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## **The Physiology of the Three Gates in the Process of Energetic Development**

By Guan-Cheng Sun, PhD

Qigong is the practice of developing our inherent potential and well being through a growing awareness and enhancement of the “Qi” within us, as well as surrounding us. In China, these energetic practices were the foundation of all the martial arts, of energetic healing, and of Chinese medicine, philosophy, and culture. Today, Qigong offers vital direction for improving our individual health and promoting personal growth, as well as our collective well-being. Qigong, and all that it has to offer, is actually in some ways more valuable than ever. The reason I believe this to be the case is because the main function of all Qigong practices is to keep one’s body, mind, and emotions, in perfect balance; however, in our modern day, with its fast pace, many people are constantly over-stimulated--day after day, week after week, and month after month. These mental stress levels increasingly accumulate in the body. At a certain point this throws the internal systems out of balance. If this imbalanced internal condition becomes chronic, it can lead to a variety of stress-related symptoms and illnesses such as peptic ulcers, hypertension, and migraine headaches, etc.

### **Mental Stress and the Nervous System**

Mental stress is actually caused by nervous reaction. It occurs within the Autonomic Nervous System (ANS), which is an enormous network of nerves branching out from the spinal cord, directly connecting and affecting every organ in the body. The ANS is responsible for maintaining the equilibrium of the internal environment.

The ANS is comprised of two distinct systems: the Sympathetic Nervous System (SNS) and the Parasympathetic Nervous System (PNS). The functions of the sympathetic nervous system include constricting the blood vessels, tensing the musculature, speeding up the thinking process, etc. These changes occur not only when we are facing a danger or meeting an emergency, but also in more mundane situations, such as when we focus and concentrate upon our work. The functions of the parasympathetic nervous system include relaxing the blood vessels, decreasing the heartbeat, generating a peaceful state, clearing away metabolic waste products, etc. This occurs when we are resting or sleeping. From an energetic point-of-view, the sympathetic nervous system is concerned with energy expenditure, while the parasympathetic

nervous system is concerned with energy restoration and conservation. In addition, the sympathetic nervous system tends to respond to electric stimulation, whereas the parasympathetic nervous system tends to respond to magnetic stimulation.

As mentioned above, in this culture many people tend to be over-stimulated, in synch with an external environment which is too highly-pace--with an abundance of computer games, cellular phone communications, E-mails, etc. In such an environment, peoples' sympathetic nervous system stays on far too much of the time. They may find it difficult to relax, or to generate a state of internal peace. Their parasympathetic nervous system is often repressed, so it cannot function well. This sort of internal condition clearly paves the way for a host of problems. To take one very suggestive example, according to the National Institute of Neurological Disorders and Stroke, about 40 million Americans suffer each year from sleep disorder, and another 20 million people suffer occasional sleeping problems.<sup>1</sup> Growth hormone secretion occurs primarily during deep sleep, but, according to Dr. Eve Van Cauter, by the age of 45 most men have almost entirely lost the ability to generate significant amounts of deep sleep. This study suggests that, as a consequence, most middle-aged men have very low levels of growth hormone.<sup>2</sup>

### **Qigong Practice Balances the Parasympathetic and Sympathetic Nervous Systems**

When we practice Qigong, we help to slow down the aging process caused by an over-functioning sympathetic nervous system. In ancient times, Taoists observed that every phenomenon has two aspects: negative and positive. They referred to Yin and Yang as two opposing forces in nature; a healthy, vital body results from a harmonious relationship of the two opposites, Yin and Yang. Similarly, when we strike a balance between the parasympathetic and sympathetic responses and their respective systems, we dramatically enhance our health and vitality. With Qigong practice, we experience sensations of a magnetic field, like an energetic rubber band stretching between our hands. We also experience increased saliva flow, and sensations of deep relaxation, including deeper sleep states and a clearer mind. These are some of the benefits of a well-functioning parasympathetic nervous system. But why does Qigong practice affect the functions of the sympathetic and parasympathetic nervous systems?

The ancient Qigong tradition stresses that it is important to open up three gates in the back in the development of the internal energy system. The three gates are the lower gate/Coccyx (尾闾关, Wei Lu Guan), the middle gate/Narrow

Vertebrae (夹脊关, Jia Ji Guan), and the upper gate/Jade Pillow (玉枕关, Yu Zhen Guan), as shown in Figure 1.

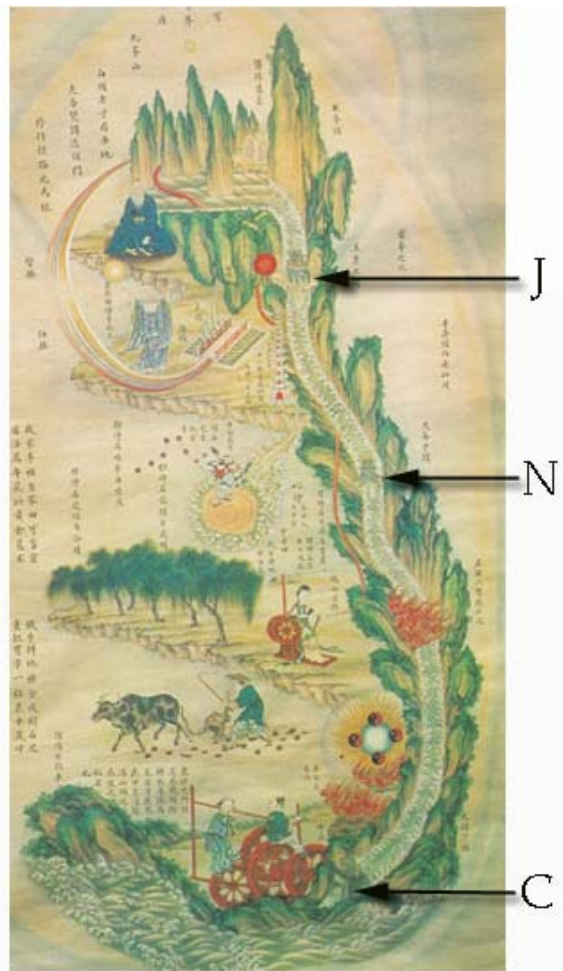


Figure 1. The Locations of the Three Gates in The Chart of Inner Luminosity By Cheng-Yin Liu (1886) C: Coccyx; N: Narrow Vertebrae; J: Jade Pillow

In my personal observation, I have found that the lower gate/ Coccyx is located in the base of the lower parasympathetic nervous system division; the middle gate/Narrow Vertebrae is located in the base of the sympathetic nervous system division; and the upper gate/Jade Pillow is located in the base of the upper parasympathetic nervous system division, as shown in figure 2. Next, I would like to describe why Qigong practice affects the states of these three gates, and why the states of these three gates, in turn, affect the functions of the sympathetic and parasympathetic nervous systems.

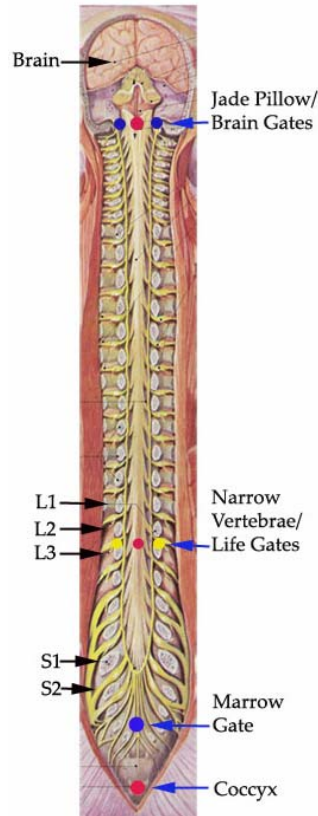


Figure 2. The Anatomical Locations of the Three Gates

### The Lower Gate/Coccyx and the Lower PNS Division

Opening up and activating the lower gate/Coccyx allows the refined energy to rise up to the marrow gate (髓孔, Sui Kong) where it nourishes the bone marrow and energizes the lower parasympathetic nervous system division. Once the lower gate/Coccyx is opened up and activated, it not only enhances the immunity, but greatly improves the vitality of the reproductive system. The lower gate/Coccyx is also known as the “gate of strength generating” (长强, Chang Qiang), meaning that once this point is activated practitioners are able gain strength and stay youthful. However, this place is, generally speaking, easily stressed and pressured from the weight of the body. By the age of 45, most men (except successful energetic practitioners) have a nearly closed or blocked gate of strength generating.<sup>3</sup> Their marrow gate and lower parasympathetic nervous system division receive less and less internal energy support. At a certain stage, if they have not become aware of this loss and do not work at keeping the lower gate open, the functions of their immunity can easily decrease and their sexual functioning can also become weak. A unique aspect of Qigong practice is that we can consciously develop our internal energy system and enhance the internal energy flow through the lower gate, thereby maintaining the lower gate’s openness, continuously nourishing the

bone marrow, and keeping the vitality of the reproductive system. For example, three years ago, a Qigong practitioner said to me “Dr. Sun, I am over 50 now, but I am feeling like a teenager again after last quarter’s Qigong class, you know what I mean?” I told him:” Yeah, I know what you mean. In the ancient Qigong tradition, it means you re-gained your internal youth.” He gave me a very happy smile.

### **The Middle Gate/Narrow Vertebrae and the SNS Division**

Opening up and activating the middle gate/Narrow Vertebrae not only allows the refined energy to rise up to energize the sympathetic nervous system, but stimulates the life gate (命门, Ming Men) to be open and activated as well. In my experiential understanding, the life gate is like the key that turns on the internal power station, the internal electricity generator--the kidneys. In the view of traditional Chinese medicine and Taoist self-cultivation, the kidneys are considered the “root of life,” because the “original Qi” has been accumulated and stored in the kidneys during our embryonic development stage. The original Qi is considered the “life force” for supporting the activities of all of the internal organs and cells in the body. From the perspective of human physiology, the primary function of the kidneys is filtering, cleansing and regulating the fluid environment in the body. This function is accomplished through the formation of urine. During the process of urine formation, the kidneys regulate blood volume and pressure, filter and cleanse waste products from the blood, regulate the concentration of electrolytes, and adjust blood pH, as well as help the liver to remove toxins. To look at the Kidney-Ureter-Urinary Bladder System symbolically, the Urinary Bladder is a lake, and the two long ducts, the Ureters, are like amazing water falls, and the Kidneys themselves are like a hydraulic power station, as shown in figure 3. Many Yi Ren Qigong practitioners have reported sensing an electric vibration initiated from the kidneys when practicing their mind/life gate connection exercise. They also, during the early stages of Qigong practice, felt a sense of tingling and electric vibration that traveled from the spinal cord to shoulder height. My personal experiential understanding, and the experiences of other Yi Ren Qigong practitioners as well, suggest that the Kidney-Ureter-Urinary Bladder System functions as an internal power station in the body that is able to produce electricity for supporting the functions of the internal body.

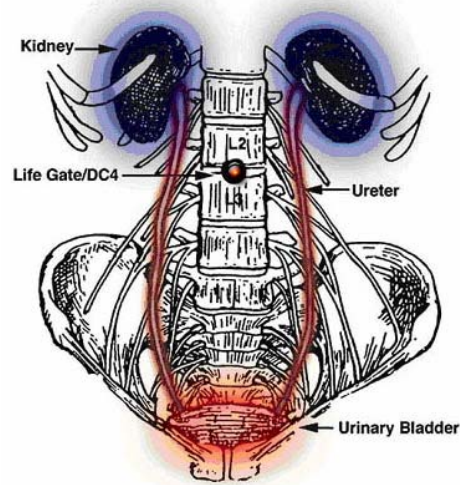


Figure 3. The Internal Power Station

As mentioned above, opening up and activating the middle gate/Narrow Vertebrae allows the refined energy to rise up for energizing the sympathetic nervous system. At this point, the sympathetic nervous system naturally increases in sensitivity and awareness. Before, when the body tried to tell us something, we probably couldn't hear it because the SNS wasn't sensitive. For example, perhaps the PNS had been sending the signal "slow down--you're exhausted." But the SNS couldn't hear it, wasn't aware, and couldn't help us to relax. Once the middle gate/Narrow Vertebrae is activated, these two systems--the PNS and SNS--have better cooperation and coordination. Everyone's body has a great bio-feedback system, information system, and alarm system. However, in general, in our education system, we have been trained intellectually rather than intuitively, so our mind is used to being outward-directed all the time. No matter how hard our body may try to tell us what is wrong internally or in our activities, even if we are in a dangerous situation, our mind cannot see it, cannot hear it. The internal intelligence always tries to do us a great service, but the mind just doesn't get it. The internal intelligence, the body's information system, is either being abused or ignored by the mind all the time.

Why is the mind not able to receive this great service from the body's internal intelligence? Why is it being ignored by the mind? In my personal experiential understanding, one of the reasons is that the higher level energetic communication function of the sympathetic nervous system is not activated. I have experienced a growing awareness of internal and external communications at the energetic level that began upon the opening and

activation of the middle gate/Narrow Vertebrae, and life gate. Usually, six weeks into a weekly Yi Ren Qigong Level I class or during the course of a two day intensive training, most of the practitioners are able to express their feeling and awareness clearly, with statements such as “I can feel my energy vibrating in my kidneys” or “I am aware my shoulders are not relaxed, but I never noticed it before” or “My back pain is gone” .....

### **The Upper Gate/Jade Pillow and the Upper PNS Division**

Opening up and activating the upper gate/Jade Pillow not only allows the refined energy to rise up for energizing the upper parasympathetic nervous system division, but also stimulates the brain gate(脑户, Nao Hu) to be open and activated.<sup>4</sup> The upper parasympathetic nervous system division is responsible for all of the internal organs (except the reproductive organs) having enough energy to maintain their health and vitality. When the upper parasympathetic nervous system division is nourished and energized from the refined energy within, most of the internal organs feel loved and cared for. During the internal cultivation process, when the upper gate/Jade Pillow is opened and activated, practitioners experience a greater joy and peace within because they feel the internal body reaching a new level of balance and harmony.

Opening and activating the brain gate allows the refined energy to flow into the brain, supporting and enhancing the brain's functions. The brain is made up of about 100 billion neurons and is one of the largest organs of the body. Even though the brain comprises only about 2 percent of total body weight, it needs about 20% percent of the body's oxygen supply and receives about 20% of the total blood flow to the body per minute. The brain is one of the most metabolically and energetically active organs of the body. Human beings are clearly different from animals in that we have a developed brain. The human brain has great learning ability, creative power, amazing memory, thinking, reasoning, decision-making, self-awareness, etc. In general, only a small part of the brain is being used. However, there are great potentialities in the brain to explore and develop.

The cerebrum is the part of the brain which is very developed and clearly different from other animals. The cerebrum can be divided into four areas, or lobes: first, the frontal lobe is the intellectual area controlling the most abstract reasoning; second, the parietal lobe is the intuitive and self-awareness area processing information from the senses; third, the occipital lobe is the vision area regulating vision; and fourth, the temporal lobe is the memory area controlling memory, hearing, and language. The frontal lobe is located in

the front of the brain; the parietal lobe is located in the back of the brain; the occipital lobe sits at the base of the brain; and the temporal lobe is located on each side of the brain as shown in Figure 4.

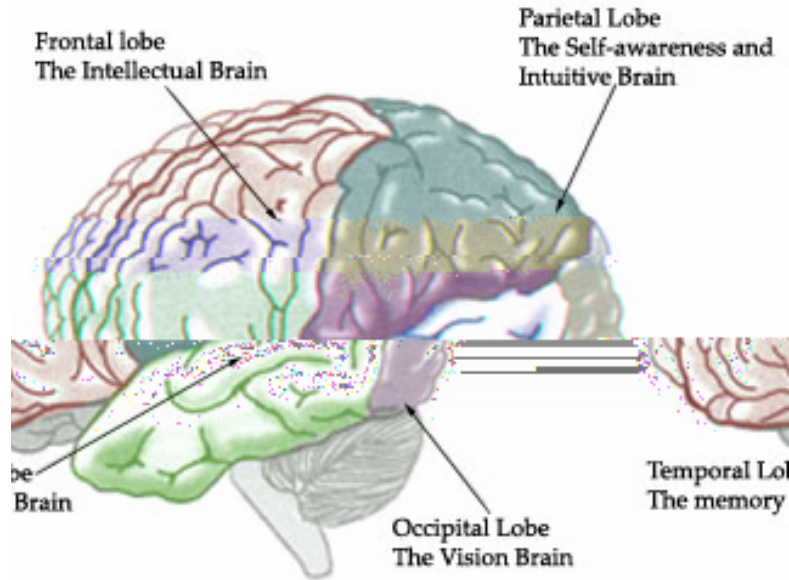


Figure 4. The Cerebrum fo Human Brain

In our education system, we have been trained intellectually rather than energetically. Thus, the frontal, temporal, and occipital lobes of our brain have been trained, but the parietal lobe of the brain is relatively untrained. In my experiential understanding, this is another reason why the mind can not see or listen to the body's intelligence and information, thereby missing out on crucial communications and interactions between the mind and the body.

After opening and activating the brain gate, all parts of the brain can be energized and nourished with refined internal energy, particularly the back part of the brain, the parietal lobe. The oxygen supply of the brain is also enhanced by the increased internal energy flow. And, interestingly, the quality of skin breathing is especially effective and active in the back of the head. When the parietal lobe is energized, it not only greatly helps the intellectual mind to understand the information received from the senses, but also gradually increases self-awareness. This is reflected in the internal cultivation process when Qigong practitioners become able to recognize different layers of consciousness and sub-consciousness, as well as self-consciousness and collective consciousness, when their brain gate is opened and activated. They also experience greater communications and interactions between the mind and the body within, as well as between their self and their environment, at the energetic and informational levels. At this stage, with the

development of their intuitive system, practitioners often experience a way of knowing beyond the usual five senses. For example, dreams can become an effective and useful informational resource. It must be said, however, that at the beginning stages of the brain gate opening and activation, some practitioners are not able to distinguish between real information and illusions, between real information and their own thought projections and delusions.<sup>5</sup> It takes much disciplined practice, clear understanding, and internal realization to achieve self-mastery and actualization.

## **Conclusion**

The benefits of bringing the parasympathetic and the sympathetic nervous systems into greater balance are apparent to Qigong practitioners very soon after embarking on self-cultivation practice--though this process, of balancing the two aspects of our autonomic nervous system through Qigong practice, is one that only deepens over the years. Initially, practitioners experience energy sensations and begin to listen to the body's feedback; they experience better sleep, are functioning better in their daily lives, and feel more grounded.

As practice and commitment continue, practitioners experience greater degrees of opening of the three gates, resulting in a general state of vitality and health, and a more integrated intelligence, one that is both outwardly and inwardly informed. With the body's balance enhanced by greater cooperation and coordination of the parasympathetic and sympathetic nervous systems, practitioners are free to make real progress toward the ultimate goal of the synchronizing of the body and the mind.

## **Acknowledgments:**

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## **Endnotes:**

1. From the website of the National Institute of Neurological Disorders and Stroke:

<http://www.neurologychannel.com/sleepdisorders/index.shtml>

2. From BBC News, 15 August, 2000:

<http://news.bbc.co.uk/1/hi/health/881636.stm>

3. In the case of women, this is not as true. Perhaps because the coccyx of a woman is situated differently, or is more flexible, or for some other reason, I have found that this point is generally more open in women than in men, though women benefit just as greatly as men do by practicing lower gate exercises.

4. I would like to stress that opening up and activating the upper gate/Jade Pillow and activating the brain gate is quite an advanced step in the internal cultivation process. All of the opening and activating of the energetic gates should happen naturally, not be pushed or forced.

5. For someone who is or has been dealing with mental illness, before practicing Qigong and other types of energetic work, I would like to suggest that they consult with their therapist and doctor first. They should not practice Qigong and other types of energetic practice without their therapist or doctor's permission and cooperation. It has been my experience that depression is readily helped by Qigong practice. The effects of energy grounding from Qigong practice also contribute to a greater sense of well-being and improvement in many patients undergoing therapeutic treatment. But these beneficial responses to the energetic practice do not occur in every case, and practitioners with a history of mental illness require careful monitoring.