

Oriental Medical Physiology

Yin and Yang

Introduction to Yin and Yang Theory

- Inner Classic describes three fundamental concepts which form the foundational pillars of Chinese Medicine
 - Yin-yang and the five phases (elements) theory
 - Represents the basic language of traditional Chinese medicine
 - Categorizes the parts of the body, disease, and basic treatment principles
 - Internal organ theory
 - Categorizes physiology and pathology
 - Important for conceptualizing treatment
 - Channel theory
 - Describes the network that bring the other theories to life
 - Integrates the organs and links the body to the external qi of the environment

Introduction to Yin and Yang Theory

- Along with Five Phases, Yin Yang theory serves as the fundamental language of medical dialogue in China
- Both are used to help categorize qi
 - Qi is defined as the smallest functional unit in any environment, in living creature and in organs
 - Qi is also a substance (or a potential for change within a physical substance)

Analysis Based on Yin-Yang

- Looks at the general nature of a particular subject
 - Something that is expanding, opening, moving, growing, or warm would be characterized as yang
 - Something that is contracting, closing, nourishing, shrinking, or cool is characterized as yin

Analysis Based on Yin-Yang

- When one is looking through this lens, not trying to categorize so much as to quantify in a relative sense
 - All things have both yin and yang within their nature
 - Must analyze within a continuum a particular subject falls and what other factors might influence it to change
 - Relative 'yin nature' or 'yang nature' of a subject depends on what it is being compared to
 - Top of the head is yang compared to the feet
 - When compared to the heavens, the entire body is more yin
 - When compared to the earth, the entire body is yang

Analysis Based on Yin-Yang

- Table for correspondences Foundations pg 5, pg 6 for two states of density
- Tai Chi symbol pg 7 with blue box

Analysis Based on Yin-Yang

- Analysis of Yin-Yang takes into account the tendency of things to change. This is summarized by four aspects:
 - Counterbalance/Opposition
 - Interdependence of Yin and Yang
 - Intertransformation of Yin and Yang
 - Mutual consuming (waxing and waning) of Yin and Yang

Analysis Based on Yin-Yang Counterbalance/Opposition

- Yin and Yang are either opposite stages of a cycle or opposite states of matter
 - Yang - all rarefied, immaterial, pure, gas-like states of things - symbolized by Heaven
 - Yin - all dense, material, coarse and solid states of things - symbolized by Earth
 - *Opposition is relative, nothing is totally yang or totally yin*
 - Yin and Yang forces in the body work to counterbalance (or oppose) each other to maintain a healthy physiology

Analysis Based on Yin-Yang Counterbalance/Opposition - Applications to Chinese Medicine

- Fire-Water
 - Kidney organ has a dual nature (Fire and Water)
 - Fire is the basis for the body's physiological processes. It is derived from the Kidneys and is called Fire of the Gate of Life (ming men)
 - This Fire is the ultimate stimulus of the qi transformation in all organs of the body. If fire declines, other processes suffer (Spleen qi transformation), SI can not separate fluids, UB and lower burner can not excrete fluid). If it becomes excessive it has the tendency to flow upwards and affect the top part of the body (red eyes, headache, red face, thirst, dizziness, tinnitus)
 - Water moistens and cools and balances the physiological fire of the body. Water is also derived from the Kidneys and is called Essence (Jing)
 - Water has the function of moistening and cooling during the body's physiological processes, balancing the Fire . If it is deficient, it fails to moisten and cool the body and deficient-heat flares up. If water becomes excessive, it tends to flow downward (edema in the legs, profuse urination, incontinence)
 - These forces could be said to be in opposition. Better to see them as counterbalancing and keeping in check

Analysis Based on Yin-Yang

Interdependence of Yin and Yang

- Although yin and yang are opposites, they are interdependent and can not exist without the other.
 - Expansion needs contraction, day comes after night, activity needs rest.
- Application to Chinese medicine
 - All of the organs are interdependent
 - Yin and Yang organs are dependent on each other
 - Yin organs are dependent on each other as are the Yang organs (5 phases will explain this better)

Analysis Based on Yin-Yang

Intertransformation of Yin and Yang

- Yin and yang are not static but transform into one another
- This occurs at certain stages of a cycle (24 hr cycle, seasonal changes, changes in life as we age)

Analysis Based on Yin-Yang

Intertransformation of Yin and Yang

- Application to Chinese medicine
 - Especially important to prevention
 - If we know that yin and yang transform into one another, we can prevent this
 - Ex) Excessive work (yang) without rest induces extreme deficiency (yin) of the body
 - Seen in pathological processes
 - Excessive cold can invade the interior and transform into heat
 - Excess conditions can transform into deficient ones or vice versa
 - Ex) Spleen qi deficiency leading to dampness

Analysis Based on Yin-Yang

Mutual Consuming (waxing and waning) of Yin and Yang

- Yin and yang are in a constant state of balance and must continuously adjust
- When out of balance, each affects the other by changing proportions

Analysis Based on Yin-Yang

Mutual Consuming (waxing and waning) of Yin and Yang

- Application of Yin-Yang to medicine
 - Normal physiology relies on this principle to regulate things such as sweating, urination, etc.
 - From a pathological point of view, yin and yang might increase or decrease beyond their normal range

Analysis Based on Yin-Yang

Mutual Consuming (waxing and waning) of Yin and Yang

- Application of Yin-Yang to medicine
 - Four possibilities exist in regard to pathology. The entire complexity of Chinese medicine can thus be reduced to Yin-Yang :
 - Excess Yin
 - Consumes Yang
 - Excess Yang
 - Consumes Yin
 - Deficiency of Yin
 - Results in an increase in Yang
 - Deficiency of Yang
 - Results in an increase in Yin

Analysis Based on Yin-Yang

Mutual Consuming (waxing and waning) of Yin and Yang

- Ultimately every treatment modality can be summarized by four principles
 - Eliminate excess Yin
 - Eliminate excess Yang
 - Tonify Yin
 - Tonify Yang

Yin Yang and Body Structures

Head-Body

- Head is the place where all Yang channels either end or begin
- Relationship of the head to Yang energy is observed in clinic
 - Yang energy tends to rise to the head (points on the head can assist to raise Yang energy)
 - In pathological situations, Heat or Fire will tend to rise to the head causing red face and eyes and other pathological conditions
 - Yang pathogenic factors tend to easily affect the head (Wind, Summer-Heat)
- Rest of the body (chest and abdomen) pertains to Yin
- These areas are easily affected by Yin pathogenic factors (Cold, Dampness)

Yin Yang and Body Structures

Above-Below the Waist

- Above the waist pertains to Yang and is easily affected by Yang pathogenic factors such as wind
- Below the waist pertains to Yin and is easily affected by Yin pathogenic factors such as Dampness

Yin Yang and Body Structures

Exterior-Interior

- Exterior of the body includes skin and muscles and pertains to Yang. It has the function of protecting the body from exterior pathogenic factors.
- Interior of the body includes the Internal Organs and it has the function of nourishing the body

Yin Yang and Body Structures

Posterolateral and anteromedial surface of limbs

- Yang channels flow along the posterolateral surface of the limbs
- Yin channels flow along the anteromedial surface of the limbs

Yin Yang and Body Structures

Yang and Yin Organs

- Yang organs are hollow organs and they transform, separate, digest and excrete 'impure' products of food and fluids
 - They are constantly filling and emptying, transforming, separating and excreting the products of food in order to produce Qi
 - They are in contact with the exterior via the mouth, anus and urethra
- Yin organs are solid and store the vital substances (Qi, Blood, Body Fluids, and Essence)

Yin Yang and Body Structures

Function-Structure of Organs

- The function of an organ represents its Yang aspect and the structure represents its Yin aspect
- Ex) the Liver stores Blood and represents its Yin aspect, The Liver controls the flow of Qi (dredges and drains the channels) and represents its Yang aspect

Yin Yang and Body Structures

Qi-Blood

- Qi is Yang in relation to Blood which is Yin
- Qi warms, protects, transforms and raises (all Yang functions)
- Blood nourishes, moistens (all Yin functions)

Yin Yang and Body Structures

Defensive Qi-Nutritive Qi

- Defensive Qi is Yang in relationship to Nutritive Qi which is Yin
- Defensive Qi circulates in the skin and muscles (exterior) and has the function of protecting and warming
- Nutritive Qi circulates in the Internal Organs and has the function of nourishing

Oriental Medical Physiology

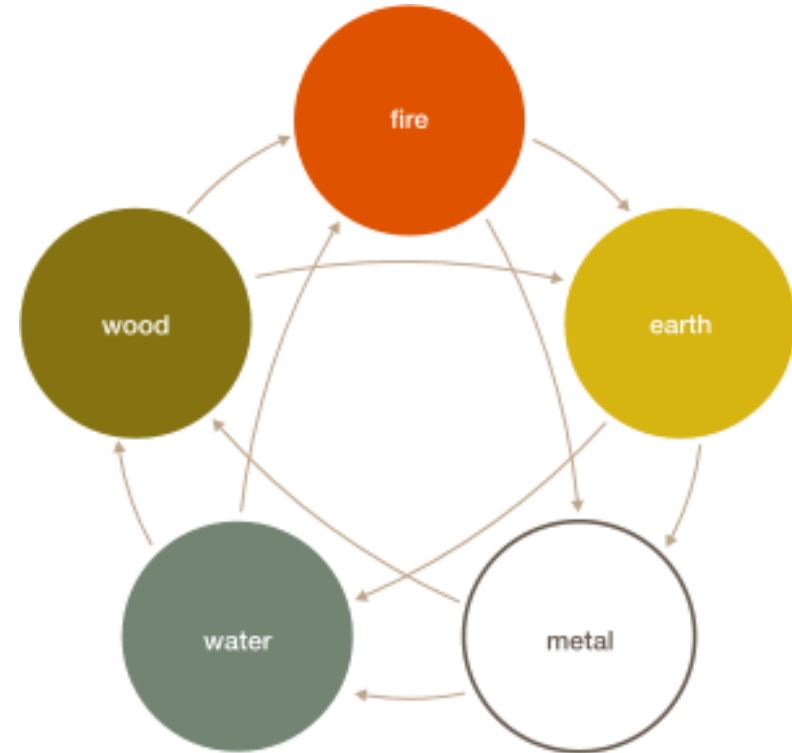
Five Phases

Five Phase Theory

- Along with Yin Yang, is the fundamental language of medical dialogue in China.
 - Yin/Yang is used to analyze the nature of a substance or situation
 - Five phase theory is about categorization and unification of qi.
 - Categorization strives to maintain an understanding of the interrelationship of each phase to the other. Five phase theory takes into account how each phase interacts with the other four.
 - Unifying aspect means that each phase enables/expands one phase while limiting/contracting another.
 - Therefore, five phase theory characterizes concepts within a unified whole.

Five Phase Theory

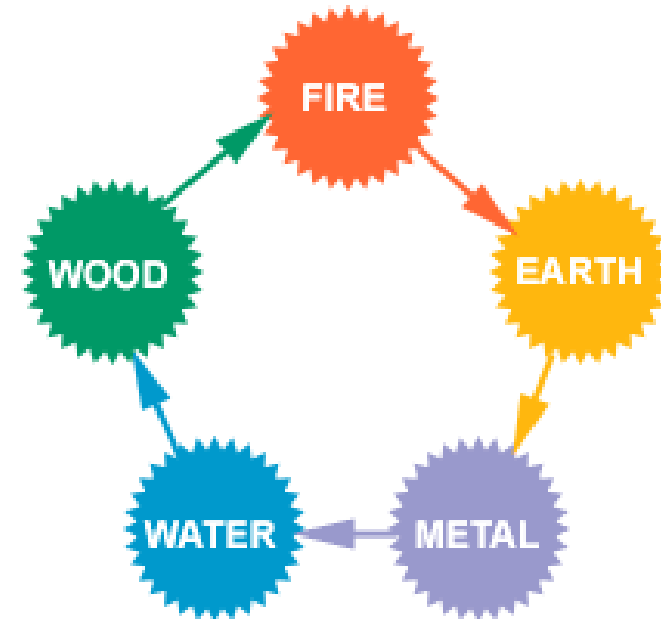
- The Five Phases are:
 - Fire
 - Earth
 - Metal
 - Water
 - Wood
- Each phase enables/expands one phase while limiting/contracting another. In addition to these two interrelationships, overacting and insulting relationships can occur.



Five Phase Theory

Generating Sequence

- Enabling/expanding/generating means each phase depends on another for support.
- This is explained as a Mother/Child Relationship
- Each element generates (nourishes) another and is generated by another
- Pg 28

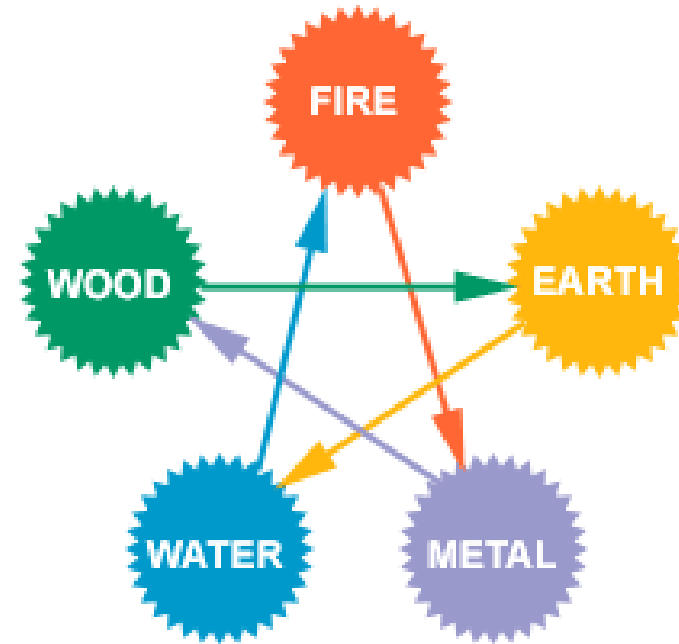


Generating (Sheng) Cycle

Five Phase Theory

Controlling Sequence

- Limiting/contracting/controlling means limiting full freedom, but not exactly holding back .
- Likened to a police officer directing traffic, limiting full freedom, but not exactly holding back.
- This is explained as a Grandparent/grandchild relationship
- Each element controls (keeps in balance) one element and is controlled by another

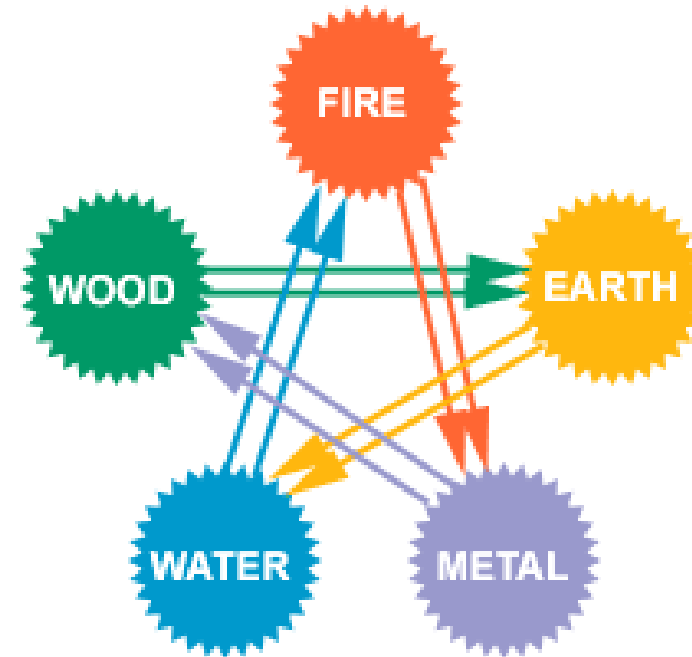


Control (Ke) Cycle

Five Element Interrelationships

Overacting

- This is a pathological variation of the controlling cycle
- One element overcontrols or overacts on another

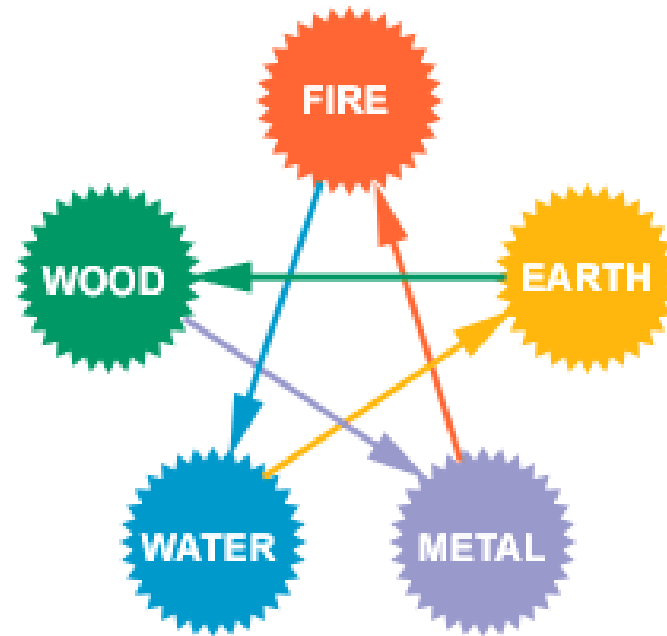


Overacting (Cheng) Cycle

Five Element Interrelationships

Insulting

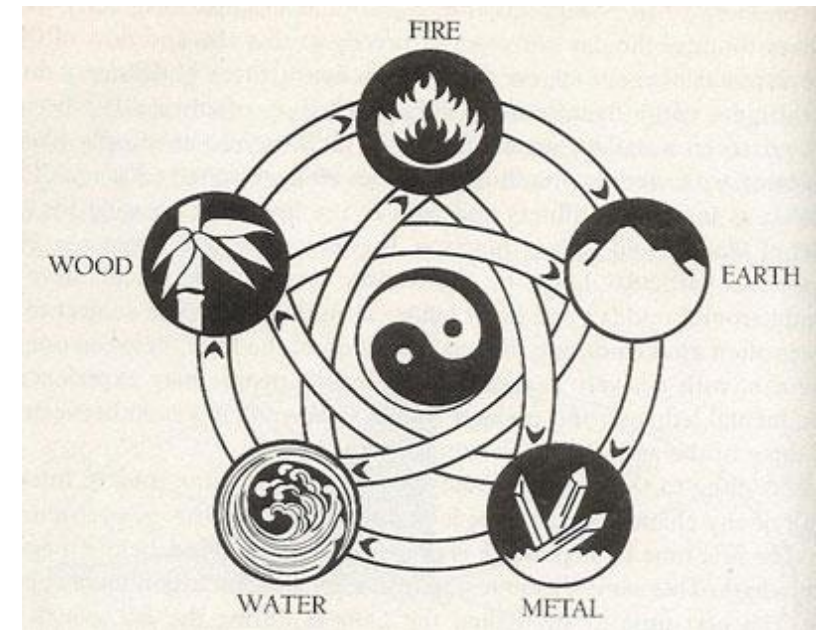
- Another pathological variation of the controlling cycle
- It is a reverse order from the controlling cycle



Insulting (Wu) Cycle

Example of Interrelationships

- Spleen-Earth in classical physiology
- Spleen revolves around the creation of nutrition and transformation of fluid (T&T)
- It generates Lung-Metal
 - Functionally this means that the upward movement of the Spleen qi dynamic balances and activates the downward movement of the Lung in respiration. Spleen-Qi sends up food-qi to the Lungs where it interacts with the air (from the Lungs) to form gathering qi.
- At the same time the Spleen is controlled by the Liver-Wood
 - The Liver's dredging and draining (qi-moving) function regulates the rate and efficiency of Spleen metabolism



Five Phase Correspondences

- Each phase reflects a yin and yang organ, particular tissues, sense organs, and other qualities. These correspondences guides understanding and treatment.

Fire

- Organs:
 - Yin: Heart/Pericardium
 - PC is referred to as ministerial fire as it serves the role of serving and protecting the HT (like a Prime Minister)
 - Yang: Small Intestine/Sanjiao
- Tissue: Vessels
- Sense organ: Tongue,
- Emotion: Joy
- Sound: Laughing

Earth

- Organs:
 - Yin: Spleen
 - Yang: Stomach
- Tissue: Muscles
- Sense organ: Mouth
- Emotion: Pensiveness
- Sound: Singing

Metal

- Organs
 - Yin: Lung
 - Yang: Large Intestine
- Tissue: Skin
- Sense organ: Nose
- Emotion: Sadness
- Sound: Crying

Water

- Organs:
 - Yin: Kidney
 - Yang: Urinary Bladder
- Tissue: Bones
- Sense organ: Ears
- Emotion: Fear
- Sound: Groaning

Wood

- Organs:
 - Yin: Liver
 - Yang: Gallbladder
- Tissue: Sinews
- Sense organ: Eyes
- Emotion: Anger
- Sound: Shouting

Five Movements Associated with the Five Elements

- F - upward movement
 - Pathological fire flares upward (causes red face, headache, teeth grinding, tinnitus)
- E - neutrality or stability
 - Earth is at center
- M - contractive , inward movement
 - Controls the skin, contracts the pores
- Wa - Downward movement
 - Relates to excretion of impure fluids (downward movement)
- Wo - expansive, outward movement in all directions
 - Flows freely, if contained (stagnation, can generate heat, can rebel and flow upward or over to attach Spleen/Stomach)

Seasons Associated with the Five Elements

- F - Summer, associated with growth
- E - Late Summer, late season in general, transformation
- M - Autumn, harvest
- Wa - Winter, storage
- Wo - Spring, birth

Tastes Associated with the Five Elements

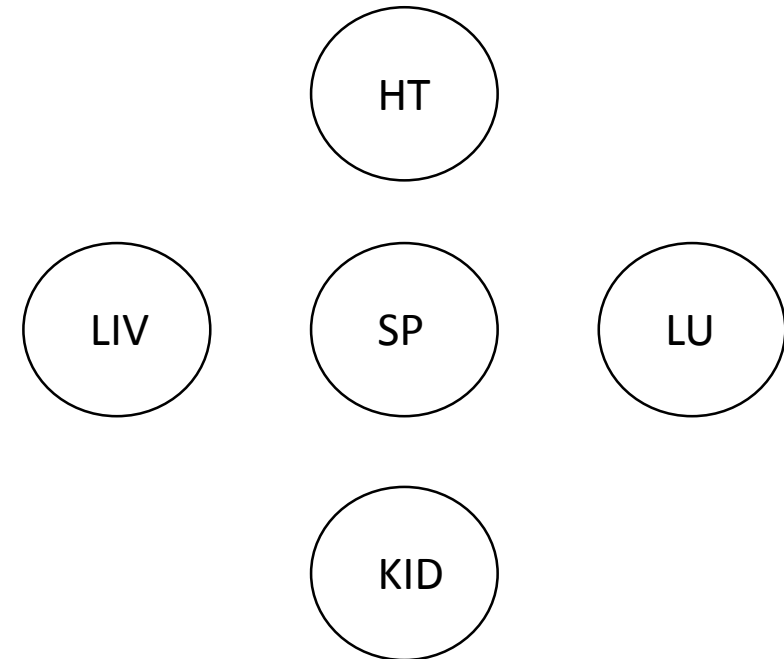
- F - Bitter
- E - Sweet
- M - Acrid, Pungent
- Wa - Salty
- Wo - Sour

Colors Associated with the Five Elements

- F - Red
- E - Yellow
- M - White
- Wa - Black
- Wo - Green

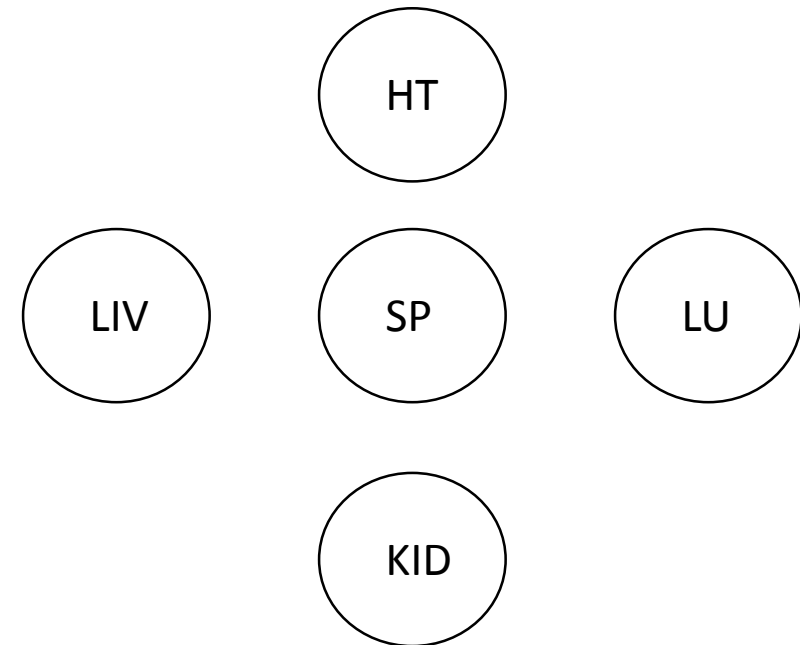
Five Phase Cosmological Sequence

- Another way of depicting the 5 elements which is useful clinically
- In this model, the Wa element is the foundation, E is in the center



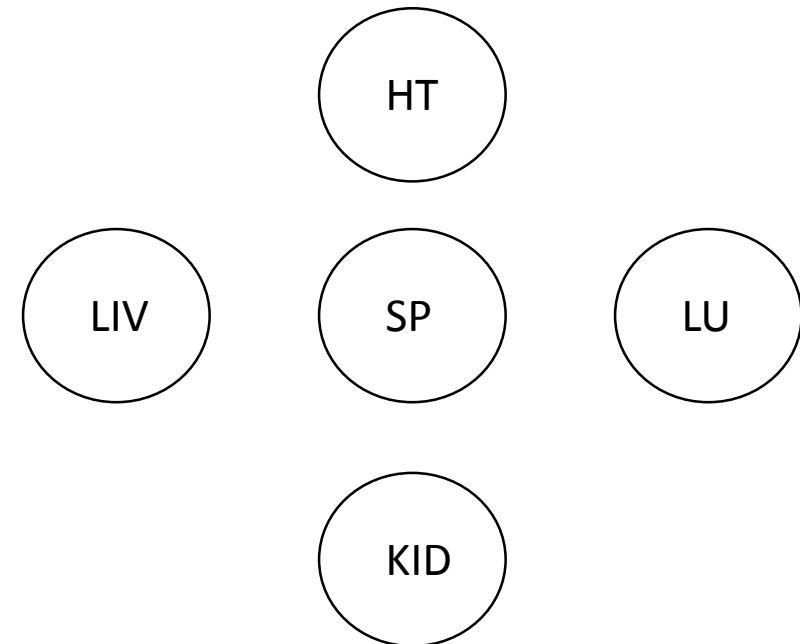
Five Phase Cosmological Sequence

- Water is the foundation
- Kidney serve as the foundation of Yin and Yang of the other organs
- Kidneys store Essence (Jing), and Ming Men
- They are therefore the source of Fire and Water of the body and are called Original Yin and Original Yang
- In this view, Water is the foundation of the other elements
- Clinically, Kidney-Yin deficiency can easily induces Liver-Yin and Heart-Yin Deficiency. Kidney-Yang Deficiency can easily induce Spleen-Yang or Lung-Qi deficiency.
- Kidneys store Essence which is the material foundation of Qi and Mind (Shen) - Jing, Qi, Shen



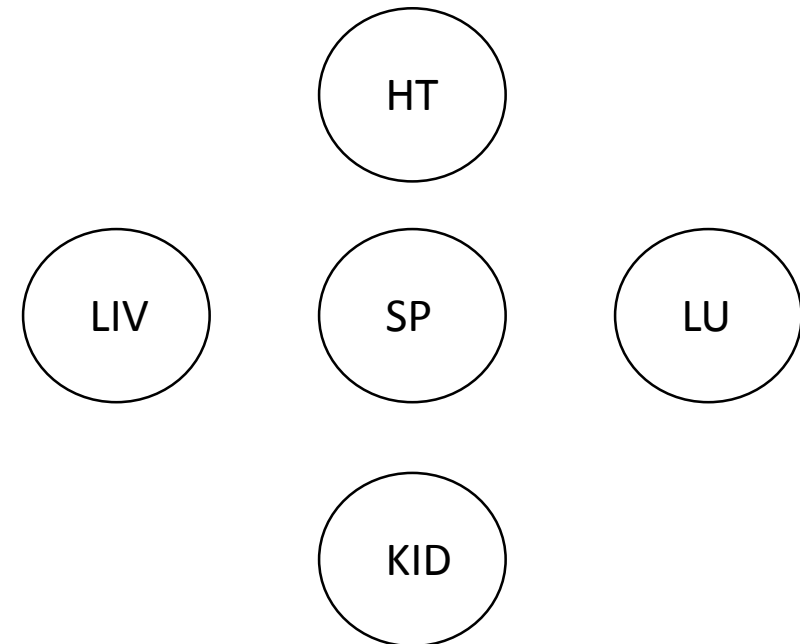
Five Phase Cosmological Sequence

- Relationship of the Kidney and Heart
- Related along a vertical axis and there is a direct communication between these two organs
- Kidneys govern Water and this has to flow upward to nourish the Heart
- The Heart governs Fire which has to flow downward to the Kidneys
- This is a relationship of mutual nourishment
- The relationship also expresses the relationship between Essence and Mind (Jing and Shen). The Essence is the material foundation for the Mind. If the Jing is weak, the Shen will suffer.
- If Kidney-Yin is deficient, not enough Yin energy goes to the Heart and Heart-Yin becomes deficient. Empty (Deficient) Heat then rises within the Heart and affects the Shen. This is commonly seen in menopause, for instance. It is referred to as Kidney and Heart not Communicating



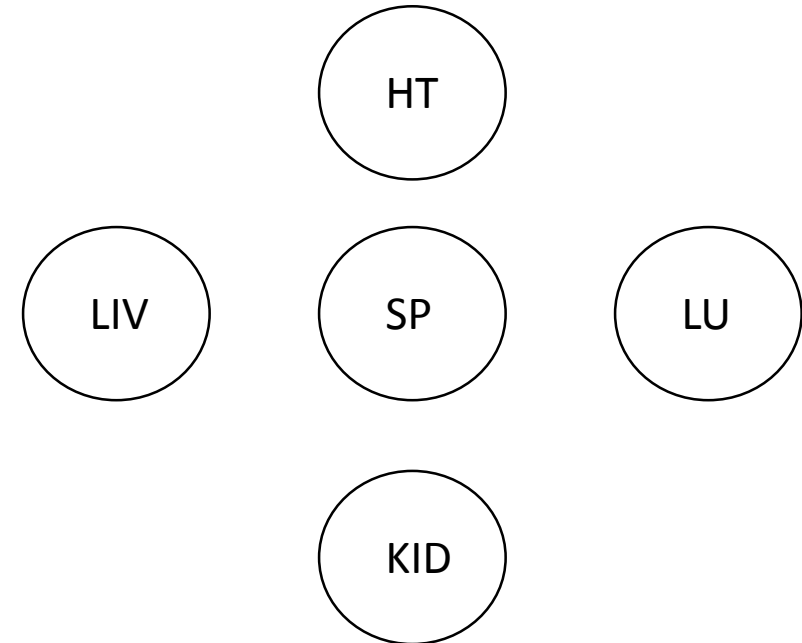
Five Phase Cosmological Sequence

- Stomach-Spleen as the Center
- ST-SP are both in the middle jiao and are the basis of upward and downward movement of Qi
- ST-SP are clinically the root of Post-Natal Qi and the origin of Qi and Blood (Water is foundation - Pre-Natal Qi)
- They therefore nourish the other organs and naturally occupy a central space in human physiology
- Tonification of the Spleen and Stomach therefore indirectly tonifies all of the organs and serves as an important treatment strategy with deficiencies or all types



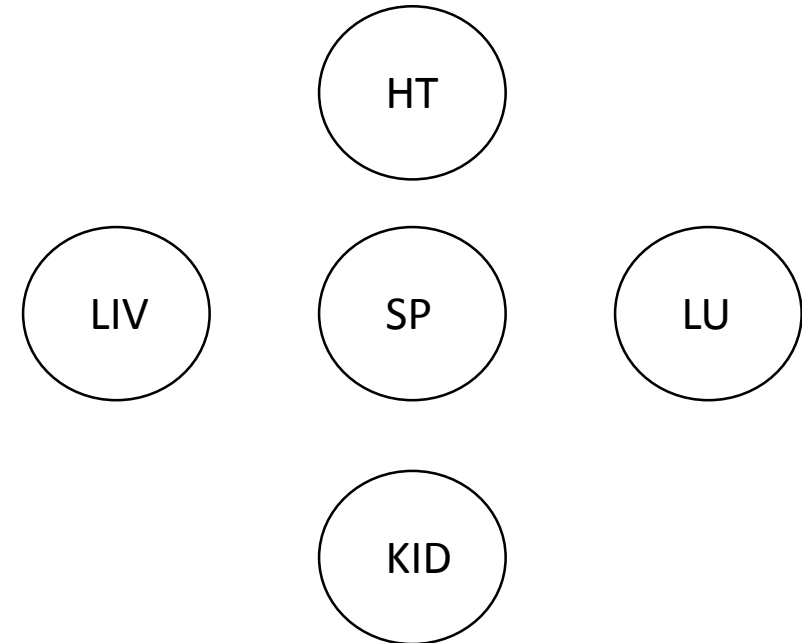
Five Phase Cosmological Sequence

- Stomach-Spleen as Support for the Heart
- Earth is between Water and Fire, supports Fire
- Stomach-Spleen are the main support of the Heart
- The Spleen produces Blood which houses the Mind
- Heart-Qi and Blood deficiencies require tonification of the SP and ST



Five Phase Cosmological Sequence

- The Vertical Axis Symbolizing Jing-Qi-Shen
- This is the complex or physical and mental energies from most material to most ethereal
- Essence (Jing) belongs to the Kidneys, Qi is derived from the Stomach and Spleen, and the Mind (shen) is housed in the Heart



Oriental Medical Physiology

Vital Substances

Different Manifestations of Qi

- According to Chinese medicine, there are many different types of Qi
- These range from more subtle and rarefied to dense and material
 - Ex) Nutritive (Ying) Qi and Defensive (Wei) Qi
 - Ying Qi is denser and it is nourishing. Ying Qi resides more interior
 - Wei Qi is more subtle and more easily mobilized, it resides more on the exterior in the *Cou Li*
- The different types of Qi discussed are
 - Defensive (Wei) Qi
 - Nutritive (Ying) Qi
 - Original (Yuan) Qi
 - Essence (Jing)
 - Blood (Xue)
 - Body Fluids (Jin Ye)

Meanings of Qi

- The term Qi is used in two different ways
 - 1) Indicates refined energy produced by the Internal Organs. It has the function of nourishing the body and mind. It takes several forms depending on its location and function and can include Zong Qi (Gathering Qi) in the chest which nourishes the Heart and Lungs, Original Qi (Yuan Qi) which is in the lower burner and nourishes the Kidneys
 - 2) Indicates the functional activity of the internal organs. In this sense it does not indicate a rarefied substance, but a set of functional complexes such as the Liver-Qi or Spleen-Qi

Essence (Jing) and Fire at the Gate of Vitality (Ming Men)

- Essence is the yin-natured root of the gate of vitality (the driving force behind all physiology).
- Essence is the most fundamental physical manifestation of inheritance.

Essence (Jing) and Fire at the Gate of Vitality (Ming Men)

- Macioca distinguishes between pre-heaven essence (received from blending of parents energies) and kidney essence.
 - Pre-heaven Essence is present at birth (and before). It matures into kidney essence at puberty and mixes with post heaven essence.
 - At puberty, Kidney-Essence generates sperm in men and menstrual blood and ova in women
 - Post heaven essence is refined and extracted from food and fluids. It is closely related to the Spleen and Stomach.
 - Stomach and Spleen are known as the root of Postnatal Essence or Postnatal Qi.
 - Kidneys are known as root of Prenatal Essence.

Essence (Jing) and Fire at the Gate of Vitality (Ming Men)

- Essence and Fire at the Gate of Vitality interact to produce Kidney Qi (or Kidney Function)
 - Analogy to a pot of water heated and producing steam (water is essence, fire is fire at gate of vitality, steam is kidney qi)

Essence (Jing) Features

- Essence has the following features (especially when compared to Qi)
 - Essence is primarily derived from the parents before birth, Qi is formed after birth
 - Essence is replenished with difficulty, Qi can be easily replenished on a day to day basis
 - Essence follows 7-8 year cycles, Qi follows briefer cycles (yearly, circadian, even shorter)
 - Qi moves quickly and changes from moment to moment, Essence changes more slowly and gradually over longer periods or time

Essence (Jing) Functions

- Essence has the following functions:
 - Controls growth, reproduction, sexual maturation, conception, pregnancy, menopause, and aging
 - Basis of Kidney-Qi
 - Produces Marrow
 - Basis of Constitutional Strength
 - Basis for the 'Three-Treasures' (Jing, Qi, Shen)

Essence (Jing) Functions

- Controls growth, reproduction, sexual maturation, conception, pregnancy, menopause, and aging
- Basis of Kidney-Qi
 - Function of the Kidneys is rooted in Essence

Essence (Jing) Functions

- Produces Marrow
 - Marrow in Chinese medicine does not correspond directly to bone marrow in Western medicine
 - Marrow produces bone marrow, and fills the spinal cord and brain
 - Brain is the "Sea of Marrow"
 - If Kidney Essence is weak, the brain may lack nourishment and a person may lack concentration and memory and may suffer from dizziness and a feeling of emptiness of the head

Essence (Jing) Functions

- Basis of Constitutional Strength
 - Wei Qi is mostly responsible for protecting against exterior pathogenic factors. It gets its strength from Kidney Essence

Essence (Jing) Functions

- Basis for the 'Three-Treasures' (Jing, Qi, Shen)
 - The Essence and Qi are said to be the material foundation of the Mind (Shen)
 - Jing, Qi, and Shen are the three fundamental physical and psychic substances of humans, they are called the Three Treasures
 - They also represent three states of condensation of Qi - Essence the densest, Qi more rarefied, Shen being the most subtle and immaterial
 - A healthy mind depends on Essence stored in the Kidneys and Qi produced by the Stomach and the Spleen

Essence (Jing) and Deficiency

- Problems Associated from Deficiency of Essence
 - Essence associated with growth, reproduction, and development
 - Stunted growth, poor bone development, infertility, mental retardation, loose teeth, hair falling out or greying prematurely, habitual miscarriage
 - Essence as a basis of Kidney-Qi
 - Poor sexual function, impotence, weakness of the knees, nocturnal emissions, tinnitus and deafness
 - Essence as a basis of Marrow
 - Poor concentration, poor memory, dizziness, tinnitus, and a feeling of emptiness of the head
 - Essence as a basis for Constitutional Strength
 - Being constantly prone to colds, influenza, and other exterior diseases, chronic rhinitis, and allergic rhinitis

Different Forms of Qi

- Qi takes on many forms depending on location and function
- Includes the following
 - Yuan Qi (Original Qi or Source Qi)
 - Zong Qi (Gathering Qi)
 - Zhen Qi (True Qi)
 - Ying Qi (Nutritive Qi)
 - Wei Qi (Defensive Qi)

Yuan (Source) Qi

- Source Qi is Essence in the form of Qi (rarified). It is created by the union of Essence and Mingmen. It can be compared to genetic expression that occurs throughout the body.

Yuan (Source) Qi

- Source Qi has several functions:
 - It is the motive force through which Mingmen and Essence acts.
 - Basis of Kidney Qi and related to all of the Kidney's functional activities.
 - Facilitates the transformation of Qi, thus the Kidneys are essential for the production of Qi.
 - Facilitates the transformation of Blood, thus Kidneys are involved in the production of Blood.
 - Conduit is the Sanjiao.
 - Comes out at the source points.

Yuan (Source) Qi and the Transformation of Qi

- Gu Qi (Food Qi) - means Qi of Grain, first stage of the transformation of food into Qi
 - Food is rotted and ripened in the Stomach and the the Spleen performs its T&T function to convert to Gu Qi
 - Look at functions of Gu Qi on pg 51

Yuan (Source) Qi and the Transformation of Qi

- Gu-Qi is sent from the middle jiao to the chest (SP Qi Ascends) to mix with air from the Lungs. It is then called Zong Qi (Gathering Qi).
- Assisted by the motive force of Yuan Qi, Zong Qi is then converted to Zhen Qi (True Qi) which circulates in the channels.
- Look at functions of Gathering Qi and True Qi on pg 52.

Yuan (Source) Qi and the Transformation of Qi

- Zhen Qi assumes two different forms:
 - Ying Qi (Nutritive Qi)
 - Nourishes the internal organs and body
 - Closely related to Blood and travels in the blood vessels and channels
 - Activated when needle is inserted
 - Look at functions pg 52
 - Wei Qi (Defensive Qi)
 - Wei Qi is a coarser form of Qi than Ying Qi, flows on the outer layers and is quickly mobilized
 - Look at functions on pg54
- Also discuss Zhong and Zheng Qi pg 54

Yuan (Source) Qi and the Transformation of Blood

- Gu Qi also ascends to the upper jiao to the Heart and is transformed into Blood
- This transformation is assisted by Source Qi.

Yuan (Source) Qi and the Transformation of Blood

- Gu Qi also ascends to the upper jiao to the Heart and is transformed into Blood (which is assisted by Source Qi)

Yuan (Source) Qi and the Sanjiao, Comes out at the Source Points

- Source Qi travels in the Sanjiao
 - Sanjiao makes the Source Qi separate and differentiate into different forms in different places around the body.
- There are important point classifications between the fingers and elbow and the toes and knees. Source points are one of these and source qi enters the channels in force at the source points.

Functions of Qi

- Qi has the following functions:
 - Transforming
 - Transporting
 - Holding
 - Raising
 - Protecting
 - Warming

Transforming Functions of Qi

- Transforming
 - Qi is essential for the transformation of food and fluids
 - Food and fluids are transformed into clear and turbid
 - Examples include pg 55

Transporting Functions of Qi

- Transporting
 - Qi transports substances that are being transformed into and out of various body structures
 - Directions of qi movement:
 - Transports Upward, Downward, Inward, and Outward
 - The ascending/descending, entering/exiting of Qi in the body is what constitutes the Qi mechanism (Qi Ji)
 - Ex) Spleen Qi transforms food and fluids, ascending nature so it sends them up to Heart and Lungs, Lung-Qi sends Qi back down and also diffuses Qi to the skin

Holding Function of Qi

- Qi holds fluid and blood in their proper place
 - Ex) Spleen qi controls the blood which means it keeps it holds it in the vessels.
Easy bruising can be a sign of Spleen qi failing to hold blood
 - Ex) Lung qi holds sweat through its relationship to wei qi and holding the pores

Raising Function of Qi

- Qi ensures that the body structures are held in place. If the raising aspect of qi is deficient, there can be sinking signs
 - Ex) Organ prolapse can be due to Spleen qi sinking, Uterine prolapse can be associated with Kidney-qi failing to raise
 - Ex) Other conditions that involve leakage such as diarrhea can be attributed to the loss of this function

Protecting Function of Qi

- Qi protects the body from invasion of exterior pathogenic factors
- Mostly the function of wei qi, but also nutritive qi and essence are involved

Warming Function of Qi

- Qi is yang in nature and warms the body
- This is essential for the body to perform its many functions such as T&T function
- Kidney Yang and Minister Fire is the source of the warmth in the body
- Spleen Yang warmth is necessary for the T&T of food and fluids, but it derives its warmth from Kidney Yang

Pathologies of Qi

There are four pathologies associated with Qi:

- Qi deficient
 - Applies mostly to Stomach, Spleen, Lung, or Kidney
- Qi sinking
 - Results in prolapse
 - Applies to Spleen Qi and Kidney Qi
- Qi stagnation
 - Qi can fail to move and stagnate
 - Applies mostly to Liver qi, lesser extent to other organs
- Qi rebellious
 - Qi flowing in the direction
 - Ex) Stomach Qi (nausea, belching, vomiting); Spleen Qi (Diarrhea); Liver Qi can invade other organs

Blood

- In Chinese medicine, Blood is a very dense, material one type of Qi.
- It is therefore inseparable from Qi.

Functions of Blood

- Main function is nourishing the body
- Blood also moistens
 - Ex) Liver-blood moistens the eyes and sinews
- Blood provides the material foundation for the mind (shen)
 - If deficient, mind becomes unhappy or uneasy - vague anxiety, irritability, etc
 - If blood is deficient, insomnia can be a problem

Relationship of Blood with Internal Organs

- Heart governs Blood (responsible for its circulation)
- Spleen controls Blood (important for generation of Blood and holding Blood in vessels)
- Liver stores Blood (Blood flows to muscles, flows back to Liver for clarification at night)
- Lungs control Qi - Blood follows Qi
- Kidneys (essential for contributing to production of Blood via Source Qi)

Blood and Qi

- Qi moves Blood
- Qi holds Blood
- Blood nourishes Qi

Body Fluids (JinYe)

- Composed of Jin (thin fluids). These circulate with the Wei Qi. They are under control of the Lungs. They nourish skin and muscles.
- Composed of Ye (thick fluids). These are more turbid and dense. They circulate with the Ying Qi. They are under control of the Spleen and Kidneys. They moisten the joints, spine, brain and bone marrow. They nourish and lubricate the orifices and sense organs.

Relationship of JinYe to Internal Organs

- Fig 3.27
- The Spleen transforms and transports
- The Lung diffuses
- The Small Intestine separates into clear and turbid
- The Kidney transforms, separates and excretes
- The Bladder excretes
- The Sanjiao assists transforms, transports, and excretes
- The Stomach is the origin of

Oriental Medical Physiology

Qi Transformation

Movement of Qi

- *Qi*
 - Enters
 - Exits
 - Rises
 - Descends
- Therefore the transformation and proper direction of Qi movement is important for many physiological processes in the body.

The Transformation and Proper Direction of Qi Movement is important for:

- The movement of Blood
 - Blood follows Qi
- The movement, transformation, and excretion of Body Fluids
 - Ex) Kidney Yang warms and sends refined fluids up
- The digestion of food
 - Ex) Spleen's rising action sends Gu Qi up
- The absorption of nourishment
- The excretion of waste
- The moistening of sinews and bones
- Qi enters joints
- The moistening of skin
- The resistance to exterior factors

The Source Qi (Original Qi/Yuan Qi) is the motive force that is behind all movement and transformation of Qi.

Qi Mechanism (Qi Ji)

- Relies on 4 fundamental movements :
 - Ascending (a Yang movement)
 - Descending (a Yin movement)
 - Exiting (a Yang movement)
 - Entering (a Yin movement)
- The Qi mechanism (movements) influences the formation of Qi and Blood
- Any disruption of ascending/descending of Qi or Entering/exiting of Qi may result in pathology of Qi and/or Blood. This may be deficiency, stagnation, or rebellious Qi

Qi Mechanism (Qi Ji) and the Sanjiao

- The Qi mechanism is closely dependent on the Sanjiao
 - In upper burner, Qi goes up and enters and is under control of the Lungs.
 - In the middle burner, Qi goes up and down and in and out and is under control of the Spleen and Stomach.
 - In the lower burner, Qi mostly descends and is under control of the Kidneys, Bladder, and Intestines.
 - The Sanjiao assists all the other organs in their functions and makes sure that all passages are open, that the various types of Qi flow smoothly, that the Source Qi emerges, and that wastes are excreted smoothly.

Ascending/Descending

- In certain physiological processes Qi needs to ascend, and in others it needs to descend
- Internal organs perform specific functions and their Qi must flow in a specific direction

Ascending/Descending

- Lungs
 - Lung-Qi descends
 - Lungs are uppermost organ and are often compared to lid or canopy
 - Lung-Qi descends towards the Kidneys
 - Lung-Qi also descends to communicate with the Bladder (urinary retention in elderly as example)
 - When the Lung-Qi descends, breathing is normal. When it fails to descend, there is breathlessness and cough
 - Lung-Qi also ascends to diffuse Wei Qi and sweat to the Cou li
 - Lung-Qi regulates entering and exiting of Qi in and out of the Cou li
 - Lung-Qi regulates ascending/descending and entering/exiting of Qi

Ascending/Descending

- Liver

- Liver controls the smooth flow of Qi in all directions
- This assists all other organs
 - Helps Stomach-Qi descend
 - Helps Spleen-Qi ascend
 - Close relationship with the Lungs (Liver-Qi ascends whereas the Lung-Qi descends)
 - If Liver-Qi stagnates, can cause rebellion of the Qi of other organs
 - Liver-Qi enters and exits from sinews, bringing Liver-Blood

Ascending/Descending

- Kidneys
 - Control the transformation of water
 - Impure fluids flow downward and the clear flow upwards
 - For certain physiological processes, Kidney-Qi descends, for others it ascends
 - Balances the Lung-Qi
 - Lung-Qi descends, Kidney-Qi ascends to the Lungs (Kidney-Qi grasps Lung-Qi)
 - Lungs control exhalation, Kidneys control inhalation
 - Lungs govern Qi, Kidneys are the root of Qi

Ascending/Descending

- Spleen-Stomach

- Spleen sends Qi upward to Lungs and Heart
 - If spleen fails to ascend there is diarrhea
- Stomach sends impure Qi downwards
 - If the Stomach fails to descend, it causes nausea, belching or vomiting
- Spleen controls transformation, Stomach controls receiving

Ascending/Descending

- Heart-Kidneys
 - Special relationship between heart and kidney qi
 - Mutually controlling relationship
 - Heart-fire flows downward to meet the water of the kidney and kidney water flows up to meet the fire of the heart
 - When sovereign fire becomes either excess or deficient, kidney essence acts to regulate it
 - Out of balance, heart-kidney disharmony develops (usually involves a deficiency of kidney yin which leads to heat in the heart)

Entering/Exiting

- Entering/Exiting
- Important aspect of movement among the six energetic levels of the body
 - Taiyang
 - Shaoyang
 - Yangming
 - Taiyin
 - Shaoyin
 - Jueyin