

# CHINESE ORGAN PHYSIOLOGY



## THE ORGAN NETWORK OF WOOD: THE LIVER

Like a military commander who formulates strategy and tactics, the Liver exercises authority in collecting and directing the Blood. Since Blood is never stationary but constantly circulating, and since Qi courses inseparably through the body with the Blood, the Liver equitably distributes all resources, assuring the maintenance of smooth flow.

### Storing and Releasing Blood

The Liver bears the Yin responsibility of storing and the Yang role of distributing the Blood. This process of regulation determines the quantity and pressure of Blood in the physical body and the evenness of emotion and consistency of behavior in the feeling body. The force of the Liver moves upward and outward, lifting Blood and Qi toward the far reaches of the head and limbs. Through this action, the Liver facilitates the work of the Heart and Spleen to adequately nourish the body with Blood and Nutritive Essence. The healthy sexual and procreative role of the genital organs also depends on the capacity of the Liver – to transmit the power of our Essence to another person.

### Spreading Qi

The Blood nourishes the tissue of the body and is the source or “mother” of Qi. Through the task of holding and releasing the Blood, the Liver spreads the Qi. The Liver governs the tendons, ligaments, small muscles and nerves, motivating and regulating all body movement. In Western terms, the Liver’s function bears resemblance to the sympathetic nervous system insofar as it is the mechanism of excitation and arousal. This movement of Blood and Qi, of muscles, joints, limbs, and viscera, comprises the active life of the body. When movement is steady and tissue resilient, it means the Liver is functioning in accord with its character and responsibility.

Inability to evenly spread the Qi arises from a disturbance of the Liver’s power to store and release Blood. This manifests as erratic activity in the body and a volatile temperament. For example, migraines occur when the Liver is not able to properly store, discharge, and distribute the blood to the eyes, ears, and brain: the head becomes hot and congested while the hands and feet become cold. A similar thing happens with painful menstruation: as the discharge of blood begins, if the Liver cannot release easily and evenly, the uterus will cramp. This same pattern of poor circulation also causes spasm in the muscles. Problems of irregularity as diverse as disturbed sugar metabolism, sudden outbursts of emotion, uncoordinated movement, blurry vision, indigestion, and constipation, or difficulty unwinding after working hard may all occur as a result of the Liver’s inability to maintain the smooth flow of Qi and Blood.

### Mate to the Liver: the Gallbladder

The Gall Bladder is the paired Yang organ of the Liver Network, that executes a part of the Qi-regulating role. Unlike the other Yang organs, that only transform and transmit matter but do not store it, the Gall Bladder stores and secretes the bile, a pure and essential substance that stimulates peristalsis in the Stomach and Intestines, aiding assimilation and elimination.



The Gall Bladder imparts the power of decision and the Liver the power of action. The purity of the bile assures pure and proper judgment, clarity of vision, thought, and decision-making. If the Liver and Gall Bladder are dissonant, action occurs without judgment, decisions cannot be actualized, or a Hamlet-like paralysis of decision and action persists. Metaphorically, the Gall Bladder and bile form a liquid crystal, like the lens of the eye, through which we perceive the (existent and anticipated) inner and outer reality. Our prescience and foresight arise from this faculty. With a deterioration in function of the Liver Network, a veil obstructs vision and thought. Cataracts, glaucoma, and other deformities that diminish vision may arise.

### **Stagnation of Qi and Blood**

Poor Liver function can lead to stagnation of Qi and eventually Blood. Stagnation of Qi is experienced in the body as a feeling of fullness, discomfort, or pain in the chest, belly, or head; and in the mind as agitation, nervous tension, suppressed emotion, and frustration. Stagnation of Blood is experienced as a localized stabbing or cutting pain. If this stasis of Blood persists for too long, it gives rise to hard lumps, masses, tumors, or chronic inflammation in the chest, abdominal, and pelvic region. A mass or lump may come and go unpredictably, like an intestinal spasm when Qi is obstructed, or may become a benign or malignant tumor in the final stages when Blood becomes “congealed.” This situation is often the case in women who develop uterine fibroids, uterine hemorrhage with large clots, irregular, scanty, or suppressed menstruation, cervical dysplasia, ovarian cysts or tumors.

Stagnant Qi can also obstruct the Spleen, affecting its ability to generate and distribute moisture and nutritive essence in the body. This impairment of Spleen function results in the accumulation of Dampness and an attrition of vitality. The fluid excess itself then may become a secondary source of stagnation since it impedes the flow of Qi. The body often generates Heat to counteract this fluid excess by drying it. This Heat then accumulates and intermingles with the Dampness. Damp Heat can settle in the pelvis, where it damages and obstructs the Blood. Over time this will lead to coagulation and deficiency of Blood. Damp Heat in the Liver also sets the stage for problems such as genital and perianal herpes, jaundice, and hepatitis. In men, the manifestations of stagnated Liver Qi with Damp Heat are prostatitis, epididymitis, urethritis, and painful ejaculation.

### **Blood of the Liver**

The Blood stored by the Liver is responsible for nourishing the tendons, ligaments, muscles, joints, and eyes. When the Liver cannot properly store the Blood, symptoms such as muscle spasm, dizziness, numbness of the limbs, and dry eyes occur. If the flow of Blood is poorly regulated, muscles and nerves become easily fatigued and metabolic waste products are not efficiently eliminated. Stagnation of Qi and Blood in the Liver leads to pain and sensitivity in the muscles, eyes, and glands (such as breasts, thyroid, prostate, testes, and ovaries) and tiredness, especially fatigue that is worse after rest.

### **Judicious Grace**

In short, the job of the Liver Network is to monitor flow, maintaining evenness of emotions and clarity of judgment, giving grace and flexibility to the physical and mental body. When the Liver is healthy, judgment and decision-making are sound, vision is clear, and action is resolute. Strengthening the Liver develops drive and adaptability, enhancing our capacity to cope with the vicissitudes of life.





## THE ORGAN NETWORK OF FIRE: THE HEART

The Heart is considered the Ruler because like a benevolent and enlightened monarch, it is all-knowing and ever-present, sharing its wisdom unconditionally for the good of the whole. Our Fire aspect represents fulfillment: the total expression and integration of our being, the full extent of our expansion, maturation, and development.

### Propels Blood, Enfolds Spirit

The Heart propels the Blood through the body and enfolds the Spirit (Shen), maintaining awareness. This continuous flow of Blood through the vessels both nurtures the body and serves as a vehicle for communication. The Blood communes with each and every cell, pervading all regions of the soma. It also “houses the mind,” serving as the material matrix of the psyche.

Just as the Sun provides warmth and light for all of creation, so the Heart suffuses and permeates the body with consciousness, sensation, and feeling. The Heart maintains awareness by integrating and communicating experience, establishing an inter-connectedness between our inner life and external universe. The Heart holds and envelops the Spirit. In Chinese medicine, the term “Shen” does not refer to an independent, discarnate entity and is not to be confused with Western religious ideas about the soul or immortal aspects of human identity.

Spirit in Chinese medicine connotes the totality of the person’s life force at any given moment, and represents the complete outward expression of the Qi through the personality. When the Spirit is strong, it means that the soma, psyche, and personality are well blended. This is reflected by aliveness of emotional expression, presence of mind, bright eyes, and a lustrous complexion. The Spirit is also the realm of the higher moral and spiritual faculties. Conscious identification with nature and humanity and the compassion that accompanies those sentiments emanates from the Heart.

A sense of individualized being and at the same time a sense of union with others is the power of the Heart. The Heart as the foundation of the mind in Western terms resembles the integrative function of the cerebral cortex which gives rise to the capacity for thought, perception, sensation, speech, communication, and memory. What the Kidney receives through the sense organs, the Heart expresses through speech, the resonance of the voice, and the radiance of the complexion and eyes.

### Mate to the Heart: the Small Intestine

The paired Yang organ of the Heart Network is the Small Intestine, that which separates out the useful constituents of digested food, conducting fluid waste to the Kidney and solid waste to the Large Intestine. This function permits the Essence of food to be assimilated by the Spleen and extracted into the Blood that flows to the Liver. The Small Intestine assists the Heart in communication by the purification and transportation of fluids and substances that enter the Blood. By separating the purer from coarser elements physically and psychically, the Small Intestine protects the Spirit by filtering out negative input. Pathologies of the Heart often manifest in inflammatory disorders of the Small Intestine. This occurs when over-activity of the Heart produces Heat that’s transmitted to the Small Intestine



and conducted downward and outward through the Bladder and Large Intestine. Urethritis, cystitis, ileitis, duodenal ulcers, and enteritis can be precipitated by anxiety states associated with agitation of the Spirit.

### **Disturbances of the Heart**

Shock, surprise, inordinate sorrow, or overwhelming joy can obstruct the Heart's function and disrupt the perfusion of Blood and the continuity of consciousness. An individual whose Heart has been overwhelmed by emotional trauma may suffer a "break with reality," a heart attack, or stroke. If the Blood of the Heart is insufficient, even without emotional trauma, the mind will have no house in which to dwell and the Spirit will "wander and roam." This deficiency is experienced as forgetfulness, distraction, restlessness, and disturbed sleep. The Heart becomes overheated and overactive when the Yin or Blood becomes deficient. This excess Heat manifests as incessant talking, disturbing dreams, aberrations of behavior, disjointed thinking, or blood in the urine, stool, or sputum.

In order for the Heart Network to function well, it must remain peaceful and protected. When there is agitation and unrest, it is difficult for the Heart to respond appropriately to sensory input. This makes the Shen insecure and generates a feeling of anxiety. Under stress, circulation is abnormal and thinking becomes disordered and confused.

When the Qi of the Heart dissipates, a healthy, pink complexion can alternate between gray pallor and a scarlet veil. The person may experience sudden exhaustion and feel either too Hot or too cold. Enthusiasm for life can be overcome by periods of withdrawal and melancholy. This person may have difficulty finding words and suffer short-term memory loss, shortness of breath, and perspire with slight exertion.

When the Heart cannot perform its job properly, arterial circulation becomes impaired: blood pressure lowers, the limbs become cool, the heart skips beats, and the person feels tired, swollen, and breathless. These are the symptoms associated with heart failure. As the Qi dissipates, the tendency is for the Blood to become sluggish and stagnant. The extremities may become numb and the lips, nose, and fingers take on a purplish hue. As a result of this Blood stasis obstructing the Heart, angina or chest pain may occur.

### **Full-bodied Spirit**

The Heart has the pure nature of Fire. It exudes warmth and light: the warmth of good circulation and the light of consciousness. Under stress, the light may become cloudy and the warmth can either dissipate or turn to flames. When the Heart Network functions properly, a person has a tranquil mind, good memory, clear senses, restful sleep, and a robust complexion. It is the nature of the Heart to be accessible, responsive, and serene, like a monarch who rules not by force but by spreading joy, maintaining peace, and establishing communication.





## THE ORGAN NETWORK OF EARTH: THE SPLEEN

Just as a Minister of Agriculture oversees the production and distribution of farm resources, the Spleen supplies the nourishment that sustains the organism. The raw material of food and experience is ingested, digested, and assimilated to fuel the life of the body and mind. This fuel, called Nutritive Essence, is extracted and converted into an abundance of Qi and Blood. Gathering and holding together is the dominion of Earth. Like Mother Earth, the Spleen is the constant provider, the hearth around which the body gathers to renew itself.

### Extract, Convert, Supply, Contain, Lift

By providing nourishment, Qi and Blood, the Spleen holds the fabric of the body together and upright, maintaining the integrity and position of flesh, blood vessels, and organs. The Spleen “governs the Blood” by keeping it within the arteries and veins, and “uplifts the Qi,” counteracting gravity and preventing prolapse, by holding the viscera and muscles in their proper place.

### Metabolic Fuel

The Spleen regulates metabolism. It adjusts the quantity of pure fluid Essence that is released into circulation after its refinement from digestion. As a hydroelectric dam assures a reliable power output by controlling the amount of water flowing through the turbines, the Spleen regulates how much Essence is transformed into Qi and Blood; that is, the quantity of fuel metabolized determines how much energy is produced.

### Moisture and Density

The distribution of Moisture is another function of the Spleen. Through the process of accumulating and releasing Moisture, the Spleen adjusts the viscosity of the blood and fluids circulating through the vascular and lymphatic systems, the density of the flesh, and the total mass of the body. The dissemination of Moisture affects the weight, shape, and tone of tissue, and the lubrication of joints and mucous membranes.

### Assimilation

The Spleen governs both the physical extraction of nutrients from food and the incorporation of ideas and information by the mind. The faculties of concentration, ideation, recollection, and reflection emanate from the Spleen; it focuses the mind and bestows the power of intention.

Intention is a means of gathering the momentum necessary to transform will (the impulse of the Kidney) into action (the drive of the Liver). Maintaining this necessary motivation to sustain effort over time arises from the Spleen. Regulating metabolism, adjusting the distribution of Moisture, holding tissue together, preserving the uprightness of muscles and viscera, and facilitating higher mental processes constitute the means by which the Spleen maintains homeostasis and assures adaptation and equilibrium.



## Constancy

The Spleen occupies the position of the fulcrum, the balance point through which transition occurs. By means of a fulcrum, a lever transfers energy and mass from one site to another. The Spleen transports nutritive Essence – the basis of Qi and Blood – throughout the organism, forming and reforming self and tissue, and imparting a sense of substantiality and terrain. Just as a heavy keel assures the stability of a sailboat, the Spleen provides ballast. Body weight, size, and shape remain virtually the same from day to day. To accommodate fluctuating conditions, the Spleen shifts fluid and mass from place to place, retaining the body's center of gravity. By promoting continuity of mental orientation and psychological perspective, the Spleen preserves a sense of continuous identity in relationship to place, people, and values. Such constancy supports adaptability, the capacity to endure stress without harm.

The Spleen alters its density to cope with stress – a strategy for counterbalancing extreme deviation. Shifting the mass of the body facilitates ease of movement or helps us remain still and unperturbed. When the Spleen metabolically liberates energy and fluids from the tissues, to relieve pressure and enhance circulation, the flesh becomes less dense and the body lighter and more mobile. When matter and fluids accumulate, flesh increases and the body becomes heavier and more stationary. The Spleen attempts to master disequilibrium by slowing down or speeding up the conversion of nourishment to Blood and Qi. When the Spleen thickens fluids and tissue, it produces stagnation and adhesion, retarding movement and weighing down the body.

## Overwhelmed

When over-burdened by excessive input, either food or information, the Spleen cannot transform or transport what it receives and produces congestion instead of providing nourishment. This congestion is experienced as distension, fullness, and lethargy accompanied by ponderous, obsessive, and muddy thinking. Movement of mind and body becomes lugubrious and effortful. When the Spleen is exhausted, the mind becomes disoriented, easily distracted by scattered, superficial, and elusive thoughts. The body feels fatigue, and a lack of energy and strength.

The Spleen also “supervises” the Blood by keeping it within the vessels. Normally, through its function of digestion and assimilation, the Spleen supplies the nourishment to maintain the tone and elasticity of the blood vessel walls. When the Spleen cannot perform this role, this leads to the fragility or collapse of these walls – the basis of bruising, varicosities, chronic bleeding, and hemorrhage.

Since the Spleen is the source of the body's “juices” that circulate in the media of blood, lymph, and saliva, it is vulnerable to problems of Dampness. Surplus fluids spill over into tissues which, once saturated, pass it into joints, sinuses, abdomen, lungs, and the space between the skin and muscles. This excess is experienced as spongy and tender flesh, swelling of the belly, joints, and lymph nodes, edema under the skin, painful swelling of the breasts or reproductive organs, and copious or sticky discharges from the nose, throat, mouth, and other mucous membranes. The texture of secretions is determined by the interaction of Dampness with Heat or Cold. Clear and fluent discharges are a product of Cold affecting the Spleen; thick and sticky discharges occur when Heat becomes entangled with Moisture.



Phlegm is congealed fluid that arises from accumulated Dampness and obstructs the free flow of Qi and Blood, producing stagnation. Phlegm in the respiratory tract is associated with coughing, wheezing, and expectoration of sputum. Phlegm affecting the joints, muscles, and nerves is felt but not seen; this “invisible phlegm” can create arthritic and rheumatic pain, dizziness, seizures, and even paralysis.

### **Mate of the Spleen: the Stomach**

The Yang partner within the Spleen Network is the Stomach, which “rots and ripens” food by moistening and decomposing it. In contrast to the Spleen, the Stomach needs fluids to execute its duty. Yet, excessive wetness makes the Spleen’s job of absorbing and distributing fluids more difficult. Since the Stomach is Yang, its nature is warmer and drier and therefore needs the balance of Yin moisture; since the Spleen is cooler and damper (Yin), it needs the balance of Yang dryness.

Normally, the Spleen Qi moves up and brings pure Essence to the Lung, while the Stomach Qi descends, bringing impure matter and liquid to the intestines. If the Stomach Qi instead rebels and moves upward, belching, hiccoughs, nausea, regurgitation, and inflamed gums can occur. It is the Spleen’s upward-moving Qi that maintains organs, vessels, and tissues in their proper place. If Spleen Qi sinks downward, diarrhea, and prolapse of organs and veins occurs, especially of the stomach, intestines, uterus, and rectum, causing hernias and hemorrhoids.

### **Weak Spleen: Depleted Qi and Blood**

Just as Spleen weakness leads to deficiency of Qi, it also leads to a deficiency of Blood. Symptoms of this are anemia, dry skin and hair, blurry vision, pale lips and nails, dizziness and fatigue (muscle atrophy, weakness, and emaciation). The Heart depends on the Blood formed by the Spleen, its deficiency leading to symptoms like palpitations and insomnia. Similarly, without adequate Blood to store, the Liver becomes unstable and unable to properly regulate the Qi. This in turn causes disruption to the digestive function of the Spleen. When the Lung’s moist Essence, generated by the Spleen, is insufficient, its delicate lining becomes dry and fragile, as do those of the nose and large intestine. This hinders the blending of Essence (Food and Air), leading to a loss of vitality and a weakening of body defenses.

### **Great Sustainer**

Thus does the Spleen assist the Liver and Heart by maintaining the integrity of the blood vessels, nourishing the Blood and maintaining its proper viscosity so that it flows smoothly. This also helps preserve the stability of the mind and emotions. The Spleen assists the Lung and the Kidney by generating Essence and distributing adequate moisture and lubrication for skin and mucous membrane.





## THE ORGAN NETWORK OF METAL: THE LUNG

In the Lung, the Qi of Heaven (air) joins with the Qi of Earth (nutrition), forming the Qi that vitalizes human life. Like a Minister who conducts affairs of state and determines territorial borders, the Lung governs the relationship between the inside and the outside, setting limits and protecting boundaries. With restraint and delicacy, expanding and contracting, the Lung collects, mixes, and scatters Qi, instilling rhythm and order.

### Establishing the Cadence of Qi

The newborn's first breath ushers in its separate, individual existence. The activity of respiration drives Qi throughout the body. This continuous bellows-like pulsation of the chest and abdomen sets the basic rhythmic pattern for all the functions in our body. To receive air the Lung empties, slowing the movement of Qi, and when the chest fills, the movement of Qi accelerates. In Western terms, the function of the parasympathetic nervous system is analogous to that of the Lung insofar as it is a mechanism for inhibiting and quieting activity.

Many physical and spiritual self-mastery systems adhere to the premise that by controlling the breath one can achieve and preserve mental clarity, emotional tranquility, and physical vigor. Accordingly, Taoist adepts developed a practical discipline of breath called Qi Gong to cultivate vitality and prevent disease.

Like the alchemical process of transmuting base metals, lead and mercury, into gold, the Lung extracts the essence from air, combining it with the essence from food sent by the Spleen, distilling it into the pure, correct Qi of bodily life. The Lung then guides this refined essence downward from the head into the chest and abdomen, and outward toward the muscles, skin, and extremities. Through exhalation, the Lung eliminates the by-products of its alchemical work by expelling the turbid, used air. If this descending and dispersing cadence is thwarted, an uprising of rebellious Qi causes coarse breathing, headaches, tightness of the chest and shoulders, and mental distress.

### External Security

As the interface between our inner and outer world, the Lung manages external security. Sometimes referred to as the "third Lung," the skin is the outermost surface of the self, providing an elastic envelope that contains and shield us from intrusion. The Lung transpires across the dermal layer: through perspiration and opening and closing the pores, it constantly adjusts the moisture and temperature of the body. Like a screen of variable porosity, the Lung tightens the skin to ward off undesirable influences and seal in valuable internal resources. It also loosens the skin to release unwanted internal substances and feelings, and permits penetration of desirable influences.



Often the first strategy for treating acute illness is to drive the pathogenic influences of Cold, Heat, and Wind out through the skin by using methods that open the pores and stimulate peripheral circulation. The Lung mobilizes the periphery, called the “Wei Qi,” or first line of defense, enabling the body to adapt to its environment and resist adversity. If the Lung Qi is weak, our physical and emotional protection is reduced, making us vulnerable to infectious diseases as well as the negative thoughts and feelings of other people.

### **Dispersion of Moisture**

The smooth dispersion of Moisture to all parts of the body is also a task of the Lung. It collects the Fluid Essence transported upward from the Spleen and moisture from the air and “precipitates” it downward, like mist, to the Kidney and Bladder; it also releases it as sweat. Thus, the Lungs serve to regulate urine output. If the Lung Qi is prevented from properly descending, moisture accumulates in the upper body, causing facial edema above and scanty urinary output below. If, on the other hand, the Lung Qi is severely weakened, moisture and vitality may leak away from the body through excessive sweating (perspiration at rest) or uncontrolled urination (incontinence), because the Lung Yang can no longer vaporize the Qi upward.

Since Moisture is generated by the Spleen and transported to the Lung, Spleen problems lead to a building-up of Moisture, or Dampness. This Dampness in the Lung can congeal into phlegm that obstructs the bronchi, throat, and nose, impairing respiration, causing coughing, asthma, and nasal congestion. The Lung is the upper source that accepts the Qi, and the Kidney is the lower source that grasps and anchors the Qi. Shortness of breath can occur when the Kidney cannot store the Qi that the Lung receives.

### **The Lung-Heart Connection**

Since the Lung commands the Qi and the Heart rules the Blood, the Lung and Heart depend upon each other. The axiom, “Where Qi goes, Blood flows” means that the movement of Qi governs the flow of Blood. The beat of the heart keeps pace with the breath, and the Blood follows the Qi on its return to the heart. A congestion of Lung Qi impedes the circulation of Blood, causing palpitations and fullness in the chest. A deficiency of Heart function impairs respiration, causing shortness of breath and easy sweating.

Other disturbances of the Lung manifest as disorders of the skin, mucous membrane, and venous circulation. Manifestations of this include dry and wrinkled skin, allergic dermatitis, loss of body hair, varicose veins, sensitivity to drafts and changes in temperature, and diminished immunity to colds, flus, and other infectious microbes.

### **Mate of the Lung: the Large Intestine**

The Large Intestine is the Yang partner of the Lung Network. It amasses and discharges the refuse of digestion and metabolism, continuing the process of refining that begins in the Lung. By dispelling stale air and excreting turbid matter, the Lung and Large Intestine separate out that which we no longer desire or need.



Generally, the Large Intestine delineates and shapes that which we no longer want and that which is not really “us,” creating the space for recognition of what we want and who we are. It helps us to concretely distinguish between what is useful and useless, beneficial and harmful, right and wrong, self and non-self.

When the Large Intestine is not functioning properly, distinctions become vague and ambiguous and the mind becomes unclear and cluttered. Failure to eliminate the old leaves no room to take in what is fresh and new, leaving an unpleasant feeling of stuffiness, staleness, and lifelessness. Conversely, the inability to extract and retain what is good leaves a person weak, empty, and withered. The Large Intestine, together with the Lung, promotes the processes of separation, distillation, individuation, and elimination, engendering a distinct sense of form and value.

The ease with which we are able to let go of unnecessary thoughts, feelings, and attachments is facilitated by the function of this Network. Letting go can be experienced in the extreme as a loss of control, provoking an urgent desire to exercise stricter self-regulation. For the sake of security, relaxation and flexibility may be sacrificed. This reluctance to easily release impulses and express feelings develops into a posture of rigidity and withholding.

Suppressing physical and emotional responsiveness is a way of armoring oneself, stiffening and hardening the protective envelope of the psyche and soma. The skin and superficial musculature become rigid, the deeper muscles of the diaphragm and intestines become spastic and tense. Asthma, constipation, stiffness of the spine and neck, and spastic colon are consequence of this over-restraint of Lung and Large Intestine. Mental fixation and emotional inhibition limit the range of response, restricting creativity and a person’s ability to adapt.

### **Inspiration, Form**

With inspiration and expiration the body inflates and shrinks, defining the margins of contraction and expansion which are the fundamental polarities of Yin and Yang. Breathing is separated into inhalation and exhalation – between the two there is a brief interval, a moment of stillness that partitions events, marking beginnings and endings. The Lung is sensitive, tender, yielding, open, and refined as it directs the Qi, providing form, structure, and definition. When the Lung is vigorous and strong, the skin is smooth, supple, and vibrant, and the body has abundant physical power, an even tempo, and superior immunity. The Lung is the source of inspiration, creating open space and the emptiness within which new ideas and emotions take shape.





## THE ORGAN NETWORK OF WATER: THE KIDNEY

The Kidney consolidates and stores the Qi that initiates and keeps life growing. Like a Minister of Interior who conserves natural resources, stockpiling essential raw materials for use in times of growth, crisis, or transition, the Kidney preserves what is essential (the Essence) of human life. As the well of vitality and endurance, the Kidney is the germ of intellect and creativity, and houses our instinct to procreate and survive.

### Harbors the Germ

Before we are born, our parents endow us with Essence Qi that, following birth, is fortified by Air Qi from the Lungs and Food Qi from the Spleen. Both inherited and acquired Qi is collected within the reservoir of the Kidney, to be dispensed as needed. To say the Kidney “holds the Essence” means it generates and warehouses the original material substance that forms the basis of all other tissue – it grasps the kernel from which all life springs. Kidney Essence can be likened to the genetic information encoded in DNA, the template of biological destiny that, along with basic structural proteins, forms the hormones and enzymes that direct cellular metabolism.

The Kidney is the fundament that upholds our continuous regeneration, the link in our chain of being. Responsible for procreation, the Kidney transmits our physical and cultural inheritance as a species from millions of years of evolution. It is the source of our imagination, enabling us to look backward at our ancestral origins, our heritage, and look forward to envision our future and create our progeny.

Like the deep-reaching roots of a sapling suck the juices of the earth while its leafy branches imbibe sunlight and air, so the Kidney secures essential sap (Yin) while imparting essential heat (Yang). Kidney Yin, like the root system, nourishes and moisturizes, whereas Kidney Yang warms and activates. Even though the Kidney is the most Yin organ, it contains within it the Yang seed of its opposite, Fire.

The rudimentary vegetative mechanisms that sustain us – analogous to the integrated function of the hypothalamus, pituitary, and adrenal glands in Western terms – are governed by the Kidney. The primary catalytic substance, Kidney Essence, enables the Spirit (Shen) to express itself. Jing and Shen interact to create the soma and the psyche, Water and Fire, Yin and Yang. This presence (Shen) that animates our being is required to humanize its vessel, the body. The vessel (Jing) is necessary to give mindful existence its form.

### Regeneration

The Kidney supports the reproductive organs (ovaries, uterus, testicles, and prostate), the reproductive material (sperm and ovum), and reproductive activity (sexual impulse, ovulation, ejaculation, fertilization, and gestation). When Kidney Qi is abundant, sexual and reproductive life is vigorous and lasting. The supply of inherited Essence is finite – our life span is ultimately demarcated by its diminution.



## Growth

The Kidney engenders the structural elements of the body and regulates growth. The proper unfolding of mental and physical maturation depends upon the adequate supply of Essence, giving rise to the marrow that, in turn, produces the brain and spinal cord, bones, teeth, blood, and hair. The brain is called the Sea of Marrow, meaning that the cleverness and acuity of the mind and senses are subsidized by the Kidney, as is the timely appearance of teeth, secondary sexual characteristics, the ability to store calcium in the bones, inscribe experience in the memory, and accelerate the manufacture of red blood cells.

When Essence is plentiful, the life force and the ability to resist disease and adapt to change are strong. Poor health, developmental deformities, mental retardation, fragility of bone, and premature aging signify an insufficiency of Essence. Withering of the skin, deterioration of the joints, fading of mental faculties, stiffness of the spine, loss or graying of hair, dimness of vision and hearing, loss of teeth, impotence and infertility betray its decline. Ample stamina, luxuriant hair, perennial vigor, sound teeth, and agility of thought evidence a flourishing Essence.

## Fluid Metabolism

Kidney Yin is the basis of all liquid substances in the body, and Kidney Yang regulates the balance and circulation of these constituents. All internal secretions and interstitial fluids are derived from the synthesis of inherited and acquired Yin Essence, including tears, saliva, mucus, urine, sweat, cerebrospinal fluid, synovial fluid, plasma, and semen. The Yin aspect of the Kidney accepts and stores the Qi that precipitates downward from the Lung, and the surplus Qi from the Spleen and Stomach, transmitted by the Small Intestine. By sucking in the descending Qi from the Lung and holding onto it, the Kidney anchors the Qi like a root, permitting deep inhalation and perfusion of oxygen (Air Qi). The Kidney in the lower body and the Lung in the upper body act upon the Qi like the moving coil within a magnetic chamber generates an oscillating electrical field. The Qi constantly moves downward and upward between the poles of the pelvis and chest.

If too much fluid condenses in the lower body, it stagnates, producing lower abdominal bloating, swelling of the knees and ankles, and puffiness beneath the eyes. Water retention represents either the inability of the Kidney to discharge turbid fluid or the excessive accumulation of surplus energy in the form of Moisture. In either case, the build-up of interstitial fluid can interfere with the circulation of Qi and Blood, affecting primarily the Lungs and Heart. Excessive Moisture in the Lung becomes phlegm and manifests as puffiness of the face and skin between the eyebrows and upper eyelids. In the Heart Network, excess Moisture shows as edema within the chest and upper abdomen, and swelling of the hands and tongue.

## Mate of the Kidney: the Bladder

As the Kidney filters pure fluid from turbid to produce urine, vaporizing Moisture upward and recycling nutrient and lubricating fluids, the Bladder holds and releases the unneeded fluid. Through its Yang partner, the Kidney controls the urethral sphincter, regulating the discharge of urine and semen. Through the other lower sphincters of the anus and cervix, the Kidney regulates the retention and release of stool and menstrual blood.



## Basal Metabolism

Just as an ember hiding its dense heat within a dark husk of charred wood ignites new fuel, so Kidney Yang kindles metabolic process. Whereas the bright flashing Yang of the Heart shimmers across the surface through the eyes, the Yang of the Kidney is buried below the navel, where warmth is felt but not seen, like the molten core of the planet. Kidney Yang supplies the necessary spark that stirs the organism, warms the body, animates the Spirit, activates the Spleen and Liver, assists the Lung in mobilizing Qi, instigates reproduction, regulates water metabolism, and oversees the Bladder in the storage and discharge of urine. If Kidney Yang is exceptionally robust, one has superior resistance to cold, reliable digestive power, and lifelong sexual potency.

When the circulation of fluids is not regulated, it is often a problem of Kidney Yang not controlling Kidney Yin. Essential heat must not cease; if it does, the body cannot remain warm, respiration falters, and food cannot be digested. With a deficiency of Kidney Yang, the person feels cold and is cold to the touch, and symptoms manifest such as diarrhea, frequent or incontinent urine, infertility, impotence, premature ejaculation, loss of hearing, ringing in the ears, dizziness from fatigue, and weakness and pain in the knees, lower legs, and low back.

Kidney Yang is vulnerable to damage by exposure to physical cold (cold weather or air conditioning) and by the ingestion of iced or refrigerated foods and beverages. Kidney Yin is subject to damage by chemical agents, such as antibiotics, analgesics, tranquilizers, food additives, air pollutants, and recreational drugs. It may also be harmed by inadequate intake of water and too much bitter, salty, or hot spicy food. The Kidney is generally undermined by inadequate sleep, excessive exercise, sexual activity, or work.

## The Original Source

All other Organs depend on the Kidney for moistening and regeneration (Yin) and for animation and warmth (Yang). The Kidney enables the Spleen to lubricate and nourish tissue and supplies the heat essential for digestion; the Heart relies upon Kidney Yang to exert the required force for systole; the Lung requires the vaporizing, moistening, and anchoring power of the Kidney. The Liver needs the moistening of Kidney Yin to nourish the Blood and subdue the Fire of the Liver, and the mobilizing function of Kidney Yang to regulate and distribute the Blood. A deficiency in another Organ Network adversely affects the Kidney by draining its reserves of Essence.

Together the Yin and Yang of the Kidney construct the substance and stimulate the function of the soma and psyche. The Kidney is like an inland sea: on the surface languid and serene, fed by seasonal rains and crystal pure underground rivers, with warm mineral-rich vapors bubbling up from beneath its floor, it breathes renewal into salty waters that teem with primordial marine life. Submerged within us, the Kidney envelops the hidden, quintessential treasure-house of life's potentiating power.

