 1927, he claimed to be 249 years old at the time. The then-governor of Sichuan province, General Yang Shen, who had invited him to Wan county, had this photo taken. Having some doubts about Li Qinyun, the general collected more stories about Li, and even found a book that was said to be written by master Li on secrets of longevity. General Yang published a book in Taiwan many years later, entitled “Factual account of 250 years old good luck man.”<sup>6</sup> I was lucky to find this book in the National Taipei Library. The book tells many detailed stories about master Li by people who had interaction with him. The key points may be summarized as follows: Master Li left home to become an herbalist at the age of 13, travelled through many mountains in China to gather herbal medicines, frequently took herbal roots as daily food, mastered fasting technique; joined the army at age 53 (he knew the details of some historic events), married one wife at a time, but sequentially married 14 times (I guess the wives did not practice qigong), and started learning Daoist longevity arts from a much older Daoist sage at the age of 103. He taught life-nurturing courses and longevity seminars in the Er-mei Mountains, and most of his students lived beyond the age of 100 (120 to 150 years). He was 6 feet tall and walked 30 li (15 km) from his residency to the Wan County faster than most young people....



A Daoist Yang Sheng practitioner,  
Master Li Qinyun (1678-1928)

Last summer I visited Wan County (now it is part of Chongqing city, called Wanzhou) with a copy of this book, and tried to find some clue or information about the truthfulness of these stories. Unfortunately, nobody in the downtown area had ever heard about Li Qinyun since his last visit to Wanzhou was more than 80 years ago. It will become harder and harder for us to verify the truth about this old Master as time goes by. Although I do not have any evidence to prove he actually lived 250 years, I can share the ten secrets explained in his book “Formula for Longevity and Immortality” (which was most likely written by his students), as a way to examine the relationship between Yang Sheng and longevity. Mr Li stated: “The arts of longevity have ten ways: sitting meditation 打坐, reducing desire 降心, refining personality 炼性, over the boundary 超界, respecting belief 敬信, cutting-off relations 断缘, closing mind 收心, simplifying life 简事, truthful observation 真观, and great Samadhi 泰定.” (Note that my translation reflects my understanding of the Chinese, but may not reflect the true meanings of these secrets)

In summary Yang Sheng is the root of Chinese medicine, and the foundation of human health. To become a true Yang Sheng expert or a mind-body cultivator one needs the guidance of good teachers. When good teachers are not around, we can learn from each other by sharing and exchange. Traditionally, teachers and students interacted with each other through long-distance travel and face-to-face meetings, which was the key to their personal cultivation, life fulfillment and truth illumination. However, with our modern technology and communication tools (especially the development and widespread use of the Internet), we can be much better connected to one another, and have our own voices heard and establish our own platform of sharing. More importantly, there are many emerging health-related issues that may not be addressed in the ancient literature but which need our current inspiration and understanding; for example, the effects of high-rise buildings (away from grounding qi), electric lights (breaking the boundary of day and night), over use of antibiotics and hormones (creating drug-resistant infections), computer screens and cell phones (strong electronic magnetic field) on our health, to name only a few.

In our new editorial board we have invited many experts in the areas of nutrition, mind-body cultivation, spirituality, sexuality and health, and complementary therapies to form a strong and knowledgeable team to support this virtual community. *Yang Sheng* magazine or network will serve the purpose of sharing and improving our health practice and spiritual cultivation, and will enlighten more people who are searching for health, happiness and harmony within. Please join us as part of this virtual community of mind-body-spirit cultivators. We invite you to share your experiences and knowledge with your friends and acquaintances. Together we can build a unique community of our own that is dedicated to a healthy, happy and harmonious life for all.

**References:**

1. The Concise Oxford Dictionary of World Religion (1997).  
<http://www.encyclopedia.com/The+Concise+Oxford+Dictionary+of+World+Religions/publications.asp>
2. Liu ZW, Ma LG, et al. (eds) *Life-Nurturing Science in Traditional Chinese Medicine*. Beijing: People's Medical Publishing House. 2007.
3. Liu TJ, Chen KW et al. (eds) *Chinese Medical Qigong*. London: Singing Dragon. 2010. (see more information at <http://www.wishus.org/chinesemedicalqigong.asp> )
4. the *Yellow Emperor's Internal Classic (Huang Di Nei Jing, 黄帝内经)*, Beijing: People's Medical Publishing House. 1963.
5. Sobel, D. S. (1995). Rethinking medicine: Improving health outcomes with cost-effective psychosocial interventions. *Psychosomatic Medicine*, 57(3), 234–244.
6. Yang Shen, *Factual account of a 250-year-old good luck man*. Taipei, Taiwan: Zhong-Wai Wen Ku.

Facebook page for Yang Sheng: [http://www.facebook.com/home.php?sk=group\\_172417306114567](http://www.facebook.com/home.php?sk=group_172417306114567)

Future web address for Yang Sheng: <http://www.Yang-Sheng.net> or <http://www.Yang-Sheng.com>

**Appendix:****Life-Nurturing Science in Traditional Chinese Medicine**

(Edited by Liu, ZW; Ma LG et al. 2007)

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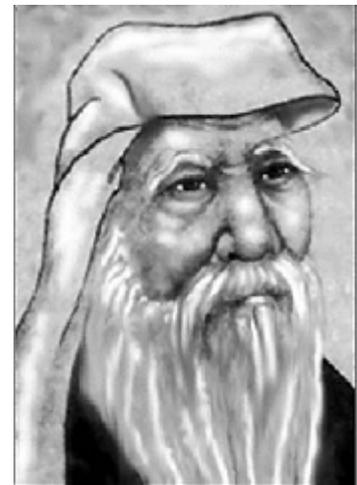
**[Citation of the Month]**

**NURTURE**

The Way bears all things;  
 Harmony nurtures them;  
 Nature shapes them;  
 Use completes them.  
 Each follows the Way and honors harmony,  
 Not by law,  
 But by being.

The Way bears, nurtures, shapes, completes,  
 Shelters, comforts, and makes a home for them.

Bearing without possessing,  
 Nurturing without taming,  
 Shaping without forcing,  
 This is harmony.



Lao Tzu

--- Chapter 51 – Dao De Ching

**[Research Update]**

**Shaolin dan tian breathing fosters relaxed and attentive mind: a randomized controlled neuro-electro-physiological study.** Evid Based Complement Alternat Med. 2011; Epub 2010 Sep 22. By Chan AS, Cheung MC, Sze SL, Leung WW, Shi D. at Neuropsychology Laboratory, Department of Psychology, The Chinese University of Hong Kong, New Territories, Hong Kong.

**Abstract:** Neuro-electrophysiological studies on meditative breathing revealed its association with either a relaxed or an attentive state. The present study aimed to investigate whether the Shaolin Dan Tian Breathing (DTB) technique, which consists of the Passive and Active subtypes and can be considered as a relaxation exercise and Qigong, would induce both relaxed and attentive states. Twenty-two adults and 22 age-, gender- and education-matched controls received training on the Shaolin DTB (experimental group) and the progressive muscle relaxation respectively for one month. Eyes-closed resting EEG data before and immediately after each type of breathing were obtained individually at baseline and after one-month training. At baseline, the EEG changes after the Shaolin DTB between both groups were comparable. After one-month training, participants in the experimental, but not the control, group showed enhanced temporal alpha asymmetry (an index of relaxation and positive mood) after performing the Passive DTB for five minutes, and enhanced intra- and inter-hemispheric theta coherence (an index of attention and alertness) after performing the Active DTB. The present findings suggested a positive effect of the Shaolin DTB technique on enhancing human neural activity and connectivity, which may possibly enhance mood state and cognitive functions. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2957109>



**Effect of yoga on quality of life of CLBP patients: A randomized control study.** International Journal of Yoga. 2010 Jan;3(1):10-7. by Tekur P, Chametcha S, Hongasandra RN, Raghuram N. at Division of Yoga and Life Sciences, Swami Vivekananda Yoga Research Foundation (SVYASA), Bangalore, India.

**CONTEXT:** In two of the earlier Randomized Control Trials on yoga for chronic lower back pain (CLBP), 12 to 16 weeks of intervention were found effective in reducing pain and disability. **AIM:** To study the efficacy of a residential short term intensive yoga program on quality of life in CLBP. **MATERIALS AND METHODS:** About 80 patients with CLBP (females 37) registered for a week long treatment at SVYASA Holistic Health Centre in Bengaluru, India. They were randomized into two groups (40 each). The yoga group practiced a specific module for CLBP comprising of asanas (physical postures), pranayama (breathing practices), meditation and lectures on yoga philosophy. The control group practiced physical therapy exercises for back pain. Perceived stress scale (PSS) was used to measure baseline stress levels. Outcome measures were WHOQOL Bref for quality of life and straight leg raising test (SLR) using a Goniometer. **RESULTS:** There were significant negative correlations (Pearson's,  $P < 0.005$ ,  $r > 0.30$ ) between baseline PSS with all four domains and the total score of WHOQOLBref. All the four domains' WHOQOLBref improved in the yoga group (repeated measures ANOVA  $P = 0.001$ ) with significant group\*time interaction ( $P < 0.05$ ) and differences between groups ( $P < 0.01$ ). SLR increased in both groups ( $P = 0.001$ ) with higher increase in yoga (31.1 % right, 28.4 % left) than control (18.7% right, 21.5 % left) group with significant group\*time interaction (SLR right leg  $P = 0.044$ ). **CONCLUSION:** In CLBP, a negative correlation exists between stress and quality of life. Yoga increases quality of life and spinal flexibility better than physical therapy exercises. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2952119>

**Effects of scheduled qigong exercise on pupils' well-being, self-image, distress, and stress.** J Altern Complement Med. 2010 Sep;16(9):939-44. by Terjestam Y, Jouper J, Johansson C. at School of Education, Psychology and Sport Science, Linnaeus University, Växjö, Sweden. [yvonne.terjestam@lnu.se](mailto:yvonne.terjestam@lnu.se)

**OBJECTIVES:** Psychologic problems is increasing among pupils and has become a major problem in Sweden as well as in other Western countries. The aim of this study was to explore whether scheduled qigong exercise could have an effect on well-being at school, psychologic distress, self-image, and general stress.

**SUBJECTS:** Pupils, 13-14 years, were assigned to either a qigong group or a control group.

**INTERVENTION:** The qigong group had scheduled qigong 2 times a week for 8 weeks. **MEASURES:** Self-reported well-being at school, psychologic distress, self-image, and stress were measured pre- and postintervention. **RESULTS:** The control group had reduced well-being at school during the semester and the qigong group was stable. The qigong group reduced psychologic distress and stress, and had a tendency to improved self-image, where no

changes were found in the control group. Self-image explains 47% ( $R(2) = 0.47$ ) of well-being at school, and stress explains 29% ( $R(2) = 0.29$ ) of psychologic distress. Conclusions: Scheduled qigong, meditative movement, is a possible way to improve well-being at school.

**Heart rate autonomic responses during deep breathing and walking in hospitalized patients with chronic heart failure.** *Disabil Rehabil.* 2010 Aug 23 [Epub ahead of print]. By Rossi Caruso FC, Arena R, Mendes RG, Reis MS, Papa V, Borghi-Silva A. at Cardiopulmonary Physiotherapy Laboratory, Nucleus of Research in Physical Exercise, Federal University of Sao Carlos, Sao Paulo, Brazil.

**Objective.** To evaluate the acute effect of physiotherapy (deep breathing exercises and walking) on heart rate variability in patients hospitalised with chronic heart failure (CHF). **Design.** Ten males with CHF (57 +/- 7 years) and 10 healthy controls (59 +/- 9 years) were included. Heart rate and RR intervals were recorded in the following conditions: supine, seated, during deep breathing exercises and during and after walking. Heart rate variability was analysed by linear and non-linear methods (alpha2, Mean HR, rMSSD, SDNN and ApEn). **Results.** Patients presented significantly lower SDNN (12.4 +/- 4 versus 26 +/- 8 ms), rMSSD (18.2 +/- 16.2 versus 25 +/- 19.5 ms) and ApEn (9.9 +/- 10 versus 16.68 +/- 22.6) during the walking compared to controls ( $p < 0.05$ ). In addition, mean HR was significantly higher during and after walking for patients with CHF compared to controls (103 +/- 8 versus 80 +/- 2 bpm and 90 +/- 9 versus 68 +/- 2 bpm, respectively). Patients with CHF demonstrated a significant reduction of alpha2 during deep breathing (0.78 +/- 0.1) when compared to the seated position (1.08 +/- 0.1) and walking (1.15 +/- 0.2,  $p < 0.05$ ). Additionally, rMSSD index increased during deep breathing when compared to walking in both groups. **Conclusion.** Deep breathing exercises and walking are safe and promote beneficial effects on heart rate variability in patients hospitalized for CHF.

**Qigong for the treatment of tinnitus: a prospective randomized controlled study.** *J Psychosom Res.* 2010 Sep; 69(3):299-304. By Biesinger E, Kipman U, Schätz S, Langguth B. at ENT-Clinic and Otolaryngology Department, Klinikum Traunstein, Traunstein, Germany.

**OBJECTIVE:** Tinnitus is a frequent disorder which is very difficult to treat. Qigong is a mindful exercise and an important constituent of traditional Chinese medical practice. Here we performed a randomized controlled trial to evaluate the effect of a Qigong intervention on patients with tinnitus. We hypothesized that especially tinnitus patients with somatosensory components may benefit from the mind-body technique of Qigong. **METHODS:** Eighty patients with tinnitus of at least 3 months duration were randomly assigned to an intervention group (n=40) consisting of 10 Qigong training sessions in 5 weeks or a waiting-list control group (n=40). Tinnitus severity was assessed with a visual analogue scale (VAS) and with a tinnitus questionnaire (TBF-12) before treatment, immediately after treatment, and 1 and 3 months after treatment. **RESULTS:** Qigong did not cause any side effects and was completed by 80% of the assigned patients. Compared with the control group, Qigong participants experienced improvement in tinnitus severity, as reflected by a significant reduction in both the VAS and the TBF-12. In the subgroup of patients with somatosensory tinnitus, Qigong effects were more pronounced, resulting in a highly significant improvement in both scales compared to the waiting-list group. **CONCLUSION:** These findings suggest that Qigong interventions could be a useful complement to the therapeutic management of patients with tinnitus and especially for those with somatosensory components. Satisfaction with the intervention, a high degree of completion, and stability of the effects for at least 3 months after the intervention further underscore the potential of Qigong in the treatment of tinnitus.

**Tai Chi as an adjunct physical activity for adults aged 45years and older enrolled in phase III cardiac rehabilitation.** *Eur J Cardiovasc Nurs.* 2010 Nov 20. [Epub ahead of print] By Taylor-Piliae RE, Silva E, Sheremeta SP. At Robert Wood Johnson Foundation Nurse Faculty Scholar, College of Nursing, University of Arizona, Tucson, AZ, United States.

**BACKGROUND:** Cardiac rehabilitation improves physical, cognitive and psychosocial functioning, yet services are greatly underutilized with increasing patterns of attrition over time. Tai Chi has been suggested as a possible adjunct to cardiac rehabilitation exercise training. **AIM:** To describe differences in physical, cognitive and psychosocial functioning among adults  $\geq 45$ years old attending phase III cardiac rehabilitation, who have or have not self-selected Tai Chi exercise as an adjunct physical activity. **METHODS:** A cross-sectional design compared subjects attending group-based Wu style Tai Chi classes plus cardiac rehabilitation, with cardiac rehabilitation only. Subjects had a battery of physical and cognitive functioning tests administered to examine aerobic endurance, balance, strength, and flexibility, verbal retrieval/recall, attention, concentration and tracking. Subjects completed a health survey to ascertain cardiac event information, medical history, and psychosocial functioning (i.e. health-related quality of life, stress, depressive symptoms, social support, and Tai Chi self-efficacy). **RESULTS:** A total of 51 subjects (75%

married, 84% college-educated, 96% White/European-American) participated. Subjects were on average 70 ( $\pm 8$ ) years old and had attended cardiac rehabilitation for 45 ( $\pm 37$ ) months. Approximately 45% ( $n=23$ ) attended Tai Chi classes plus cardiac rehabilitation, while 55% ( $n=28$ ) attended cardiac rehabilitation only. Subjects attending Tai Chi plus cardiac rehabilitation had better balance, perceived physical health, and Tai Chi self-efficacy compared to those attending cardiac rehabilitation only ( $p \leq 0.03$ ). **CONCLUSION:** Tai Chi can be easily implemented in any community/cardiac rehabilitation facility, and may offer adults additional options after a cardiac event.

**Tai chi exercise for patients with chronic obstructive pulmonary disease: a pilot study.** *Respir Care*. 2010 Nov;55(11):1475-82. By Yeh GY, Roberts DH, Wayne PM, Davis RB, Quilty MT, Phillips RS. at Division for Research and Education in Complementary and Integrative Medical Therapies, Osher Research Center, Harvard Medical School, 401 Park Drive, Suite 22A, Boston, MA 02215, USA. gyeh@hms.harvard.edu

**OBJECTIVE:** To determine the feasibility of a randomized controlled trial of the effect of a tai chi program on quality of life and exercise capacity in patients with COPD. **METHODS:** We randomized 10 patients with moderate to severe COPD to 12 weeks of tai chi plus usual care ( $n = 5$ ) or usual care alone ( $n = 5$ ). The tai chi training consisted of a 1-hour class, twice weekly, that emphasized gentle movement, relaxation, meditation, and breathing techniques. Exploratory outcomes included disease-specific symptoms and quality-of-life, exercise capacity, pulmonary function tests, mood, and self-efficacy. We also conducted qualitative interviews to capture patient narratives regarding their experience with tai chi. **RESULTS:** The patients were willing to be randomized. Among 4 of the 5 patients in the intervention group, adherence to the study protocol was excellent. The cohort's baseline mean  $\pm$  SD age, percent-of-predicted FEV<sub>1</sub>, and ratio of FEV<sub>1</sub> to forced vital capacity were  $66 \pm 6$  y,  $50 \pm 12\%$ , and  $0.63 \pm 0.14$ , respectively. At 12 weeks there was significant improvement in Chronic Respiratory Questionnaire score among the tai chi participants ( $1.4 \pm 1.1$ ), compared to the usual-care group ( $-0.1 \pm 0.4$ ) ( $P = .03$ ). There were nonsignificant trends toward improvement in 6-min walk distance ( $55 \pm 47$  vs  $-13 \pm 64$  m,  $P = .09$ ), Center for Epidemiologic Studies Depression Scale ( $-9.0 \pm 9.1$  vs  $-2.8 \pm 4.3$ ,  $P = .20$ ), and University of California, San Diego Shortness of Breath score ( $-7.8 \pm 3.5$  vs  $-1.2 \pm 11$ ,  $P = .40$ ). There were no significant changes in either group's peak oxygen uptake.

**CONCLUSIONS:** A randomized controlled trial of tai chi is feasible in patients with moderate to severe COPD. Tai chi exercise as an adjunct to standard care warrants further investigation.

<http://www.rcjournal.com/contents/11.10/11.10.1475.pdf>

**Tai Chi exercise versus rehabilitation for the elderly with cerebral vascular disorder: a single-blinded randomized controlled trial.** *Psychogeriatrics*. 2010 Sep;10(3):160-6. By Wang W, Sawada M, Noriyama Y, Arita K, Ota T, Sadamatsu M, Kiyotou R, Hirai M, Kishimoto T. at Department of Psychiatry, Nara Medical University School of Medicine, Nara Akitsu-Kounoike Hospital, Akitsu-Kounoike, Japan.

**BACKGROUND:** Cerebral vascular disorder (CVD) might result in a quantifiable decrease in quality of life, which is determined not only by the neurological deficits but also by impairment of cognitive functions. There are few studies that report on the cognitive effect of Tai Chi exercise (Tai Chi) on the elderly with CVD. The purpose of the present study was to examine the cognitive effect of Tai Chi on the elderly with CVD using P300 measurement, in addition to the General Health Questionnaire (GHQ) and Pittsburgh Sleep Quality Index (PSQI). **METHODS:** A total of 34 patients with CVD were recruited from outpatient Akitsu-Kounoike Hospital and randomly assigned to receive Tai Chi ( $n= 17$ ) or rehabilitation ( $n= 17$ ) in group sessions once a week for 12 weeks. To examine the time courses of each score (P300 amplitude, P300 latency, GHQ score and PSQI score), repeated-measures analysis of variance was carried out with groups and time as factors. **RESULTS:** For the time courses of P300 amplitudes and latencies, there were no significant effects of interaction between group and time. However, significant time-by-group interactions were found for Sleep Quality ( $P= 0.006$ ), GHQ total score ( $P= 0.005$ ), anxiety/insomnia score ( $P= 0.034$ ), and severe depression score ( $P= 0.020$ ). **CONCLUSIONS:** Tai Chi might therefore be considered a useful non-pharmacological approach, along with rehabilitation, for the maintenance of cognitive function in the elderly with CVD and might be a more useful non-pharmacological approach for the improvement of sleep quality and depressive symptoms in the elderly with CVD than rehabilitation.

**Mindfulness practice leads to increases in regional brain gray matter density.** *Psychiatry Res*. 2010 Nov 9. [Epub ahead of print] by Hölzel BK, Carmody J, Vangel M, Congleton C, Yerramsetti SM, Gard T, Lazar SW. at Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA; and Bender Institute of Neuroimaging, Justus Liebig Universität Giessen, Germany.

Therapeutic interventions that incorporate training in mindfulness meditation have become increasingly popular, but to date little is known about neural mechanisms associated with these interventions. Mindfulness-Based Stress Reduction (MBSR), one of the most widely used mindfulness training programs, has been reported to produce positive effects on psychological well-being and to ameliorate symptoms of a number of disorders. Here, we report a controlled longitudinal study to investigate pre-post changes in brain gray matter concentration attributable to participation in an MBSR program. Anatomical magnetic resonance (MR) images from 16 healthy, meditation-naïve participants were obtained before and after they underwent the 8-week program. Changes in gray matter concentration were investigated using voxel-based morphometry, and compared with a waiting list control group of 17 individuals. Analyses in a priori regions of interest confirmed increases in gray matter concentration within the left hippocampus. Whole brain analyses identified increases in the posterior cingulate cortex, the temporo-parietal junction, and the cerebellum in the MBSR group compared with the controls. The results suggest that participation in MBSR is associated with changes in gray matter concentration in brain regions involved in learning and memory processes, emotion regulation, self-referential processing, and perspective taking.

**Meditation-specific prefrontal cortical activation during acem meditation: an fMRI study.** Percept Mot Skills. 2010 Aug;111(1):291-306. by Davanger S, Ellingsen O, Holen A, Hugdahl K. at Institute of Basic Medical Sciences, Centre for Molecular Biology and Neuroscience, University of Oslo, Norway. [svend.davanger@medisin.uio.no](mailto:svend.davanger@medisin.uio.no)

Some of the most popular meditation practices emphasize a relaxed focus of attention in which thoughts, images, sensations, and emotions may emerge and pass freely without actively controlling or pursuing them. Several recent studies show that meditation activates frontal brain areas associated with attention focusing and physical relaxation. The objective of the present study was to assess whether brain activation during relaxed focusing on a meditation sound could be distinguished from similar, concentrative control tasks. Brain activation was measured with functional magnetic resonance imaging (fMRI) in experienced practitioners of Acem meditation. Bilateral areas of the inferior frontal gyrus (BA47) were significantly more activated during repetition of a meditation sound than during concentrative meditation-like cognitive tasks. Meditation-specific brain activation did not habituate over time, but increased in strength with continuous meditation bouts. These observations suggest that meditation with a relaxed focus of attention may activate distinct areas of the prefrontal cortex, with implications for the understanding of neurobiological correlates of meditation.



[From the Master]

## Zhi 志 (Memory) - The Spirit of the Kidneys

By Master Zhongxian Wu

Ancient *Wu* 巫 (Chinese shamans) taught us that every part of the body has its own spirit residing within. In the traditional Chinese shamanic or Daoist spiritual cultivation, one of the key elements of practice is to call the spiritual body back to the physical body. In Chinese, we call the physical body *Xing* 形 and the spiritual body *Shen* 神. Through our Qigong practice or inner cultivation practice, we endeavor to reach the state of *Xing Shen He Yi* 形神合一 — the union of the physical body and spiritual body. You will maintain health, peace, and longevity if you can keep your spirit residing within your body. If the spiritual body remains in connection with its corresponding physical body, that part of the body will function well. When the spiritual body begins to separate from the physical body, we see dysfunction develop within that part of your body. If your spirit continually disconnects with your body, you become increasingly ill and uneasy. Death occurs when the physical body and spiritual body completely separate.

Within our five physical organ systems, each system has its own particular kind of spiritual body. The spiritual body, or energy, of the kidney system is *Zhi* 志. The Chinese character *Zhi* means thought, mind, intensive will, feeling, purpose, record, or memory. The *Zhi* energy is also related with the heart -- we can interpret the image of the Chinese character *Zhi* as “footprint in the heart.” *Zhi*, the spiritual energy of kidney, is the memory or footprint of your past life and the ancestral energy of human beings, which records who we are and where we come from. It is the reservoir of life energy. The spiritual name of kidney, *Yuying* 育嬰, literally means rear a baby, emphasizes that the kidney organ system is related to the root of our life.

According to Five Elements philosophy, the kidney belongs to the Water element and is associated with the northern direction. Through their direct observation of nature, ancient shamans understood that most of the surface of the Earth is composed of water. They understood that water has the special function of carrying the universal energy from the primordial cosmos. They also knew that life originated in water. Ancient Chinese shamans lived in the northern hemisphere, where the northern regions were covered with ice, and understood that the qualities of the frozen water parallels those of the prenatal stage of life. The ancient shamans saw that the spiritual energy of Water is equivalent to the spiritual energy of the Kidney system in the body.



When a person's *Zhi* energy decreases, a person will be quick to feel fear or shock; the function of the kidney will be affected and the person may have lower back pain, leg pain, tinnitus, and/or poor memory. If the *Zhi* separates from the kidneys entirely, the person will be in a critical condition, at risk of dying. People with strong *Zhi* energy fully integrated into their kidney systems will have good memories and with their strong life energy, will be able to accomplish many things.

To strengthen your kidney Qi 氣 and your *Zhi*, you can practice this Chinese shamanic Kidney Qigong Form:

*At 11pm every night, facing north and seated in meditation, light a candle in front of you. Briefly take in the candle light with your eyes, then close your eyes and imagine the candle light shining within your lower Dantian 丹田. Adjust your breathing to be slow, smooth, deep and even. Feel and see the light becoming brighter in your Dantian with each breath.*

*Next, with each inhale, visualize you are taking in universal Qi 炁 from the north through all the pores of your skin. Envision the Qi merging into your kidneys and chant the kidney's spiritual name, Yuying, with each exhale. Repeat this 36 times.*

**Master Zhongxian Wu** is the recognized master of multiple lineages of Yijing, Qigong, Taiji, and martial arts. He synthesizes wisdom and experience for beginning and advanced practitioners, as well as for patients seeking healing, in his unique and professionally designed courses and workshops. He is the author of *Seeking the Spirit of The Book Change*, *The Vital Breath of the Dao*, and *The 12 Chinese Animals — Create Harmony in Your Daily Life through Ancient Chinese Wisdom*. Please visit [www.masterwu.net](http://www.masterwu.net) for further details about his teachings.

[Spirituality of the Dao]

## Nurture Life, Discover Who You Are

By Christina J Barea, DP, MMQ

Listening deeply to the quiet sound of leaves unfolding at Spring I breathe in and embody the miracle manifested in each and every tree. Budding flowers drink the energy of the earth to create vibrant colors and seductive fragrances which capture the senses. Each tiny flower blossoms into a canvas for birds, bees and man to enjoy never compromising its beauty despite the struggle to break free from the tight skin of its seed or the pounding drops of rain or beating rays of the sun. How incredible is nature that over and over renews its splendor in all the colors of the rainbow, in so many shapes and sizes in perfect harmony with the totality of 3 Treasures. The flower does not question its purpose nor does it contend with the leaves, it does only what it can do- be a flower. And in the uncomplicated presence of this flowering tree the essence of *yangsheng* is simply stated- nurture your treasures and live life to your fullest potential. It seems to me that we should be like the flower and that *yangsheng* (*life nurturing*) is the way to becoming like the flower. Like the flower, we should be who we are, embracing our essence, honoring our roots yet living to our fullest potential; And that, like the flower, when we nurture life, all of it, we allow our true nature to blossom and manifest all the colors of the rainbow.



For most of mankind however, this simple instruction is defiantly evasive. Just as the sages have known for centuries, the dao of *wuwei* and ultimate internal peace is not easy to attain. So, how do we discover our essence, what does our “fullest potential” look like, and how do we apply the simple wisdom of *yangsheng*? To discover our own unique manifestation we must create deep awareness to all aspects of our being from jing to qi to shen. In this regard *yangsheng* means understanding how our body (including the energetic) is structured and how it works, and upon reaching this comprehension it means making choices that support the healthy evolution of your being rather than being caught in the trap of unaware drifting. Our problem is that, unlike the flower, we have the capacity to make choices bringing into our lives the thousands or millions of times more possibilities. Yet, unfortunately, the abundance of choices does not always imply a better life or better health.

The key to effectively practicing *yangsheng* and making informed choices is to understand what our true nature is. Daoist scripture teaches us that we are small beams of light emanating from a Divine source manifested into a human body, and so at our essence we are Divine beings having a human experience. The scriptures also teach us about the *wuxing* (*5 lights*) which escort the soul into this plane upon conception, are part of our Divine nature and which carry the virtues and emotions that are a deep part of our sensorial experiences. Scripture also teaches us that shen guides the qi which in turn guides the jing. Together, these basic tenets of Daoism provide profound insight into the importance of *yangsheng*. To practice “nurturing life” then becomes a deep practice in awareness, mindfulness and discipline for the purpose of discovering what truly lies in our essence and what we can accomplish when absolutely nothing lies in the way of us manifesting our Divine nature. This practice includes awareness on all levels of our being, from taking care of our physical body, to being mindful of our emotions, and even cultivating our spiritual path.

However, within the gift of life we are not automatically conferred the ability to do or be all things at the same time, the same way an orchid cannot be a daisy, and that despite our common root in divinity we are still unique in our own special way. Understanding our essence allows us to discover what we can truly manifest as effortlessly as *wuwei*. And as previously mentioned the availability of millions of choices only makes this deep internal awareness somewhat more challenging. And so the in the spirit of the taiji the practice of *yangsheng* is both a way of cultivating great health as well as a practice in self-discovery. Ultimately the greatest gift conferred in *yangsheng* is peace, harmony and the ability to radiate qi with the intense beauty of the flowers in spring and becoming as unique as the most precious flower.

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[Christina J Barea is a Daoist Priest of the Zheng Yi Pai (China) and a Medical Qigong Therapist. She dedicates her time to helping people find balance through Medical Qigong Therapy, Qigong & Tai Chi instruction and TCM related talks, workshops and courses. She is a member of the National Qigong Association and currently serves on the Board of Directors. Christina has just completed 2 books, the first a translation of Daoist Scripture and the second on qigong exercises. For more information please visit: <http://www.therisinglotus.com/>]

## [Topics in Research]

## Scientific Qi Exploration

### Part 13(b): Qigong and the Immune System. The Adaptive Immune System

Marty Eisen Ph. D.

#### 1. Adaptive Immunity

**Adaptive immunity** is also called **specific** or **acquired immunity**. It is activated when the innate or non-specific immune system can't efficiently destroy the foreign organism. Specific immunity is distinguished by its specificity for an invading organism and its ability to remember an encounter so that the second time the same invader is encountered a more rapid and intense response occurs. There are two types of specific immune responses; humoral and cellular.

Humoral immunity is mediated by lymphocytes, which derive from stem cells in the bone marrow. Thus, they are called B cells and only those that do not attack self are released. After maturation, these B cells produce antibodies (IgG, IgM, IgA, IgE), types of proteins described in Section 5, when they encounter an antigen (1, 2). They are important in combating acute bacterial infections.

Cellular immunity is mediated by lymphocytes which are processed in the thymus to become T cells. Only those cells, which do not attack self are released. The cellular immune system combats intracellular organisms such as TB, performs tumor surveillance, mediates transplant rejection, and fights fungal and viral infections. T cells also mediate the delayed type hypersensitivity reaction, like the skin test for TB. They are distinguished from other types of lymphocyte by the presence of special molecules on their cell surface called T cell receptors (TCR). TCR's are responsible for recognizing and binding to antigens.

#### 2. Activation of the Adaptive Immune System

Suppose some foreign invaders bypass the barriers of the innate immune system and penetrate a tissue of the body. Chemical danger signals are generated at the site of the infection. Such signals arise from cytokines released by tissue macrophages that have encountered bacteria in the tissue, complement products, and clotting system peptides. Another example is **N-formyl-methione** containing peptides released by bacteria. All bacteria start producing their cell proteins with the peptide N-formyl-methione. They clip off part of their protein and release N-formyl-methione. When a phagocyte, with a receptor for this peptide, binds to this molecule, it knows that there is a bacterial infection.

Some of these chemical danger signals stimulate endothelial cells of the vasculature near the infection site. This causes these cells to produce cell adhesion molecules which bind to molecules on the surface of the phagocytic cells causing them to adhere to the endothelium. Vasodilators produced at the infection site produce loosening of the junctions between endothelial cells. Then, the phagocytes squeeze between the endothelial cells, in a process called **diapedesis**, and so cross the endothelial barrier

The first cells to arrive are the neutrophils because they are most numerous of all the types of white blood cell, the most motile and also the first attracted by the chemical signals. The neutrophils send out chemical signals to attract other phagocytes for help. This results in monocytes leaving the blood to enter the tissue and becoming macrophages, which are the very efficient phagocytes. Other chemical signals in the tissues function to attract phagocytes to the infection site by **chemotaxis** (movement toward an increasing chemical gradient). Still other chemical signals activate the phagocytes to increase phagocytosis and intracellular killing of the invading organisms.

Phagocytic cells have receptors that specifically bind to **pathogen associated molecular patterns (PAMPs)** (1), such as: glucan (in cell walls of most bacteria), mannose, lipopolysaccharides (LPS) (a major component of outer membrane of gram negative bacteria). The receptors are called glucan receptor, mannose receptor, and the pair CD14/Toll like receptor (TLR4), respectively. **CD** stands for the **cluster of differentiation (cluster of designation)**. CD along with a number is a used to designate cell surface molecules present on white blood cells. **Toll like receptors** are another class of protein cell surface molecules in which individual members are distinguished by the letters TLR followed by a number, like TLR4.

German scientists, studying development of the fruit fly *Drosophila melanogaster*, named the Toll receptor when they discovered that a mutation in the Toll gene resulted in abnormal development. The embryos looked so strange that they exclaimed “toll”, which is German for “wow”. TLR1, TLR2 and TLR6 recognize components from gram-positive bacteria. TLR3, TLR4 and TLR9 recognize molecules from gram-negative bacteria. TLR5 recognizes **flagellin**, a constituent of bacterial flagella. TLR7 and TLR8 occur in **endosomes**, membrane bound compartment inside cells where material is sorted before it reaches the degradative lysosome, and recognize single-stranded RNA from viruses. TLR9 is also found in endosomes and acts as a receptor for molecules found in bacterial and viral DNA. TLR3 recognizes double-stranded RNA which is produced by replicating viruses. TLR3 is essential in inducing a protective effect against West Nile Virus by restricting its replication.

The recognition of a PAMP leads to the binding of the invader to the phagocytes receptor, which sends a signal to its nucleus that activates the production of chemical signals, such as, cytokines (1,2) and **chemokines**, proteins that cause other nearby immune system cells to follow a signal of increasing chemokine concentration towards the source of the chemokine. The attracted cells help kill the invaders directly or with the aid of the complement system’s alternate pathway (1), detailed in Section 5.

After attachment of a bacterium, the phagocyte begins to extend pseudopods around the bacterium. The pseudopods eventually surround the bacterium and engulf it in an enclosed container, called a **phagosome**. During phagocytosis the granules or lysosomes of the phagocyte fuse with the phagosome and empty their contents. The result is a bacterium engulfed in a **phagolysosome** which contains the contents of the granules or lysosomes. The bacteria is digested and the phagocyte breaks down protein (antigen) from the bacteria into short peptide chains. Neutrophils eject these antigens outside the cell, where they are carried to lymph nodes by the lymphatics. Macrophages, and other **Antigen Presenting Cells (APCs)**, display these antigens on their surface membrane attached to an MHC class II molecule (1,2). The macrophages then carry these antigens to lymph nodes and present these directly to B cells of the specific immune system. The free or carried antigens activate the specific immune system as described in the following sections. If the innate immune system stops the invaders, then the acquired immune system is not activated.

### 3. Activation of T Cells by Antigen Presenting Cells (APCs)

T cells cannot recognize, and therefore react to free antigen. The antigen must be presented to the T cells by APCs, like macrophages, dendritic cells, Langerhans cells, and certain B cells. The steps in the activation process will be described using macrophages.

Recall that the macrophage digests the bacteria, processes it and produces antigens. Then, special genes on the short arm of chromosome 6 are activated. The genetic material on the top part of these genes changes but the bottom part of the genes does not. This produces different types of **Messenger Ribonucleic Acids (mRNAs)**, which are transcribed into different proteins. The resulting peptide chains are MHC Class II (Major Histocompatibility Complex) molecules with constant tails but variable heads. When one of the antigens fits into the head of such a molecule, the MHC Class II molecule with the bound antigen is placed on the surface of the macrophage. Then the macrophage enters the network of lymph vessels and is carried via lymph flow to a draining lymph node. The lymph nodes are collection points in which APCs can interact with residing T cells. They do this by chemotaxis.

T cells are lymphocytes processed by the Thymus. Each T cell is programmed to react with only one unique antigen, by a **T Cell Receptor (TCR)** and is also MHC restricted, by a MHC Class II sensor, which is a CD4 surface molecule.

The macrophage wanders from T cell to T cell until it finds one that can react with the unique antigen that it carries. Then, the T cell binds to the macrophage both with its TCR and CD4 molecules. This results in the activation of a CD3 molecule in the T cell and so signals the nucleus to express an **IL1 (Interleukin 1) receptor (IL-1R)** on its surface. The macrophage releases IL1 molecules, which bind to the IL1 receptor, generating a signal to the nucleus of the T cell to express another molecule, CD28, on its surface in preparation for a second signal from the macrophage. This second signal is not expressed by released molecules, but by a molecular projection, **B7**, from the surface of the macrophage. When B7 binds with CD28, another signal is sent to the T cell’s nucleus. This activates two genes. The first gene causes the production of a protein IL2, which is excreted from the cell. Meanwhile, the activated second

gene promotes the production of another protein on the surface of the cell, which is an **IL2 receptor (IL-2R)**. The binding of the secreted IL2 molecules to the IL2 receptors sends another signal to the nucleus. This self stimulating signal activates the genes for mitosis. A clone of T cells, all reacting with the same antigen, is produced. This process is called **clonal selection and expansion**. Three different types of clones develop: **helper**, **cytotoxic or killer**, **regulatory** or **suppressor** and **memory T cells**.

There are a variety of helper T cells, which have the CD4 marker on their surface. T cells expressing CD4 are also known as **CD4<sup>+</sup> T cells**. The maturation of T helper (**TH** or **T<sub>h</sub>**) cells depends on the cytokines they are exposed to. IL-12 causes TH1 differentiation and blocks TH2 cell production, while IL-4 causes TH2 differentiation and antagonizes TH1 development. IL-18 also induces TH1 differentiation. TH1 cells stimulate macrophages to kill the bacteria they have engulfed and recruit other leukocytes to the site producing inflammation. TH1 cells help the CD8 pre-killer cells to differentiate into killer T cells. TH2 cells help B cells differentiate into plasma cells, which secrete antibodies as described in Section 4.

**Human immunodeficiency virus (HIV)** is a lentivirus, a member of the retrovirus family. HIV infects primarily vital cells in the human immune system, such as CD4 T cells, macrophages, and dendritic cells. HIV infection leads to low levels of CD4<sup>+</sup> T cells by directly viral killing of infected cells; increasing rates of apoptosis in infected cells; and killing of infected CD4<sup>+</sup> T cells by CD8 cytotoxic lymphocytes that recognize infected cells. When CD4<sup>+</sup> T cell numbers decline below a critical level of 200 cells per  $\mu\text{L}$ , cell-mediated immunity is lost, and the body becomes susceptible to opportunistic infections. Most untreated people infected with HIV eventually develop this **acquired immunodeficiency syndrome (AIDS)**.

**Cytotoxic or killer T cells (CD8<sup>+</sup>)** do their work by releasing **lymphotoxins**, which cause cell lysis. They kill target cells bearing appropriate antigen within the groove of an MHC class I molecule that is identical to that of the T cell. Killer T cells are the main defense against intracellular pathogens, like viruses or certain bacteria which require the inside of cells in order to live, and tumors..

**Memory T cells** are programmed to recognize and respond to a pathogen once it has invaded and been repelled. These cells have a prolonged life span and can thereby "remember" specific intruders. The second time an intruder tries to invade the body, T memory cells help the immune system to activate much faster. The invaders are frequently wiped out before any symptoms are felt. This ability to remember and learn is exploited in vaccinations and booster doses.

Suppressor T (**TS** or **T<sub>s</sub>**) cells inhibit the production of killer T cells once they are unneeded, lest they cause more damage than necessary. TS cells actively suppress activation of the immune system and prevent autoimmune disease. The critical role regulatory T cells play within the immune system is evidenced by the severe autoimmune syndrome that results from a genetic deficiency in regulatory T cells.

#### 4. Activation of B Cells and Production of Antibodies

B cells are lymphocytes that mature in the bone marrow. Every B cell is genetically programmed to produce a unique antibody (or immunoglobulin) and react with a specific antigen by displaying the antibody on its surface as a **B cell receptor (BCR)** for the antigen. This receptor is a surface immunoglobulin belonging to the family IgM or IgD, described in Section 5. B cells react to a great variety of antigens like peptides, carbohydrates, lipids and DNA. Same antigen is also occurring in the lymph node. When enough T cells have been produced, another T cell gene is activated, which produces another molecule, IL4, which is excreted from the T cells. IL4 is a B cell growth factor. When it binds with the IL-4R, it signals the B cell's nucleus to induce mitosis and a clone of B cells with the same BCRs is produced. When enough B cells are produced, another B cell surface receptor IL-5R is expressed. Meanwhile, the clone of helper T cells (TH2), is generating and releasing an IL5 molecule, which is a B cell differentiation factor. When IL5 binds with the IL-5R, it causes the B cells to convert to **plasma cells**. These plasma cells produce their characteristic antibodies.

The B cells in the lymph node interact with free antigens. When the unique matching antigen is encountered, the antigen binds with the BCR. This activates another molecule CD79 on the B cell's surface, which signals the nucleus to produce a trans-membrane protein receptor (IL-4R) for IL4. Recall that the clonal expansion of T cells with the

Some clones of B cells form **B memory cells** that remember the same pathogen for faster antibody production in

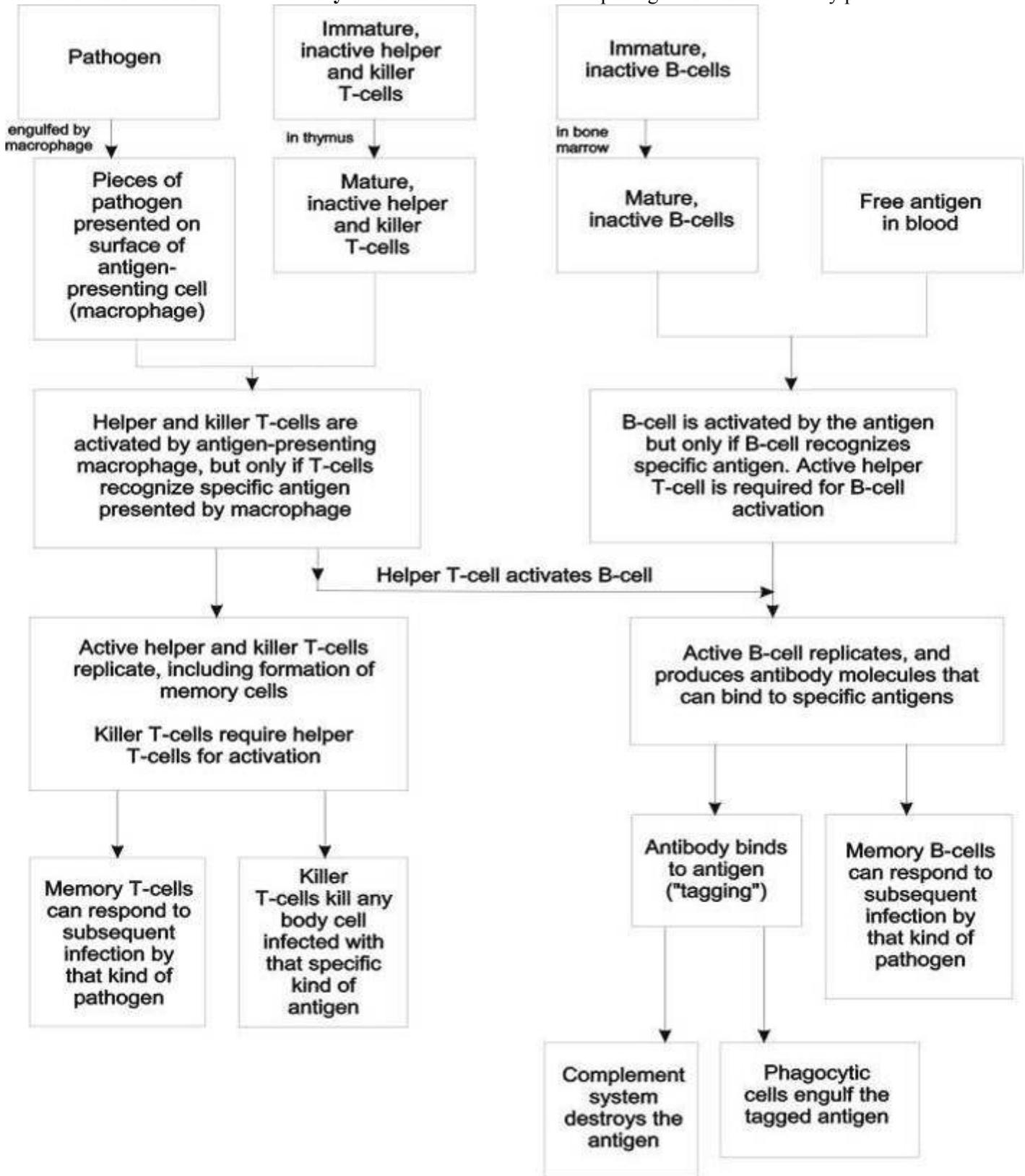


Figure 1. Summary of Acquired Immune Response

future infections. T memory cells have a longer lifespan than B memory cells. Recall that the clonal expansion of T cells with the same antigen is also occurring in the lymph node. When enough T cells have been produced, another T

cell gene is activated, which produces another molecule, IL4, which is excreted from the T cells. IL4 is a B cell growth factor. When it binds with the IL-4R, it signals the B cell's nucleus to induce mitosis and a clone of B cells with the same BCRs is produced. When enough B cells are produced, another B cell surface receptor IL-5R is expressed. Meanwhile, the clone of helper T cells (TH2), is generating and releasing an IL5 molecule, which is a B cell differentiation factor. When IL5 binds with the IL-5R, it causes the B cells to convert to **plasma cells**. These plasma cells produce their characteristic antibodies.

The free antibodies pass through the bloodstream and so reach the foreign invaders. They bind with foreign cells antigens and are activated. Phagocytes, such as neutrophils and macrophages, have receptors for the activated antibodies, which bind the bacteria very tightly, so that they cannot escape. This facilitates phagocytosis. These antibodies act as **opsonins**, an antibody in blood serum that causes bacteria or other foreign cells to become more susceptible to the action of phagocytes. Another result is the activation of complement which can kill bacteria as detailed in Section 6.

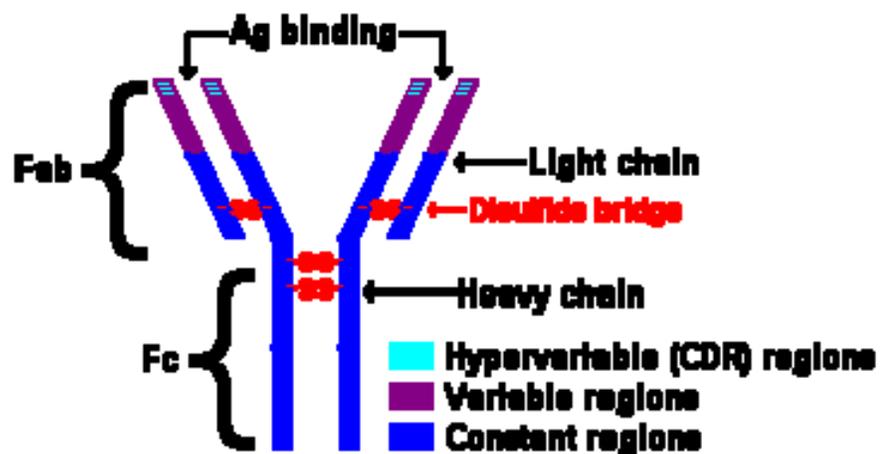
Some invaders cannot be completely eliminated. The immune system builds a wall around them with adhering phagocytes, particularly macrophages. The wall is called a **granuloma**. The imprisoned organisms may survive indefinitely. However, if the immune system is weakened and the walls crumble, the invaders may start to multiply and cause symptoms, even years later. Granulomas are seen in a wide variety of diseases, both infectious (e.g. tuberculosis, leprosy, cat-scratch disease) and non-infectious (Crohn's disease, pulmonary rheumatoid nodules and aspiration of food and other particulate material into the lung).

A summary of the adaptive immune response appears in Figure 1 (2, 3, 4).

## 5. Structure and Types of Antibodies or Immunoglobulins (Igs)

Antibodies are soluble proteins secreted by clones of primed B cells and which are the *gamma globulin* part of the blood proteins. Antibodies are composed of four polypeptide chains as shown in Figure 2. There are two "light" chains (lambda or kappa), and two "heavy" chains (alpha, delta, gamma, epsilon or mu). The type of heavy chain determines the five antibodies' isotypes (IgA, IgD, IgG, IgE, IgM). The percentage composition of gamma globulin is IgG-76%, IgA-15%, IgM-8%, IgD-1%, and IgE-0.002%. IgM is the major antibody produced in the primary immune response, while IgG dominates in the secondary immune responses. IgM is physically much larger than the other antibodies. IgG is the only antibody that can cross the placental barrier to the fetus and confers the 3 to 6 month immune protection of newborns. IgE is responsible for autoimmune responses, such as: allergies and diseases like arthritis, multiple sclerosis, and systemic lupus erythematosus. The secondary response is faster and the produced Ab, mainly IgG, are more effective.

The light chains contain 220 amino acid residues while heavy chains are composed of 440-550 amino acids. Each chain has "constant" and "variable" regions as shown in Figure 2. Variable regions are contained within the amino (NH<sub>2</sub>) terminal end of the polypeptide chain (amino acids 1-110). When comparing one antibody to another, these amino acid sequences are quite distinct. Within the same isotype, constant regions, composed of amino acids 111-220 (or 440-550), are fairly uniform, from one antibody to another. "Hypervariable" regions, or "**Complementarity Determining Regions**" (CDRs) are found within the variable regions of both the heavy and light chains. These regions serve to recognize and bind specifically to antigen. The four polypeptide chains are held together by covalent disulfide (-S-S-) bonds.



**Fig 2. Basic Immunoglobulin Structure**

Antibody molecules are very flexible. This freedom of movement allows it to more easily conform to an antigen. The upper part or **Fab** (antigen binding) portion of the antibody molecule (physically and not necessarily chemically)

attaches to epitopes on the antigen (1). The **Fc** region is crystallizable and is the end to which immune cells can attach.

Known methods that antibodies inactivate antigens are: using complement as explained in Section 6, **neutralization** (binding to specific sites to prevent attachment), **agglutination** (suspension into clumps), and **precipitation** (causing insolubility and settling out of solution). Some properties of antibodies and their qualitative changes in some diseases appear in Table 1.

**Table 1 Properties of Immunoglobulins and Effects of Diseases**

<b>Ig</b>	<b>Properties</b>	<b>Increase in</b>	<b>Decrease in</b>
IgG	Major Ig in serum and extra vascular spaces. Crosses the placenta & fetus until infant makes own. Fixes complement; binds to PMNs, monocytes & macrophages to act as opsonin. Protects against fungi, bacteria, viruses & other toxic substances.	Chronic granulomatous infections, infections of all types, hyperimmunization, liver disease, severe malnutrition, dysproteinemia, diseases associated with hypersensitivity granulomas, dermatologic disorders, and IgG myeloma; rheumatoid arthritis	Agammaglobulinemia, lymphoid aplasia, selective IgG, IgA deficiency, IgA myeloma, Bence Jones proteinemia; chronic lymphoblastic leukemia
IgM	First Ig to be made by the fetus. First Ig made by B cells when it is first stimulated by antigen; good agglutinating Ig. Normally, it is present in the bloodstream but not in the tissues.	<b>Adult:</b> Waldenström's macroglobulinemia, trypanosomiasis, actinomycosis, Carrion's disease (bartonellosis), malaria, infectious mononucleosis, lupus erythematosus, rheumatoid arthritis; ysmaglobulinemia (certain cases) <b>Note:</b> In the newborn, a level of IgM above 20 ng./dl is an indication of <i>in utero</i> stimulation of the immune system and stimulation by the rubella virus, the cytomegalovirus, syphilis, or toxoplasmosis.	Agammaglobulinemia, certain lymphoproliferative disorders, lymphoid aplasia, IgG and IgA myeloma, dysgammaglobulinemia; chronic lymphoblastic leukemia
IgA	Major class of Ig in secretions - tears, saliva, colostrum, mucus & so is important in local (mucosal) immunity; normally it does not fix complement, unless aggregated; binds to some cells - PMN's, lymphocytes. It is in colostrum	Wiskott-Aldrich syndrome, cirrhosis of the liver (most cases), certain stages of collagen and other autoimmune disorders such as rheumatoid arthritis and lupus erythematosus, chronic infections not based on immunologic deficiencies; IgA myeloma	Hereditary ataxia telangiectasia, immunologic deficiency states (e.g., dysgammaglobulinemia, congenital and acquired agammaglobulinemia, and hypogammaglobulinemia), malabsorption syndromes, lymphoid aplasia, IgG myeloma, acute lymphoblastic leukemia, chronic lymphoblastic leukemia
IgD	It is in low levels in serum; its role in serum uncertain, it is primarily found on B cell surfaces where it functions as a receptor for antigen; it doesn't bind complement	Chronic infections, IgD myelomas	
IgE	Involved in allergic reactions; binds to basophils & mast cells, IgE is involved in allergic reactions. Binding of the allergen to the IgE on the cells results in the release of pharmacological products- leading to allergic symptoms; serum IgE levels rise in parasitic diseases, measuring IgE levels is helpful in diagnosing parasitic infections. Eosinophils have Fc receptors for IgE & binding of eosinophils to IgE-coated helminths	Atopic skin diseases such as eczema, hay fever, asthma, anaphylactic shock; IgE-myeloma	Congenital agammaglobulinemia, hypogammaglobulinemia due to faulty metabolism or synthesis of immunoglobulins

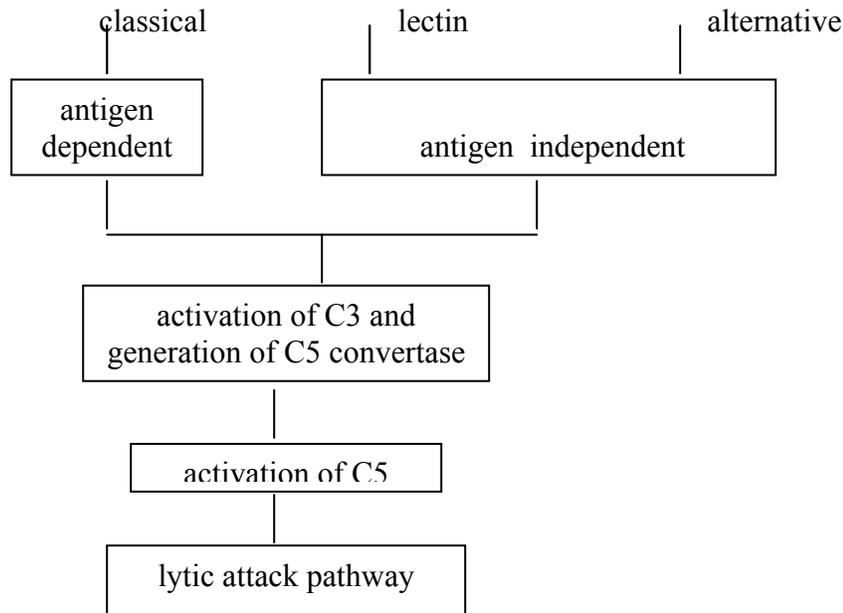
	results in killing of the parasite; it does not fix complement		
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### 6. Complement System

The complement system is a biochemical sequence of reactions that complement, the ability of antibodies to destroy pathogens. It is part of the innate immune system, but it can also be activated by the adaptive immune system.

The complement system consists of about 30 proteins, comprising approximately 5% of the globulin portion of the blood. They are designated by a letter, such as, C, and sometimes a number or a number and a letter or letters (e.g. C2a). These proteins are mainly synthesized by the liver, but also by macrophages and some B cells. They normally circulate as inactive precursors. When stimulated by one of several triggers three biochemical pathways are activated: the **classical complement pathway**, the **mannose-binding lectin complement pathway**, and the **alternative pathway** (See Fig. 3.). They all result in the lysis or destruction of the foreign cell’s membrane, by their common ending pathway, the **lytic attack pathway**. However, the classical pathway is not activated immediately. It takes about seven to fourteen days to produce sufficient antibodies. Thus, the other two pathways are essential for an instantaneous reaction to a foreign invasion of the body.

The first part of each pathway up to the generation of C5 convertase will be described and then the final lytic attack pathway. The classical and lectin pathways probably developed from the more primitive alternate pathway.



**Figure 3 Pathways of the Complement System**

The following definitions will be used in describing the pathways. **C activation** is the alteration of a C protein so that it reacts with the next component. **C inactivation** is the loss of activity of an earlier C component, for example, hemolysis. **Convertase/esterase** is an altered C protein which acts as a proteolytic enzyme for another C component.

#### (a) The first part of the classical pathway

The proteins involved in this pathway are: C1, composed of three different proteins C1q, C1r and C1s, C2, C3, C4, C5, C6, C7, C8, and C9.

1. After IgM or IgG binds to an antigen, the Fc portions of these molecules are activated, enabling the binding of the C1 complement. C1 binding does not usually occur to antibodies that have not been bound to an antigen. The binding of C1 to the antibody is via C1q and C1q must cross link at least two antibody molecules before it is firmly fixed.
2. C1q forms a complex with C1r which activates C1s to bind to C1r. Ca ion is required to stabilize CqCrCs.

3. C4 binds to membrane and the activated C1s cleaves C4 into two components C4a and C4b. The larger C4b fragment binds to the membrane and the C4a fragment diffuses away. Once C4b is bound, it binds C2 in the presence of Mg ions.
4. Activated C1s cleaves C4b-bound C2 into C2a and C2b. The larger peptide C2a binds to the membrane in association with C4b, and C2b is released.
5. The resulting C4bC2a complex is a C3 convertase and cleaves C3 into C3a and C3b. The larger fragment C3b binds to the membrane in association with C4b and C2a, and C3a diffuses away. The resulting C4bC2aC3b is a C5 convertase.

If the classical pathway were not regulated there would be continued production of C2b, C3a, and C4a. Table 2 summarizes the ways in which the classical pathway is regulated.

**Table 2 Regulation of the Classical Pathway**

Component	Regulation
All	<b>C1-inhibitor (C1-INH, C1 esterase inhibitor)</b> ; dissociates C1r and C1s from C1q
C3a	<b>C3a-INA; Carboxypeptidase B</b> ; inactivates C3a
C3b	Factor H facilitates the degradation of C3b by Factor I
C4a	<b>C3 inactivator (C3-INA)</b>
C4b	<b>C4 binding protein(C4-BP)</b> facilitates degradation of C4b by Factor I; C4-BP also prevents association of C2a with C4b thus blocking the formation of C3 convertase

The importance of C1-INH in regulating the classical pathway is that C1-INH deficiencies are associated with the development of hereditary angioedema.

#### (b) First part of the lectin pathway

The proteins involved in this pathway are: **Mannose-binding lectin (MBL)** and **MBA** associated **serine proteases (MASP-1, Masp-2)**, C4, C2, and C3. Serine proteases or serine endopeptidases are proteases (enzymes that cut peptide bonds in proteins) in which one of the amino acids in the active site of the enzyme is serine.

1. **MBL** recognizes carbohydrate patterns (mannose and fructose residues), found on the surface of a large number of pathogens, including bacteria, viruses, protozoa and fungi. The binding of **MBL** to a pathogen activates the lectin pathway and results in the binding of **MASP-1** followed by the binding of **MASP-2**. MASP-1 and MASP-2 are analogous to C1r and C1s, respectively and MBL is analogous to C1q.
2. The MBL/MASP-1/MASP-2 molecular complex (denoted MASP) binds C4 cleaving it into C4a and C4b. The C4b fragment binds to the membrane and the C4a fragment diffuses away. C4b binds C2
3. Activated MASP also cleaves C2 into C2a and C2b. C2a binds to the membrane in association with C4b and C2b is released.
4. The resulting C4bC2a complex is a C3 convertase, which cleaves C3 into C3a and C3b. C3b binds to the membrane in association with C4b and C2a and C3a diffuses away. The resulting C4bC2aC3b is a C5 convertase.

#### (c) First part of the alternative pathway

The proteins involved in this pathway are: **Factors B, D, H and I**; C3, and **Properdin (P)**. The alternative pathway provides a means of non-specific defense against infection without antibodies. Hence, it provides a first line of defense against a number of infectious agents.

1. The first step in its activation is the production of C3i by a low level of spontaneous hydrolysis of C3 in serum.

2. Complement **Factor B** binds to C3i which enables complement **Factor D** to cleave Factor B into Bb and release Ba. This step requires Mg ions.
3. Although the C3iBb complex has a short half-life, it acts as a C3 convertase and cleaves C3 into C3a and C3b.
4. Once C3b is formed, Factor B will bind to it becoming susceptible to cleavage by Factor D. The resulting C3bBb complex is a C3 convertase that will continue to generate more C3b. It is stabilized by the globular complement protein **P** complexing with C3b, but not on autologous membranes.
5. Some of the C3b, generated by the stabilized C3 convertase on the cell surface, associates with the C3bBb complex and forms a stable C3bBbC3b complex. This is the C5 convertase of the alternate pathway.

If this process described above was allowed to continue unconstrained, all C3 in the serum would be depleted and so it is normally controlled. However, patients with genetic deficiencies of Factor H or I, which play a role in the control process, have a C3 deficiency and increased susceptibility to infections by viruses, bacteria and parasites.

### Control of C3 depletion

The depletion of C3 is controlled by either blocking the formation of C3 convertase, dissociating C3 convertase, or by enzymatically digesting C3b. The details follow. When the produced C3b binds to host (autologous) membranes, it interacts with **decay accelerating factor (DAF)**, which blocks the binding of Factor B with C3b. DAF is not present in bacterial or other pathogen's cell walls. This prevents the formation of additional C3 convertase. DAF also accelerates the dissociation of Bb from C3b in C3 convertase that has already formed, thus halting the production of additional C3b. s C3b binds to **complement receptor 1 (CR1)**. C3b is inactivated by enzymatic degradation by Factor I. If some of this inactivated C3b is present in the microenvironment, it will not be able to bind to Factor B. Finally, Factor H facilitates the enzymatic degradation of C3b by Factor I. Factor I is still effective even if no Factor H is present.

### (d) Lytic attack pathway

1. C5 convertase from the classical (C4b2a3b), lectin (C4b2a3b) or alternative (C3bBb3b) pathway cleaves C5 into C5a and C5b. C5a remains in the fluid phase and the C5b is membrane bound.
2. C5b rapidly associates with C6 and C6 binds C7 and the C5bC6C7 complex inserts into the membrane. Subsequently C8 binds, followed by multiple C9 binding.
3. The C9 molecules form a pore in the membrane through which the cellular contents leak and lysis occurs. Lysis is not an enzymatic process; it is thought to be due to physical damage to the membrane. The complex consisting of C5bC6C7C8C9 is referred to as the **membrane attack complex (MAC)**.

Gram-negative bacteria have structurally weaker membranes than Gram-positive bacteria and so are more susceptible to MAC. The genus *Neisseria* contains two important human Gram-negative pathogens, *N. gonorrhoeae* and *N. meningitidis*. Deficiency in MAC results in greater susceptibility to gonorrhea, and meningococcal meningitis.

### (e) Properties of complement activation pathway products

The activated components of complement contribute to resistance, and inflammation and anaphylaxis as indicated in Table 3.

**Table 3 Biological Effects of Complement Activation Products**

Product	Effect	Regulation
C4a	<b>Anaphalotoxin</b> ; like <b>C3a</b> , but not as powerful as C3a	C3-INA
C4b	<b>Opsonin</b> . Activates phagocytes	C4-BP, Factor I
C2b	<b>Prokinin</b> cleaved by plasmin & yields kinin. Result is edema	C1-INH
C3a	Activates basophils & mast cells to degranulate leading to contraction of smooth muscles & increased vascular permeability; can result in <b>anaphylaxis</b> .	C3-INA (carboxy-peptidase 3)
C3b	Activates phagocytic cells and <b>opsonin</b>	FactorH, Factor I
C5a	Potent anaphylotoxin Chemotactic factor for neutrophils; stimulates respiratory burst in them. Activates monocytes to produce inflammatory cytokines. Activates mast cells to degranulate leading	C3-INA (carboxy-peptidase 3)

	to contraction of smooth muscles & increased vascular permeability.	
C5b67	Can dissociate from the membrane & enter the fluid phase & bind to other nearby cells, leading to their lysis	Protein S (vitronectin). Binds Cb67 to stop binding to other cells

An additional function of complement is the removal of immune complexes. Immune complexes are clusters of interlocking antigens and antibodies. Under normal conditions soluble immune complexes bind C3b and C3b binds to CR1 receptors on red cells. They are rapidly removed from the bloodstream by macrophages in the spleen and Kupffer cells in the liver. Immune complexes can also activate the alternative pathway. The immunoglobulin concentration required for such activation is relatively high

In some circumstances, immune complexes continue to circulate. Eventually they become trapped in the tissues of the kidneys, lung, skin, joints, or blood vessels. Their final disposition probably depends on the nature of the antigen, the class of antibody, and the size of the complex. There they set off reactions that lead to inflammation and tissue damage.

For example, if IgA complexes are not removed Berger’s disease and Henoch-Schonlein purpura (HSP) may result.

IgA nephropathy (Berger’s disease) occurs when an IgA complexes lodge in your kidneys. This hampers your kidneys' ability to filter waste, excess water and electrolytes from your blood. This can lead to blood and protein in the urine, high blood pressure, and swollen hands and feet. Usually Berger’s disease progresses slowly. Some people eventually achieve complete remission, while others develop end-stage kidney failure.

HSP is a systemic inflammation of blood vessels resulting from the deposition of IgA immune complexes. this inflammation causes bleeding in the small blood vessels (capillaries) in your skin, joints, intestines and kidneys. The main symptom is a purplish rash, typically on the lower legs and buttocks. HSP often causes abdominal pain and aching joints, and in some people, kidney problems. It usually resolves within several weeks and requires no treatment apart from symptom control, but may relapse in a third of the cases and cause irreversible kidney damage in about one in a hundred cases.

**7. Some Diseases of Deficiency of Complement**

Tables 4, 5 and 6 give some diseases caused by deficiencies of complement in the three pathways.

**Table 4 Complement deficiency and Disease in the Classical Pathway**

Complement Deficiency	Mechanism	Disease
C1INH	Overproduction of C2b	Hereditary angioedema
C1, C2, C4	Opsonization of immune complexes helps keep them soluble. Deficiency results in increased precipitation in tissues and inflammation	Predisposition to <b>SLE</b> (systemic lupus erythematosus)

**Table 5 Complement deficiency and Disease in the Lectin Pathway**

Complement Deficiency	Mechanism	Disease
MBL	Can’t initiate lectin pathway	Susceptibility to bacterial infections in infants or immunosuppressed

**Table 6 Complement deficiency and Disease in the Alternative Pathway**

Complement Deficiency	Mechanism	Disease
Factors B or D	Insufficient opsonization of bacteria	Susceptibility to pyogenic (pus-forming) bacterial infections
C3	Insufficient opsonization and inability to utilize the membrane attack	Susceptibility to bacterial infections

	pathway	
C5, C6, C7 C8, and C9	Inability to attack the outer membrane of Gram-negative bacteria	Susceptibility to Gram-negative infections
Properdin (X-linked)	Lack of opsonization of bacteria	Susceptibility meningococcal meningitis
Factors H or I	Uncontrolled activation of C3 leading to depletion of C3	C3 deficiency and susceptibility to bacterial infections

Why aren't white and red blood cells or platelets damaged as they pass through a region in which complement has been activated? All of these cells are derived from a common stem cell which has a **phosphatidylinositol glycan anchor biosynthesis, class A (PIGA)** gene. The *PIGA* gene provides instructions for making a protein called phosphatidylinositol glycan class A. This protein takes part in a series of steps that produce a molecule called **Glycosylphosphatidylinositol (GPI anchor)** which serves to anchor proteins to the cell's surface. The protein that is anchored is CD55, called the **decay accelerating factor (DAF)**. The classical pathway is controlled by membrane-bound DAF by its ability to bind the C3 convertase C4b2a. The alternative pathway is controlled by DAF binding to C3 convertase, C3bBb. By binding and dissociating the C3 convertases in both paths, C3b peptides can no longer be produced to bind to the surface of the cells. DAF can also bind and dissociate C5 convertases on the surface of cells, which stops the formational MAC. Therefore, the cells protected by DAF are not engulfed by phagocytic cells or lysed by membrane attack complexes.

Acquired mutations in the *PIGA* gene lead to deficient GPI anchors and so DAF cannot anchor to blood cells. This results in the destruction of blood cells and hemolytic anemia, thrombosis, and red urea, because of hemoglobin in the urine. This disease is called **paroxysmal nocturnal hemoglobinuria (PNH)** or **Marchiafava-Micheli syndrome**.

[Dr. Eisen is a retired scientist, who constructed mathematical models in medicine. He has studied and taught Judo, Shotokan Karate, Aikido, Qigong, Praying Mantis Kung Fu, and Tai Chi in different places. He took correspondence courses in Chinese herbology and studied other branches of Chinese medicine with a traditional Chinese medical doctor. He was the Director of Education of the Chinese Medicine and Acupuncture Institute in Upper Darby, PA. You can get more information about Dr. Eisen from <http://home.comcast.net/~carolezak>]

## References

1. Eisen, M. Part 13(a): Qigong and the Immune System. The Innate Immune System. Qi Dao, Sept/Oct., p. 20-27, 2010.
2. Male, D. et al. Immunology. Ed. 7, Elsevier Health Sciences, 2006.
3. Mayer, G. Immunology at <http://pathmicro.med.sc.edu/book/immunol-sta.htm>.
4. Dr. Najeeb's Channel at <http://www.youtube.com/user/DoctorNajeeb>. See Intro to Immunology and Complement System.



[A Comedy Moment]

## Zen Humor

[http://www.enlightened-spirituality.org/Zen\\_Humor.html](http://www.enlightened-spirituality.org/Zen_Humor.html)



### CLASSIC HUMOR FROM THE CH'AN / ZEN BUDDHIST TRADITION

Compiled by Timothy Conway

#### PURE NOTHING

The first Patriarch of this "meditation" school of Buddhism (Chinese: *Ch'an*; Japanese: *Zen*, from the Indian Sanskrit word *Dhyana*), was Bodhidharma. He came from southern India to southern China in 527 CE and soon visited Emperor Wu-ti, founder of the Liang dynasty at Nanking and one of Buddhism's greatest all-time patrons in China. Emperor Wu asked Bodhidharma about the highest meaning of noble Truth, and Bodhidharma replied, "Vast emptiness, there is no noble Truth." "Who, then, is standing before me?" "I don't know," said Bodhidharma. Emperor Wu then asked the enigmatic Indian sage how much karmic merit he, the emperor, had accumulated by building monasteries, ordaining monks, sponsoring translations and copies of scriptures and making Buddhist art-images. Bodhidharma was quite blunt: "No merit whatever!" And he left the region.

#### SHOW ME YOUR EGO-MIND

One of the most famous legends spun about Bodhidharma is that the seeker Hui-k'o patiently stood deep in the nocturnal snow outside the old master's cave, yearning for instruction. He finally hacked off his own left forearm and presented it as a demonstration of his sincere aspiration for complete enlightenment. (In Tao-hsüan's earlier account, wandering bandits cut off his arm.) Bodhidharma told Hui-k'o: "This enlightenment is not to be sought through another." Hui-k'o begged to have his agitated self or mind pacified. The sage retorted, "Show me your self and I will pacify it." Hui-k'o said "I've sought it many years but can't get hold of it." Bodhidharma then declared: "There! It is pacified once and for all." Upon hearing this, suddenly Hui-k'o completely awakened to his transcendent True Nature before/beyond the ego-self. He was designated the second Patriarch of Ch'an Buddhism.

#### PERFECTION

The third Chinese Ch'an Patriarch, Seng-t'san (d.606) wrote: "One in all, all in one—if only this is realized, no more worry about your not being 'perfect!'"

#### THE WISE MAN

The fourth Chinese Ch'an Patriarch, Tao-hsin (580-651), stated: "The wise man does nothing, the fool ties himself up."

#### PRAYER FLAG

Some monks were sitting quietly in the garden of a Buddhist monastery on a calm, beautiful day. The prayer flag on the roof started fluttering and flapping in a breeze. A young monk observed: "Flag is flapping." Another monk said: "*Wind* is flapping the flag." The third monk, the great sixth Patriarch Hui-neng, declared: "It is your *minds* that are flapping." Centuries later another monk, Wu-men Hui-k'ai (1183-1260), commented on this episode: "Flag, wind, minds flapping. Several *mouths* were flapping!"

#### THE RIVER

Two Zen monks, Tanzan and Ekido, traveling on pilgrimage, came to a muddy river crossing. There they saw a lovely young woman dressed in her kimono and finery, obviously not knowing how to cross the river without ruining her clothes. Without further ado, Tanzan graciously picked her up, held her close to him, and carried her across the muddy river, placing her onto the dry ground. Then he and Ekido continued on their way. Hours later they found themselves at a lodging temple. And here Ekido could no longer restrain himself and gushed forth his complaints: "Surely, it is against the rules what you did back there.... Touching a woman is simply not allowed.... How could you have done that? ... And to have such close contact with her! ... This is a violation of all monastic protocol..." Thus he went on with his verbiage. Tanzan listened patiently to the accusations. Finally, during a pause, he said, "Look, I set that girl down back at the crossing. Are you still carrying her?"

(Based on an autobiographical story by Japanese master Tanzan, 1819-1892)

[Illuminating the Dao 悟道]

## Wellness Through the Power of Material Nature and Original Nature

by Michelle Wood

When you think about wellness through the power of material nature, you might think about herbs or herbal medicine. Perhaps you also think about physical exercise like walking and hiking, about eating well, getting enough rest, and generally taking good care of yourself. These are all good areas to attend to and certainly contribute to wellness.

Contemplation of wellness through original nature perhaps evokes images of doing taiji, qigong, or yoga, enjoying breathing sessions, or meditation.

The unfortunate part of the picture is that you seldom put the two together. Furthermore, a very large aspect of material nature is entirely lacking or does not get much attention. That aspect is getting out into material nature; getting away from the hustle and bustle of civilization and reconnecting with the soil and the sky.

This is important, so I want to expand on the connection with material nature a bit before coming back to the combination of original and material nature.

Many people today work hard and play hard, and spend a lot of time rushing back and forth between the two. Lives are so busy that not many of you make time, or even see the benefit of connecting with unspoiled nature (wilderness) in a meaningful way, or it's too big a chore to get far enough out of the city or the suburb, or the length of travel time would so limit the time you could spend in wilderness, that it seems to be more trouble than it's worth. Perhaps it's not even possible for you to get anywhere near a wilderness area.

It's really a very important part of whole or holistic wellness. This was pointed out to me just last night as I walked to the home of a friend. It was a lovely night, chilly but clear, the stars were out merrily dotting the sky, and I walked along the side of the road past a hospital zone and residential area. It was nice to be out in the fresh air, except every time a car or truck drove by, I could literally taste the acrid exhaust fumes! It was a real spoiler to what otherwise was a pleasant evening walk.

For all intents and purposes, I was out in nature, but it was not the healthful sort where it served to rejuvenate me, body and soul. I could have gotten that only in an area away from the traffic and fumes.

Let's take it a step further now, say you do make the time and spend the effort to get out into the fresh air, beneath the big sky, with nothing between you and Mother Earth. (You remembered to take off your shoes and socks, right? Great!) You breathe deeply of the fresh, clean air, feel the warmth of the sunshine on your face and toes, bask in the primal beauty.

Let's take it one more step further: Once you are out there in nature, do you observe mindfully, contemplate deeply, connect naturally and willingly? Stop for a moment and ponder what that means to you, and how it would look if you were doing it.

Observing mindfully is simple enough, it likely includes sustained, focused attention on some aspect of your surroundings, perhaps examining the beautiful wildflowers you can't see anywhere else on the earth, or watching a pair of squirrels cavorting in the branches of the tree overhead, or noticing how the sun through the leaves dapples the ground with flecks of dancing light. (Perhaps that is how the idea of woodland fairies got started, someone saw from a distance the dancing flecks of sunlight on the ground!)



To contemplate deeply means to reach inside yourself and get in touch with your appreciation for the life-sustaining elements, and how everything works together to nurture the whole. Recognize how awesome it is, for it truly is awesome!

To connect with nature goes beyond just getting outside and observing and contemplating. Have you ever thought of actually connecting with nature or a natural element on a personal level? How about emulating its behavior?

“Emulating its behavior?” you may echo. “Just what behavior do natural elements have, and just how would I emulate that, anyway?”

Here is where the merging of material nature and original (primal, spiritual) nature takes place, and several possibilities come to mind. You may even be practicing one or more of these techniques without even recognizing the connection to the elements. You may emulate the stillness of a mountain during meditation, or practice Standing Tree meditation.

To emulate nature means to reestablish our physical connection to it which also reinforces our connection to Spirit or Source. Consider, please, the writing “Tree” from p 18 of Everyday Tao: Living with Balance and Harmony by Deng Ming-Dao, Harper San Francisco, 1996, ISBN: 0062513958

*“The essential parts of a tree are shown with great simplicity: below, the spreading roots; in the middle, the straight trunk; above, the branches.”*

*“Know how to use the time to grow.”*

“A tree uses what comes its way to nurture itself. By sinking its roots deeply into the earth, by accepting the rain that flows toward it, by reaching out to the sun, the tree perfects its character and becomes great.

“Look at its leaves, which shed the water, yet diver the life-given liquid to it's roots. Look at the strength of its limbs, which can span distances far greater than any of our own limbs could. Look at its sturdy trunk – could we stand in the constantly changing season and be so strong? Look at its roots. How many of us are so stable?”

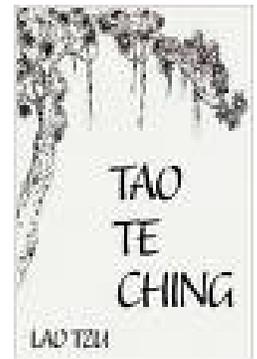
“Absorb, absorb, absorb. That is the secret of the tree. When human beings egotistically divide themselves from nature, that is a great mistake. When we divide ourselves from Tao, we are committing the greatest crime, and like all criminals, it is we who suffer the most. No, accept what life sends you. Accept how Tao flows through you, just as the tree absorbs and grows, and you will never be without Tao.”

At first glance, this may not seem to be the best advice. After all, a lot of undesirable stuff flows in your direction, doesn't it? Do you really want to absorb it all? Isn't it better to avoid some things?

That seems a reasonable assumption, but you must realize that avoidance is resistance. It's using your energy and intention to push away or push against something you do not want instead of using your energy and intention to align with something you do want. It's like “fighting disease” instead of “cultivating wellness.”

If you remember the Borg from the popular television series “Star Trek: The Next Generation,” you know that “resistance is futile.” They never completely explain this, but here is why resistance is futile: toward whatever you direct your energy and intention, that is the thing that will grow. If you direct your energy and intention toward something you want, that will grow; if you direct your energy and intention toward something you wish to resist, that will grow. Intention is the most powerful creative tool you have; you can create *anything* with your intention, *anything*! The more energetically you resist something, the larger will grow the thing you wish to avoid.

Which would you rather focus upon, which do you want to grow, disease or wellness?



The title of this article, Wellness Through the Power of Material Nature and Original Nature, describes wellness in **integration with environment**, and **in connection to Spirit or Source**. To nurture the physical means to nurture the spiritual, and to nurture the spiritual means to nurture the physical. You cannot have true wellness without the harmony of environmental integration and spiritual connection.

To assist in the understanding of this principle, here is Derek Lin's translation of verse 32 of the Daodejing from his website at [www.Taoism.net](http://www.Taoism.net) and his book Tao Te Ching: Annotated & Explained, published by SkyLight Paths in 2006.

## Chapter 32

*The Tao, eternally nameless  
Its simplicity, although imperceptible  
Cannot be treated by the world as subservient*

*If the sovereign can hold on to it  
All will follow by themselves  
Heaven and Earth, together in harmony  
Will rain sweet dew  
People will not need to force it; it will adjust by itself*

*In the beginning, there were names  
Names came to exist everywhere  
One should know when to stop  
Knowing when to stop, thus avoiding danger*

*The existence of the Tao in the world  
Is like streams in the valley into rivers and the ocean*

Let's take a closer look down the path we are led by this wisdom:

*The Tao, eternally nameless*

To borrow from verse One of the Daodejing, "The Tao that can be spoken is not the eternal Tao." This reminds us that the whole may not be spoken of by name because names always refer to past or future experiences. Once you try to name a thing, you name what it *is not*, too; you separate it *from* the whole. "Eternal" is your connection to the *Now*, the power of the present moment, which is all the power that exists. It is not something you can point to, it's something you must experience.

*Its simplicity, although imperceptible  
Cannot be treated by the world as subservient*

I have often said that the most simple things are the most powerful and profound. To make something subservient is to try to harness the power of it. You cannot harness the Now; all you may do is allow your Heart-Mind to release the chatter of thoughts of past and future experiences, and focus upon the present moment.

For example, the act of breathing, a thing you probably pay little attention to, is one of the most simple and yet profound practices you may undertake to integrate your spiritual and physical levels to create wellness.

*If the sovereign can hold on to it  
All will follow by themselves*

The sovereign is you, and only you are in command of your energy and most powerful intentions. If you can command your intention for wellness without allowing interference from out-worn or outdated beliefs from your past, or worries about your future, wellness just naturally has to follow.

道常无名朴。虽小，天下莫能臣。  
侯王若能守之，万物将自宾。  
天地相合，以降甘露，民莫之令而自均。  
始制有名，名亦既有，夫亦将知止，知止可以不殆。  
譬道之在天下，犹川谷之于江海。

Just consider the many stories of wellness “miracles” in which a person who was given a terminal diagnosis effected a complete recovery with only the powers of his or her determination and intention, following the course of action – meditation, qigong, nutrition, or other wellness techniques – dictated by research or intuition.

*Heaven and Earth, together in harmony  
Will rain sweet dew  
People will not need to force it; it will adjust by itself*

No doubt stating the obvious here that Heaven represents the spiritual, and Earth represents the physical. When the two are naturally united, all will be nourished.

You do not need to force health and wellness. Indeed, the word “force” goes completely against the idea of integration and harmony. Wellness will naturally occur if there is integration and harmony with the inner (spiritual) and outer (physical) selves.

*In the beginning, there were names  
Names came to exist everywhere*

The first problems grew out of the separation of spirit and body; i.e. giving of the names. Just calling one “the spirit” and one “the body” creates the initial separation! As you grow further and further from the integration of spirit and body, you grow further and further from wellness.

*One should know when to stop  
Knowing when to stop, thus avoiding danger*

Knowing when to stop can refer to the idea of discontinuing the separation of physical and spiritual in connection to nurturing your wholeness. How can you be whole when you are separating one aspect of yourself from the other?

Wellness is in grave danger when the separation of the physical and spiritual takes place, as we often witness in our Western culture today. Fortunately, the medical community is rediscovering the importance of this connection to overall wellness.

You do not need to wait for someone to tell you: deep, down inside you already know this. Just start practicing Wholeness and the integration of spirit and body, and you will avoid danger.

*The existence of the Tao in the world  
Is like streams in the valley into rivers and the ocean*

That is the most profound discovery and greatest experience in following the integration of spirit and body, and of being in harmony: everything flows as it should, toward health and wellness!

[Michelle helps you Create Health through Consciousness and Awareness Development techniques such as qigong and meditation. Find her online at "Be Well with Qigong" <http://bewellqigong.blogspot.com> and "Be Well with Meditation, the Mind-Body Connection" <http://bewellcreatehealth.blogspot.com/> She tweets on Twitter as bewellmichelle.]



## [Ancient Wisdom, Modern Kitchen]

**A Meal for the Winter**

By Yuan Wang, L.Ac., Warren Sheir, L.Ac., and Mika Ono

In our modern world, we live in buildings that are air-conditioned in the summer and heated in the winter, lengthen our short winter days with electric lighting, and see the same produce at our grocery stores every month of the year. While these marvels of modern technology keep us physically comfortable, they also have a downside—cutting us off from the rhythms of the planet to which we belong. Traditional Chinese medicine and its prescription to eat according to the seasons remind us that we are part of something much larger than ourselves.

According to traditional Chinese medicine, our relationship to nature is our touchstone and we need to stay in harmony with its seasons. As described in our book *Ancient Wisdom, Modern Kitchen: Recipes from the East for Health, Healing, and Long Life* (Da Capo Lifelong Books, 2010), our diet—one of the most direct ways in which we interact with our environment—is key to adapting to the changing natural world.

In the winter, the body slows down to save energy and store strength for the spring, and Cold appears in the environment. Winter is linked to the Kidney in traditional Chinese medicine, and people are thought to be predisposed to diseases from weakness in this organ system. Such conditions include fatigue, cold limbs, and sexual dysfunction.

In the winter, you can help build strength and counteract the cold by adding foods in moderation that support the Kidney and warm the body, and avoiding an excess of salty foods. Good winter foods include lamb, beef, Chinese yam, sesame, chestnuts, mushrooms, leeks, and nuts. Of course, all seasons and most circumstances call for a balanced diet, and no one food should be eaten to excess.

Here is a tasty dish from our book that is especially good for eating in the winter, when the weather is cold. In the language of traditional Chinese medicine, this dish can be described as strengthening Kidney yang, dispersing Cold, strengthening qi, and nourishing Blood.

**Five-Spice Lamb Skewers**

(Makes 2 to 3 servings)

*Ingredients*

- 1 1/2 tablespoons Chinese five-spice powder (*wu xiang fen*)
- 1/4 teaspoon ground Sichuan or other pepper
- 1 pound lamb or other meat, cut into 1-inch cubes
- 1 to 2 yellow squash and/or zucchini, chopped into 1- to 2-inch pieces
- 1 red bell pepper, seeded and chopped into 1- to 2-inch pieces
- 1 small onion, chopped into 1- to 2-inch pieces
- 8 fresh shiitake mushrooms, stems discarded, if desired
- 2 tablespoons olive oil
- 1/4 teaspoon salt

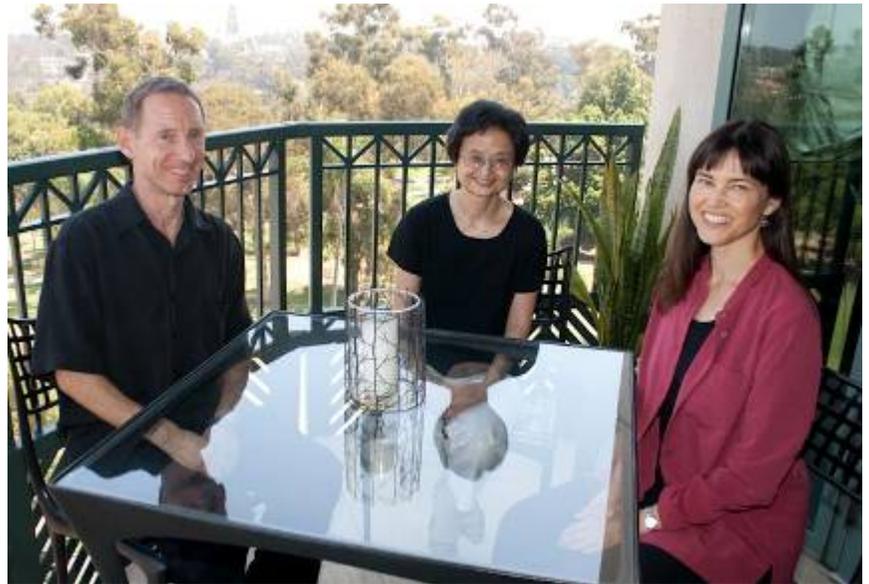
*Directions*

1. Preheat the grill.
2. In a large bowl, combine the five-spice powder and pepper, then stir in the lamb cubes. Mix well so the spices coat the lamb evenly.
3. Thread the skewers with lamb, squash, pepper, onion, and mushrooms.
4. Brush the vegetables with the oil, then sprinkle the skewers with salt.
5. Place the skewers on the grill and cook for 4 to 5 minutes. Turn over the skewers and cook for another 4 minutes or so before serving. We like to serve the skewers with rice.

In addition to eating in the winter, Five-Spice Lamb Skewers are also especially good for serving to anyone feeling cold or who is experiencing fatigue, arthritic pain, menstrual pain, or cold sensation with premenstrual syndrome. Individuals who tend to run warm should avoid large quantities of this dish.

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Dr. Yuan Wang, former physician-in charge of several departments of the Chengdu Traditional Chinese Medicine Hospital, China, is a faculty member at the Pacific College of Oriental Medicine (PCOM) in San Diego. Warren Sheir is a licensed acupuncturist and herbalist as well as a PCOM San Diego faculty member. Mika Ono is an award-winning writer and editor. For more information on the authors and their book, *Ancient Wisdom, Modern Kitchen*, see <http://www.ancientwisdommodernkitchen.com>.



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[Chinese Proverbs of Yang Sheng]

## Nurturing Life and Cultivating Mind

by Tina Zhang

养生以养心为主 心不病则神不病 神不病则人不病. (清·梁文科《集验良方》)

**An old Chinese proverb say: To nurture one's life and health, is mainly accomplished by cultivating one's mind. If the mind is calm and clear, the spirit is in a pure and healthy world, if the spirit is in a healthy world, how can the illness enter you?**

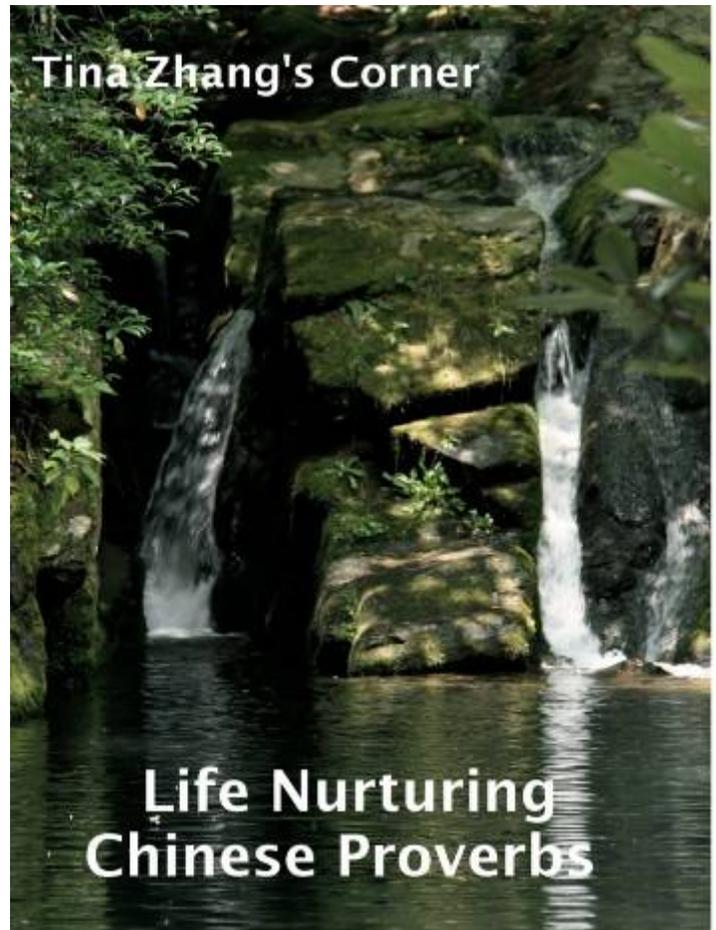
**-- A Collection of effective prescriptions by Liang Wen Ke - Qing Dynasty**

We are luckily to be living in this world now, and enjoy all life is offering, and definitely will hope to enjoy longer. We all acknowledge that we are not only living in a world where people simply work for gaining the basic conditions of food and shelter, but a world in which human health and longevity is an integral part of our personal identity and evolutionary journey, that leads to a healthy, natural retuning to the original birth. It is our strong belief set us as practitioners of ancient Chinese ideology of life nurturing, or Yang Sheng, 养生, - a practical method with many aspects of taking care of our daily life in a natural way that focus on mind, body, and spiritual health.

Undoubtedly, a healthy person exercises their body, no matter whether taking eastern or western ways. To further understanding life nurturing, or Yang Sheng, 养生, is to understand the Chinese health philosophy that heavily involves in mental and spiritual health as an important components of holistic health. Being healthy, can be explained with Chinese Yang Sheng, is to positively deal with life and health conditions, and adjusted them according the change of life to keep a greater balance.

Nurturing life is cultivating one's mind. This concept is not only to the point that, without a healthy mind/spirit, one can't have a complete healthy life, and an unbalanced physiological doesn't do life any good favor, but also regards human being's achievement and enjoyment is far beyond satisfaction of current surroundings and technologies. It is its unlimited potential that continuously expressed by more powerful creativity that serve a better livings of the world - these all comes from our creativity of the mind - the power house. So, to nurturer the mind, to keep the psychological balance is the foundation to have a happy, healthy, and creative life.

We all know the mind and the emotion are heavily affected to the health. Practically, some truths are always very clearly exhibited the deep connection between the mind, spiritual and the physical body. For instance, when someone who is sad, on the emotional level, will experiences fatigue, a loss of energy and/or decreased appetite on the physical level; if the heart/mind is unbalanced, one cannot overcomes the worry or the nervous, or living with the past; on spiritual level, they feel out of touch with their true self and disconnected from the universe. when spiritually someone feel lost and unbalanced, may cause them to be moody and discontented with life, perhaps grow emotionally distant from their loved ones and on the



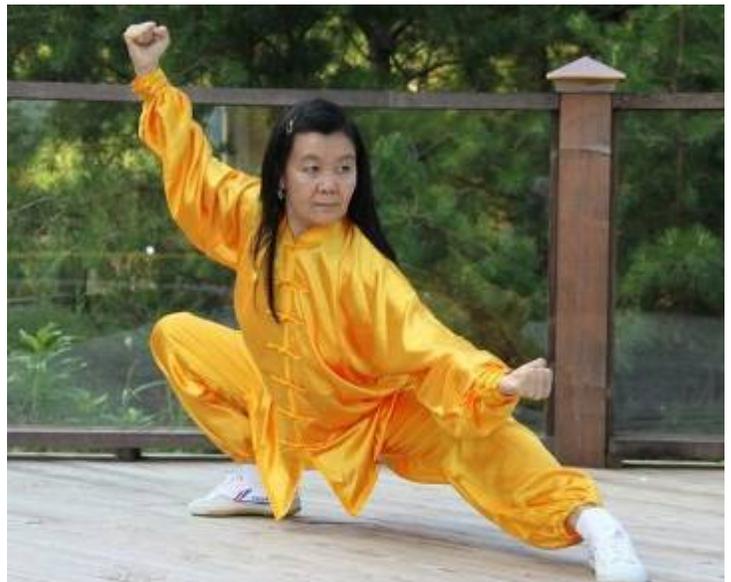
physical level they may experience anger and stress. We don't define a healthy person is the one always in bad mood or negative thinking, do we?

On the other hand, the power and high spiritual level of the mind will be an extremely helpful asset for anyone living with a chronic health condition. You may not be able to cure your illness, but a stronger mind and a healthier spirit can help you feel better, cope with pain, symptoms, limits and daily challenges, to continue to find meaning and purpose in life and live your life as just full as a physically healthy person. And, when life gets really rough, it's the mind gives us the strength to carry on.

How do we nurture and cultivate our mind/spirit into a heather, and more powerful stage? The power of the mind comes from calmness and awareness. The grounding of the mind should be solid and stable, which also is the base for focus and creativity. Gentle Qi gong, Tai Ji Quan form exercise, and meditation, in general, are highly involved in mind training exercises, which make major differences from only muscle and strengthening gaining exercise, not to mention their coordinated physical motion is the key, which builds a new relationship between the body and the mind - slow but focused. Through many repetition of these Qi flow throughout the meridian channels exercises calms one's mind; this calmness of the mind develops a great focus which able us to look ourselves from inside, and find our central stillness and clearness that lead to a positive way of thinking, realizing, acceptance, and control of life's balance. Physically, if the mind is calm, it can clearly feel and very aware about what's going on, in order to prevent from getting sick, or catch any illness in a very early stage to be taken care of with more and better choices for the treatments.

**There are three practical cultivating mind exercises you can begin with:**

1. Purposely take more breaks to let the brain/mind rest from anything you do in your every busy day; this will make you realize how busy your mind is, even on your weekend or vacations! Too busy creates a kind of tension over time, and the tensed mind needs to rest to maintain the energy flow.
2. Take some quiet times to clear and empty the thoughts. You can be in any physical position, such as standing, sitting, lying down—they all have to feel comfortable without any tension or strength, and it is better if you can keep your spine straight but relaxed. Then, try not to think or focus on anything. At the very beginning, this quiet time may actually bring up a lot of thoughts or emotions. Try to fade them out little by little, and ignore any disturbance from your surroundings, no matter what they are. For many people, it is not so easy to be calm inside of their mind, but just like other things in life - if you work constantly, you'll harvest from the seeds you originally plant.
3. Let's also nurture the mind with healthy food and water to give nutrition to support the activity of our brain/mind that wishes, dreams, and creates!



Wishing everyone great health and happy holidays!

- Tina Zhang

[Tina C. Zhang is a 5<sup>th</sup> generation lineage Northern Wu Style Taijiquan Master, who has traditionally studied Kong family's Chinese Traditional Medicine, as well as TCM in Beijing University. Tina professionally teaches Qigong, Taijiquan, Baguazhang, and runs a clinic in New York City. She is an accomplished author of Chinese Internal Martial Arts books. Please visit her web site at [www.TinaZhang.com](http://www.TinaZhang.com) for more information. ]

[The Tai Chi Examiner]

## A Magical Qigong Moment with Master Zhang Xue Xin

Violet Li



Master Zhang Xue Xin currently residing in San Francisco, California is a senior US Disciple of Grandmaster Feng Zhiqiang of Beijing, China and studied both the Lao Jia (older and traditional) and Xin Jia (new and improved) style of Chen Tai Chi Quan system created by 17th generation Chen family standard bearer Chen Fake and the Hun Yuan system created by Grandmaster Feng Zhiqiang. At 83 years of age both Zhang and Feng are truly among the “Last Dragons” of Chinese martial arts, according to St. Louisan, Sifu J. Justin Meehan who first studied with Feng in 1981 and studied with Zhang ever since 1991 and who is a senior US disciple of Master Zhang and Midwest Regional Director of the USA Feng Zhiqiang Hun Yuan Association under Master Zhang. “These two Masters practiced diligently and sometimes at risk of their lives during the Chinese Cultural Revolution to present to us the treasure of authentic and traditional Tai Chi Quan (also spelled Taijiquan) so that we would not lose these treasures of Chinese culture and be able to pass them along to future generations,” commented Master Meehan.



As a youth, Master Zhang was very athletic and strong. First he studied Shaolin and then Shuai Jiao. He admitted that he looked down upon Tai Chi because he thought Tai Chi was soft and without real fighting ability. During a personal contest with a student of Grandmaster Chen Zhao-Kui, Master Zhang was not able to throw the person despite his Shuai Jiao wrestling background. Then he realized the true power of Tai Chi. Even though it was forbidden to learn or practice Tai Chi during the Chinese Cultural Revolution, Master Zhang secretly took private lessons at Chen Zhao Kui’s (son of Grandmaster Chen Fake) home and practiced the authentic Chen Style Tai Chi diligently to perfect the art. Master Zhang also studied with the highest level Chen style masters outside the Chen village, including Feng Zhiqiang and other Chen Style Masters of the time. Grandmaster Feng Zhiqiang, who was a senior disciple of Chen Fake, created the Hun Yuan system by distilling the essence of the Chen style Tai Chi with the Taoist Qigong and Xin Yi of Grandmaster Hu Yao Zhen, who was recognized as one of the important Qigong and martial arts masters of modern China. The Hun Yuan system attempts to combine all the original influences of Chinese culture that went into the creation of Tai Chi Quan, including traditional Chinese medical theory, Taoist practice and understanding, traditional Chinese philosophy and internal martial art mastery.

Master Zhang not only practiced the Tai Chi Quan forms, Push Hands and Qigong of Feng but he also mastered the Chin Na (joint locking) skill of Chen Zhao Kui who lived with him on many occasions. Zhang is credited with being the first to publically teach the intricacies of the Chan Szu Chin Silk Reeling exercises of the Chen system, later expanded on by Feng, to US students. He also mastered the secret Tai Chi Stick (bang) exercises created by Chen Fake and his son, Chen Zhao Kui for Chin Na and Internal strength mastery. He has been referred to as one of the “highest level” teachers available in the US. What strikes most however is his youthful vigor and martial art ability even at the tender age of 83. He recently completed a 2 day workshop in St Louis where he taught non-stop for 3 hours in the morning and 3 hours in the afternoon and then 3 hours at night on Sat. and then two more 3 hour classes on Sunday.

In the morning of Sunday Oct 10, Master Zhang taught Hun Yuan Qigong. First he taught the Wuji standing post, which is a still form of Qigong. He repeatedly urged the attendees to relax their body and keep the mind still. Then, he taught the moving form of Qigong which consists of 12 movements (see the list below). According to Chinese meridian theory, stillness creates Yin while movement creates Yang. Master Zhang explained that it is important for a practitioner to practice both the still form and moving form to reach the balance and harmony within one’s body. The moving Qigong follows all Tai Chi fundamentals. Master Zhang constantly reminded attendees to keep the head suspended (*Xu Ling Ding Jing*), folding the arm and hands while opening and closing the hands (*Kai He Zhe Die*) and use Dan Tian (similar to the body “core” concept) to lead the movements.

For those who do not understand Tai Chi or Qigong, they probably will not pay much respect to these movements because all these seemingly simple movements may only appear to be big or small arm circling with the exception that



Master Zhang squatted all the way down and stood up gracefully. The hard part is not just doing them correctly externally, but in knowing how to initiate the movements internally. Master Zhang gave very detailed instruction on how to rotate or move Dan Tian. Sometimes he allowed students and Tai Chi Examiner to actually feel his Dan Tian movements by placing hands over his abdomen and back to get a clear idea how it works. It felt like a baby or a ball was inside and turning: sometimes turning right and sometimes left, sometimes in big circles and sometimes in small circles, sometimes it splitting in the middle and sometimes it coming to the center, and sometime moving slowly and sometimes really fast. Those are the Qi movements. He generously shared the information about the meridian system and how each of the movements relates to it and to the various pressure points. He highlighted the health benefits of each movement as well.

The complete name of the Hun Yuan system is Hun Yuan Xin Yi Chen Shr Tai Chi. Xin and Yi mean mind and intend. It is critical that a practitioner pays full attention to the movements while practicing and guiding the Qi circulation within. Master Zhang earnestly advised attendees to be mindful and **listen** to the Qi movement. Hun Yuan Qigong teaches the practitioner how gather Qi from the surrounding environment, how to accumulate Qi in the Dan Tian, how to circulate Qi throughout the body, and finally how to merge the energy field of the individual with the energy field of the Universe (thereby uniting Heaven, Earth and Human Being, which is the ultimate goal of Taoist practice)

Since I did not dress warmly, my entire body felt really cold that day. He asked me to put my hand in between his hands without touching while he was opening and closing them. He just waved his hands a couple of times. While his palms were about a couple of inches away from my hand, I felt warmth coming from his hands; and within a second, my forearms felt warm too. I was totally surprised by this effect. I turned around and told the attendees what I just experienced. While I was talking, suddenly I felt there was “static” in my hair. Before I could even ask myself “what was going on”, my head felt warm; swiftly the warmth traveled down to my neck, shoulders, elbows, fore arms, hands and simultaneously the warm feeling also moved down to my chest, spine, and knees. Then I heard a voice behind me saying “I am giving you Qi”. Later I asked others how he did it; I was told that Master Zhang just placed one hand over my head.



It was the first time that I was given Qi. It is hard to describe how it really felt. It was definitely different than walking up to a fireplace or a space heater. Both heating elements provide the heat but it takes a while for the entire body to warm up and the part of the body which is not close or radiated directly by the heat source may warm up slowly. During summer time, when I step out of an air-conditioned room into the Sun, my skin may feel really hot but inside my body, it might still feel cold. The Qi phenomenon was amazing. The warmth just flew through my body like a current gently, quickly and pervasively.

What is Master Zhang’s secret? Besides his access to high level teachers and learning while in China, it probably has much to do with his strong self-discipline. Normally, he practices Hun Yuan Qigong and Tai Chi twice a day: once in the morning right after he gets up for half an hour and the other one in the early evening for about an hour. Between those times he teaches 6 hours on the weekends at Golden Gate Park and San Jose for group classes and Wed. evening Push Hand classes. During the rest of the time his days are filled teaching private classes to disciples, private students and also some famous teachers who study privately anonymously. Even when he is taking a break he is always doing internal exercises often using the Tai Chi stick to exercise his internal engine, the Dan Tian.

Master Zhang not only has the power to give Qi. He also has the power to throw people off. During Sunday afternoon's Push-Hands Workshop, he and Sifu Justin's 18-year old son Jason Meehan pushed hands. Jason Meehan is a Missouri All-Star High School Football Player. He is an inside linebacker. At 6'3", he weighs 220 pounds and is all muscle. According to ESPN 2011 College Football Recruiting, Jason is currently ranked 91 among 475 players nationally. He also won the ICMAC National Championships for the Adult Heavyweight Push Hands category twice (2008 and 2009). But after a few rounds of pushing, Master Zhang "borrowing" Jason's strength, sinking his own Qi, utilizing the Jing from Silk Reeling, and applying a little bit Chin Na skill, crashed Jason down. It was quite awesome! For more information see Master Zhang's website at [www.Silkreeler.com](http://www.Silkreeler.com) and view Master Zhang Xue Xin doing the first 5 movements of Tai Chi at YouTube.

## 12 Form Hun Yuan Qigong Names

- Lower the Qi and Cleanse Internal Organs
- Gather the Qi to the Three Dan Tians
- Two Hands Rub the ball
- The Three Dan Tians Open and Close
- The Sun and Moon Turning
- Circular Extension and Contraction
- Single Leg Ascending and Descending
- Double leg Ascending and Descending
- Belt Meridian Grinding
- Heaven and Earth Open and Close
- Collecting Qi to the Dan Tian
- Health Massage Techniques.

[Violet Li is a Taichi (Taiji) enthusiast and [certified instructor](#). She has taught Taichi to different demographic groups and establishments in St. Louis (AT&T, [Mathews-Dickeys Boys and Girls Club](#), [West County YMCA – St. Louis](#), private studio, senior centers and others). Violet is also well-versed in other fitness regiments. She taught Aerobics and Kickboxing before. She is a certified [HeartZone](#) Personal Trainer and a [Aerobics & Fitness Association of America \(AFAA\)](#). You can read more about her writings at <http://www.examiner.com/x-57561-Tai-Chi-Examiner>. You can reach her by email at [Violet.Li@tadi.com](mailto:Violet.Li@tadi.com).]



## [Qigong for Seniors]

**LIVING BETTER, LIVING LONGER, LIVING HAPPIER**

By Cindy A. Borgonzi, Qi Gong Instructor

It's my belief that all education and exercise needs to be fun and uplifting, because all the good energy stays with us all day and boosts our outlook on life. I teach a class called *Fit for Life Gold* at local senior centers in Boston, Massachusetts, and I focus on keeping seniors well through physical and mental activities that generate more overall fitness and happiness. It's my belief working with seniors for over five years what older adults want most is to live independently and incorporating Qi Gong into their daily lives becomes way of life that will both physically and spiritually keep individuals, on a journey towards a lifetime of good chi and good health. I teach Therapeutic Qi Gong as part of my *Fit for Life Gold* class, and one of my main goals is to provide students with the health benefits of Qi Gong and this makes a big difference in their lives and commitment to practice. My students love to receive information on how it provides older adults the opportunity of preventing and healing various illnesses and premature aging by doing the soothing exercises. I focus on how easy it is to learn, and for best results it's done as a daily practice and do remind them of that in each class. My focus is on what they "can do" to prevent premature aging and keep themselves feeling well for many years. I have found once students learn Qi Gong they keep coming back for more, because they experience many positive emotional and physical health benefits from the powerful healing practice. My students come for many years and are curious and want to learn more about preventative health practices and the Chinese healing arts. Most of my students learn Tai Chi which gives them a higher level of training. The main thing I keep in mind as a Qi Gong instructor is what is best for my students and they like variety and fun so I think out side the box and I'm always changing up the class which seniors aren't so receptive to, but interestingly enough they rise to the occasion every time and they are healthier and more confident as the years go on.



I tell my students "you don't have to run in a super marathon to be healthy and fit you just need to keep physically and spiritually active every day".

These are some simple tricks in class to keep the good energy flowing and to keep students coming to class consistently:

- Keep it Fun – spice it up and find a variety of fun physical activities that lift your student's spirits and keep the good chi moving: Zumba Gold, Country Line Dancing, Weight Lifting, Tibetan eye exercises, active isolated stretching.
- Every Little Bit Makes a Positive Difference – Teach anywhere Qi Gong exercises they can do anytime, anywhere: when they wake up, in the car, while cooking, while watching TV, while at the computer, or gain energy, etc.
- Buddy system– remind students often, and offer different incentives to have them bring a friend to class this exponentially increases happiness and spreads the health experience of Qi Gong many people never heard of it. Something I have done as an instructor you can get your own buddy to co-teach with you so you always have backup and new ideas.
- Health Fairs – educate and do demonstrations at health fairs at local senior centers and have people sign up for a free class to kick start a Qi Gong class. Most senior centers don't require fees so you get paid directly.

Seniors are wonderful to work with and they "can do" progressively more than they think they can do. Qi Gong I have found is a real confidence booster for seniors and keeps them active and living independently. Every time I think I have too much on my plate and can't teach I remind myself of this fact "where else can you go and get hugged and told how much your appreciated in this life". I will never quit! I'm in it for life!

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**Cindy Borgonzi Areglado** - is a certified Tai Chi, Qi Gong, Zumba Gold instructor, and Whole Health Educator. Cindy holds her Masters in Adult Education and has specialized over the last 5 years in the whole health wellness, weight loss and fitness. Cindy's experience and passion is working with individuals of all ages to live in healthier, happier bodies for a lifetime.

## [The Sense of Touch]

## Simple Solutions for Stress Headaches

Rebekah F. Owens

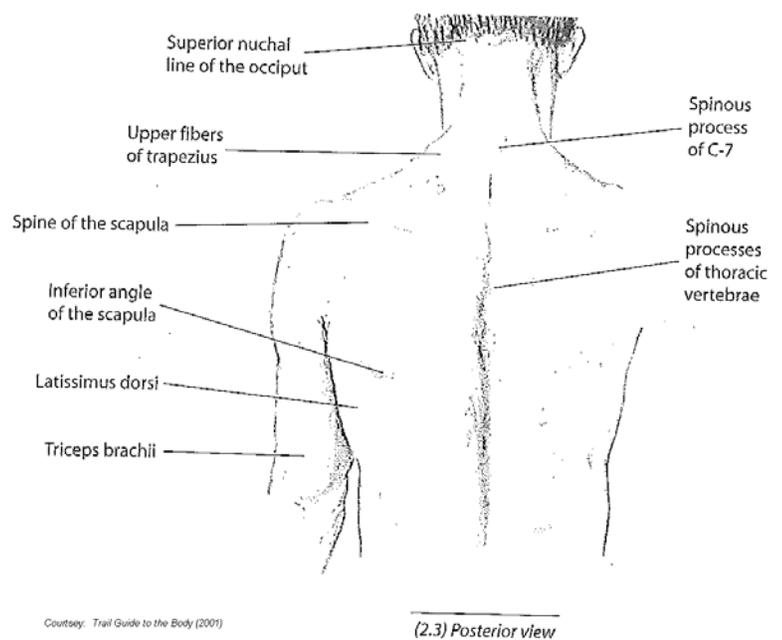


Tension or stress-related headaches are a common plague in today's society. As a massage therapist, I see many clients who come in complaining of these types of headaches – and it's no wonder. Upon looking at the client, the first thing I notice is that their shoulders are usually elevated (or "up around their ears"). Since our body is always trying to protect itself, it is only natural that this would happen – the shoulders elevate to protect the neck, which is a core part of the body. In other words, if your neck broke, you would be paralyzed, so the body subconsciously protects it. When the shoulders are elevated, the trapezius muscles in the upper back shorten, pulling on the base of the skull. This pulling is usually the main cause of the headaches.

Fortunately, there are several simple tricks to help alleviate this pain that you can do on yourself:

- 1.) **DROP** those shoulders. Sit or stand straight and lower your shoulders down and back. There may be a little pain at first, because the muscles need to get longer again, but the pain is only temporary and will be alleviated by the next tricks.
- 2.) **RUB** those shoulders. Take your whole hand and squeeze, knead, and rub your shoulders and upper back, as far as you can reach. It is usually easiest to do one side at a time by reaching across with the opposite hand and rubbing. Five minutes is usually good amount of time. Try to use the palm of your hand as much as possible, so you don't tired out your fingers.
- 3.) **PRESS** the occiput. Your "occiput" is the little notch at the base of your skull. It is at the center of where several muscles connect and therefore can get very tired. If you press your thumb in there and rub around in a small circle for a few minutes, it helps those muscles to release.
- 4.) **MASSAGE** the base of your skull. Since this is a major attachment point for many muscles, it is a great place to start massaging. Use your fingertips, the palm of your hands, and the heel of your hands in slow circular motions. This will cause the attachments to loosen, and will reduce the pulling on your skull and scalp.
- 5.) **MASSAGE** your scalp. Let your hair down and take your fingertips for a trip around your scalp. Really get in there and move the muscles of your scalp around. Pull your hair a little bit (be gentle, please) and release. Again circular motions with your palms or fingertips work best.

These simple tricks will help your stress or tension headache to release by getting to the root of the problem – those pesky muscles. When you have time, you should also go for a relaxing massage and have the therapist work on your entire back, as well as your scalp, neck, and upper pecs, which are all connected to your problem area. The combination of self-massage, good posture, and a professional massage will keep your headaches at bay.

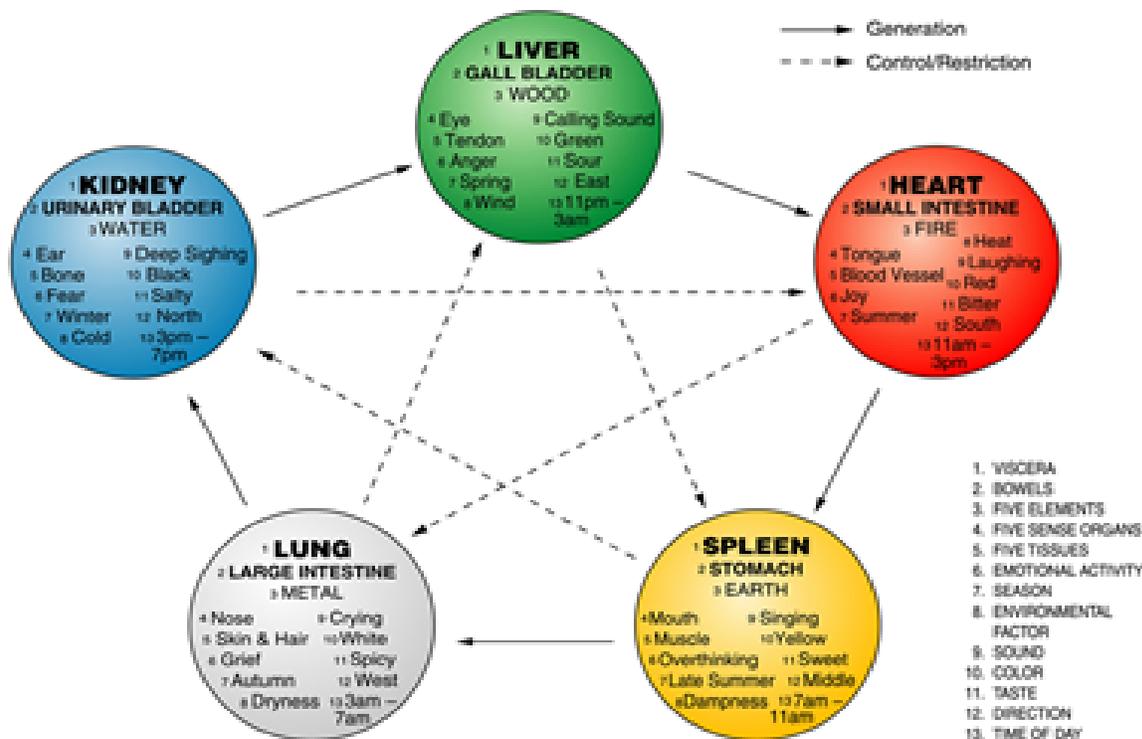


[Beka Frizzelle-Owens, LMT, NCTMB has been a massage therapist since 2004. In her practice, she integrates traditional massage healing techniques with a relaxing atmosphere to create a holistic and effective style sure to help almost any client. She works with all age groups and is a Certified Infant Massage Instructor. Beka works full-time as a coordinator for the University of Maryland School of Medicine's Center for Integrative Medicine and part-time as a massage therapist in Severna Park, MD. She has a Bachelor's degree in Allied Health from Towson University and is working on her Master's in Applied Sociology at UMBC.]

## Seasonal Harmony

By Ellasara Kling

### CLASSIFICATION OF THINGS ACCORDING TO THE THEORY OF THE FIVE ELEMENTS



For the past few years this article has talked about Five Element Theory as it relates to each season; supportive foods for the season we were in, how to choose them, how to prepare dishes that are seasonally healthful, visually appealing and tasty; various interrelationships as represented in the above chart, some ideas about emotional and mental attitudes that manifest seasonally, and so on. In this last article for Qi Dao, I would like to highlight the Winter season we are in, but also discuss the circle of seasons as an interconnected whole.

In viewing the above chart, it is clear that everything is interconnected with everything else at all times. For example, a healthy summer/heart season is dependent upon not only its child the late summer/spleen and its mother the spring/liver, but also upon its relationship with the winter/Kidney (whose energy balances Summer/heart) and Fall/Lung (whose energy Summer/heart balances). At all times all the parts are in communication with each other doing their best to create harmony within us and, by extension, to create harmony within the Universe. This is accurate regardless of the point of view one takes -- be it physical, mental, emotional, spiritual; all the parts are always doing their best to create harmony.

Taking this point of view and applying it to our health, we have a picture of ongoing wholeness that is only thwarted by lack of communication and undue stress on any or all of the parts. And here we are entering the social season of stress/fun and for many of us entering into situations that also have “interesting” communication scenarios. While, according to Five Element Theory and the common sense of Nature, we should be resting more, going inward, eating very sensibly, not overindulging, dressing warmly, being ever more gentle with ourselves, this is the season during which most of us are constantly on the go, often eating haphazardly, overindulging in food and drink, and essentially cramming lots of living into a small space of time that only spans a few weeks. And with this, we kick off the Winter Season and thereby prevent it from fully expressing its purpose of deep restoration, weaken its ability to support Liver/Gall Bladder, cause it to draw more energy from the Lung/Large Intestine, and so on. (An unsurprising example

of a common effect of weakening this ability is that people in our society are prone to respiratory illnesses in late winter.) Flowing with Winter, whose element is water, requires trust and relinquishing the existential fear that is the keynote for the season.

Almost everyone has had the experience of having cared for at least one plant and, therefore, you know that either too much water or too little water is detrimental to its life and that the amount of water required is individual to each plant and its environment. So it is with us as well. The Winter/Water season flows to the Spring/Wood season and without the proper balance the Liver/Gall Bladder has to fight to survive and becomes damaged so that its ability to nurture the Heart/Fire and to balance the Spleen/Stomach/Earth is hampered. What this balance looks like and how it is achieved is individual to each of us taking into account our life factors.

The integrity of the system depends on each part and its relationship with all of the other elements within the system. The many correlations (only 13 of which are depicted in the above chart) for each season affects those of the other seasons as they continue to also flow into and out of each other in cycles of nurturance, restraint, balance. Some other correlations for Winter are: the movement of energy this season is downward, energy wants to “store” at this time, its bodily expression is head hair, beans are the “grains” of the season, grapes are its fruit.

### Seasonal Self-Massage

Teeth tapping: tap your teeth together lightly 50 or more times every day.

Head/neck/ear massage: Starting at the center front of your head, place your “pinky fingers” next to each other along the hairline and let your other fingers fall naturally along the hairline and the thumb slightly behind the temples. With a firm but still gentle pressure, “rake” your fingers over your head and ending at the occipital ridge. Do this 9 times. Then with your open palms, and alternating hands, lay your hand across the back of your neck and so that the heel of your palm is on the large neck muscle and your fingers are resting lightly on the other side of your neck. Again, with a firm but gentle stroke, drag your hand across your neck. Keep your head held up as you do this 8 times with each hand. Finally, with your thumbs and forefingers on either side of your ears, rub the ear starting in the front and continuing down to the lobe. End by giving the lobe a light tug.

Support the Bladder Meridian by keeping your neck, back of legs covered and warm. Notice a chill in the back of the legs? Rub in some warming massage oil/muscle liniment so that the heat can enter deeply into the channel.

### Health Topic: Peri/Menopause

Kidney Qi is very important during the menopausal life opportunity. Since the Kidney/Urinary Bladder are the organs for Winter, take this time to enhance your Kidney Qi through your energy practice, meditation and by eating foods that strengthen Kidney Qi such as shellfish, soy (organic non GMO only), beans, black sesame seeds, walnuts, etc. and eating salty, bitter and very spicy foods in moderation.

### Seasonal Foods:

Black Beans, Black Mushrooms, Blackberry, Black sesame seeds and oil, Black soybeans, Blueberry, Bone marrow, Cabbages, Cardamon, Celery, Chard, Cinnamon, Cranberry, Ginger, Job’s tears, Kale, Kidney beans, Kohlrabi, Longan, Lotus seed, Miso, Mulberry, Mutton, Ocean Perch, Parsley, Pine nuts, Raspberry, Rutabaga, Seaweed, Shrimp/Prawns, Soy Sauce, String beans, Turnips, Walnuts, Wood ear mushrooms.

This is a time of year for hearty, warm soups, root vegetables, avoid raw foods and cold drinks, also avoid very spicy foods that create sweating (which leads to open pores and cooling).

### Recipes:

#### Warm Miso Soup

This is not a recipe as much as a recommendation. Buy the miso (organic, non GMO) that you prefer, mix in hot water as directed; add scallion whites, mushrooms, seaweed, etc. for your own taste. An easy, fast, “instant” warming soup.

**Winter Energy Cereal****Ingredients**

1/2 cup of rice  
 6 cups of water  
 1/2 cup toasted black sesame seeds  
 1/2 cup TB toasted crushed walnuts  
 3 TB honey  
 1/2 tsp salt

**Directions**

Cover the rice in 2 cups of water and soak for 2 hours.

Toast the walnuts and crush. A simple crushing method is to place the walnuts in a plastic bag and roll with a rolling pin.

Toast the black sesame seeds.

Drain the excess water off the rice.

Place all the ingredients in a saucepan and mix.

Add 4 cups of water and bring to a boil, reduce heat and simmer until the rice is thoroughly cooked and all the water has been absorbed. Stir the cereal frequently as it is cooking. The texture of the cereal at this stage is like a thick porridge or cornmeal mush. The rice is creamy and the sesame seeds are still slightly crunchy.

To make into a breakfast cereal: add 1/2 cup boiling water to 1/2 cup of cereal – optional: a touch of cinnamon

Yield: 4 cups

Serving size 1/2 cup

**Kale & White Beans****Ingredients:**

1 large bunch of kale  
 3 TB of olive oil  
 3 large cloves of garlic  
 Salt & pepper  
 1 cup white wine  
 1lb of cooked white beans. . your choice: cannellini, navy, chickpeas.

**Directions:**

Cut the bottom stem off the kale and cut the leaves horizontally into 3” pieces - -wash in cold water to remove any “sand” that may be stuck to the leaves. Drain, but let water adhere to leaves.

In a wok or heavy skillet heat 3 TB of oil and add minced garlic and salt and pepper. . . heat for about 1 minute and add the kale. . .

Toss the kale in the oil so that it coats lightly and the garlic/salt & pepper mix into it.

Tossing every so often sauté the kale till it get a nice dark color and begins to wilt just slightly. . . .add the wine and cover for about 1 minute.

Remove the cover and toss, add the beans and heat through. Serve.

**Mrs. Wang’s Yunan Style Pumpkin**

2 large carrots cut in half lengthwise  
 2 large white Russet potatoes cut in half lengthwise  
 1 small pumpkin, kobachu, hubbard, acorn, or other gourd-like squash cut lengthwise in 3” wide pieces.  
 1/2 red bell pepper, 1/2 tsp. garlic, 2 TB ginger, whites of 6 green onions – all minced  
 dried small, red, hot peppers, 5-6 not too many, only to warm the food not to make it hot (use less if you are sensitive)  
 1 TB salt or to taste  
 1/2 cup Walnut oil

½ -1 cup water

Cut the vegetables into chunky, triangular wedge shapes leaving the skin on the potatoes and the squash. Heat a large, heavy skillet or wok, add some oil and **the carrots, potatoes and squash and cook until the vegetables sweat. At this point, add the other ingredients and stir-fry for a few minutes. Add some water and cover. When the water is absorbed the vegetables should be cooked, but not mushy. If the vegetables are not yet cooked, add a little more water and cover again. When they are fully cooked, remove the lid and stir fry for a couple more minutes.**



### Teas:

Drinking roasted teas (usually called red or black teas) are more warming than green teas which have a cooling aspect. Interesting teas to try might include a good Pu ehr tea as it has many excellent health benefits especially when the leaves are from older trees. Most people are familiar with roasted Oolong tea.

Ginger Tea is an excellent way to dispel cold and it is easy to make from fresh roots. Peel about 1-2 inches of the root and chop it into about 3-4 cups of cold water in a pan. Bring to a boil and let it simmer for about 10 minutes. You also can add red dates and honey while the ginger is cooking. Wolfberries (Goji berries) and red dates with ginger is an excellent healthful tea.

If I have been in an overheated, dry room, which can be quite common in Winter, I will add longan to my tea to lightly moisturize the lungs.

Remember to always keep a smile in your heart!

Ellasara is a long time student of Master Nan Lu. She is now participating in LifeForce, Tao of Medical Qigong with Master Lu. She has deeply studied Chinese Nutrition and Food Cures with Master Lu and at two different schools of TCM and is a certified nutritionist. She has a background as a chef, personal chef and caterer as well as having worked with people on improving their perspective on food and health. She teaches "Seasonal Harmony" a cooking class for balanced eating according to the principles of TCM/five Element Theory and is certified to share Wu Ming Qigong for Breast Health.

*Happy Holidays*

笑声

Laughter: Remember to Embrace It!

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**A Note from the Editor:**

To better serve the community of all mind-body exercises and self-healing practitioners, *Qi Dao* will be renamed as *Yang Sheng* (Nurturing Life) -- a web-based E-magazine and a network for health, happiness and harmony, with the possibility to publish a color-printed magazine for the paid subscribers in the near future. We are actively seeking for more volunteers and columnists to make *Qi Dao* a better virtual community for everyone. If you are interested in learning more life-nurturing techniques while serving the community by helping us with more columns, better contents, or translation works so that we will have more subscribers, please send an email to Kevin Chen at [qigong4us@hotmail.com](mailto:qigong4us@hotmail.com) for more information. We also need web page designer(s) to help designing and maintaining the future web site. Thank you for your continuous help and support!



# Yang Sheng

## Cultivating Qi for Body, Mind & Spirit (A network for health, happiness, & harmony)

*Yang Sheng (Nurturing Life)* — *Cultivating Qi for Body, Mind and Spirit*, is an E-magazine and a network for all practitioners of mind-body exercises, health/happiness seekers, and spiritual cultivators. It promotes philosophy and methods of self-healing, positive mind and health preservation, and shares knowledge and experiences with those who are interested in self-healing, self-empowerment, positive outlook, and their applications in everyday life. It is FREE to those who are interested in the subjects. Your contribution, participation and suggestions are truly appreciated. **We welcome new columnists to join our editorial team to work toward the same goals!**

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- To build up a virtual community for all qigong, taiji, yoga, reiki, meditation practitioners, and other spiritual cultivators. To share experience and knowledge, to support each other's practice, and to illuminate higher spirituality.
- To create a network and platform for those who are seeking health, happiness, longevity and harmony in life through their own effort, sharing and exploration.
- To promote self-healing, self-empowerment and positive mind power through feasible daily practice and effective clinical applications.