

# Yin and Yang

TCM Anti-Cancer Centre

Zhao Cheng R.TCMP, R.Ac., Ph.D.



The theory of yin and yang is a kind of world outlook. It holds that all things have two opposite aspects, yin and yang, which are both opposite and at the same time interdependent. This is a universal law of the material world. These two aspects are in opposition to each other but because one end of the spectrum cannot exist without the other they are interdependent.

The ancient Chinese used water and fire to symbolize yin and yang; anything moving, hot, bright and hyperactive is yang, and anything quiescent, cold, dim and hypoactive is yin.

The yin and yang properties of things are not absolute but relative. As an object or person changes so the yin and yang components change at a gradual rate. Each of the yin and yang properties of the object is a condition for the existence of the other; neither can exist in isolation.

These two opposites are not stationary but in constant motion. If we imagine the circadian rhythm, night is yin and day is yang; as night (yin) fades it becomes day (yang), and as yang fades it becomes yin. Yin and yang are therefore changing into each other as well as balancing each other.

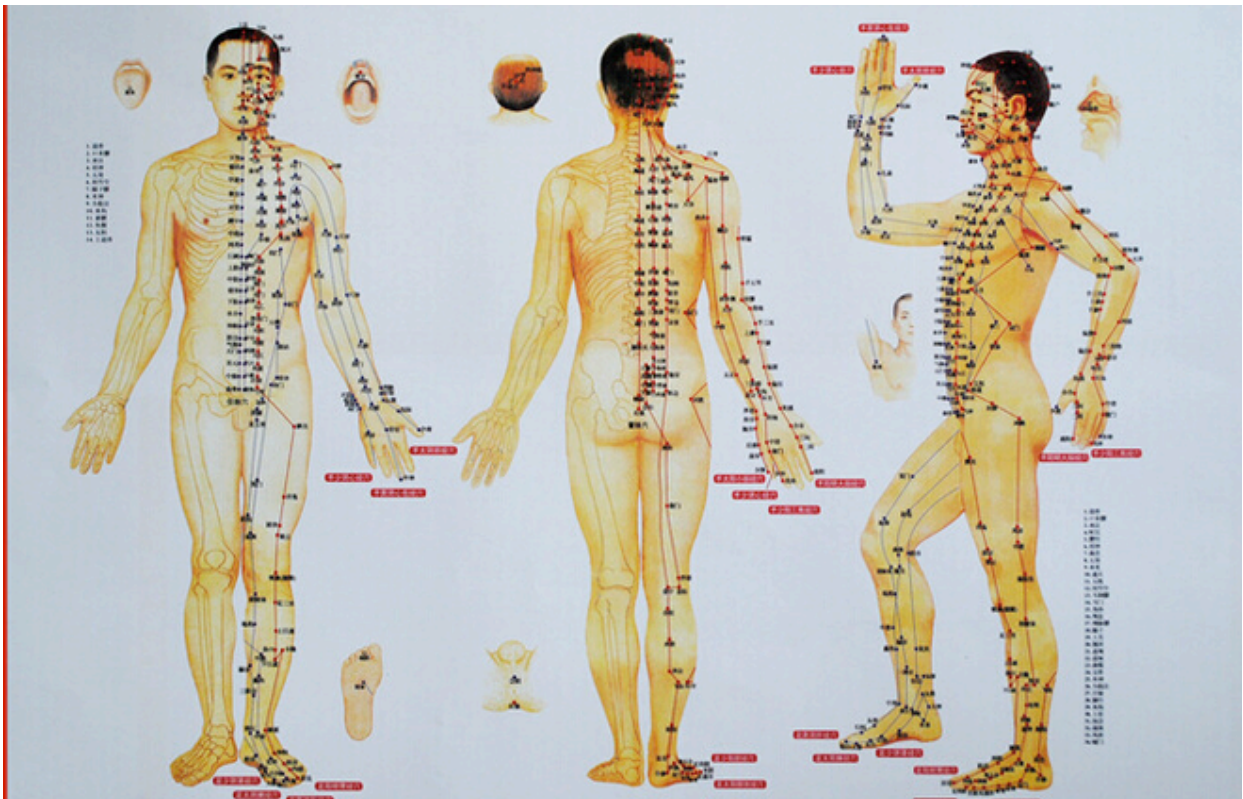
## **The Application of Yin and Yang to Chinese Medicine**

Each organ has an element of yin and yang within it. The histological structures and nutrients are yin, and the functional activities are yang. Some organs are predominantly yang in their functions, such as the gan-liver, while others are predominantly yin, such as the shen-kidney. Even though one organ may be predominantly yin (or yang) in nature, the balance of yin and yang is maintained in the whole healthy body because the sum total of the yin and yang will be in a fluctuating balance.

If a condition of prolonged excess or deficiency of either yin or yang occurs then disease results. In an excess of yin the yang qi would be damaged, and a disease of cold of shi nature would develop. Excess of yang will consume yin and a disease of heat of shi nature would develop. In a

deficiency of yin, diseases of heat of xu nature develop, while a deficiency of yang causes diseases of cold of XU nature.

## II. The Channels and Collaterals

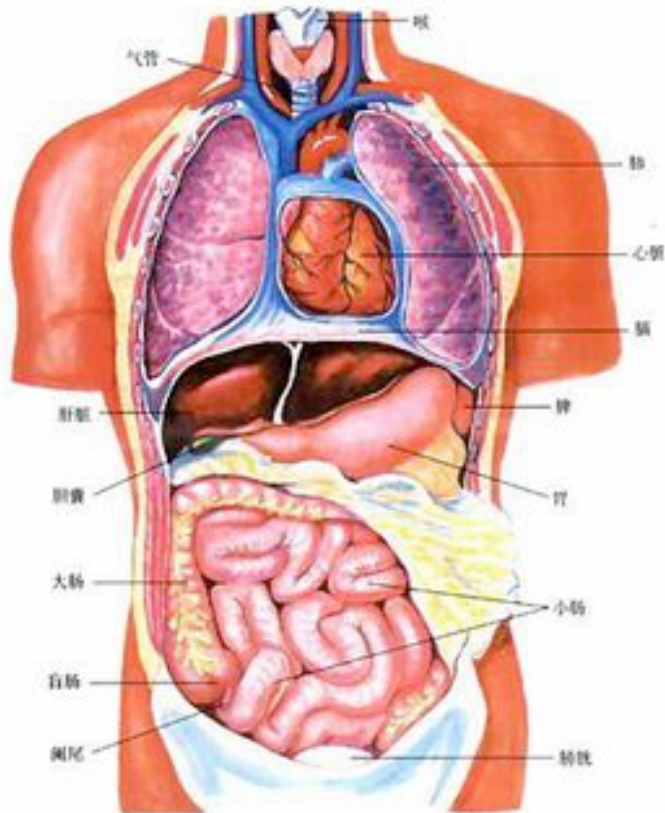


The channels and collaterals are the representation of the organs of the body. They are also a functional system in their own right and they are responsible for conducting the flow of qi and blood through the body. The flow of qi can be disrupted by direct damage to the channels, such as trauma, or by an internal imbalance of yin and yang within the body.

The central principle of traditional Chinese medicine is to diagnose the cause of the internal disease, or yin yang imbalance within the body, and, by using the relevant acupuncture points, to correct the flow of qi in the channels and thus correct the internal disease. The acupuncture points that are on the channels have a direct influence on the flow of qi through the channels, and also on the internal organs. The zang channels are yin in nature and the fu channels are yang in nature.

Qi circulates through the channels of the body in a well defined circadian rhythm.

## III. Zang and Fu Organs



The zang and fu organs are the internal visible organs of the body. The xin-heart, gan-liver, pi-spleen, fei-lung, shen-kidney and pericardium are the zang organs. The small intestine, large intestine, stomach, gallbladder, urinary bladder and sanjiao are the fu organs.

The zang organs have a Chinese prefix because a direct translation from the Chinese might be misleading. The Chinese xin has functions rather different from the concept of the heart in Western medicine, so if we call the heart 'xin-heart', or the liver 'gan-liver', we are able to understand that we are referring to the organ of the heart or the liver, but it is really rather different from our concept of those organs.

The zang organs are of paramount importance in the body. They coordinate with the fu organs and connect with the five tissues (channels, jin<sup>1</sup> muscles, skin-hair, bones), and the nine

openings (eyes, nose, ears, mouth, tongue, anus and external genitalia), to form the system of the Five Zang. The pericardium is not considered to be an important zang organ.

### **The Functions of the Zang Organs**

The xin-heart

The xin-heart dominates the circulation of blood. When it functions properly the tissues and organs are well perfused and nourished, but when it malfunctions there is precordial pain, cyanosis and ischaemia. This disease is due to 'stagnation of the blood of xin-heart'.

The xin-heart 'keeps' the mind. Normally there is a clear mind, normal mentality, normal sleep and a good memory. When this fails there is coma, insomnia or somnolence, amnesia and mental derangement, because the xin-heart is failing to 'keep' the mind.

The xin-heart takes the tongue as its orifice and opens through it. Normally the tongue is reddish, moist, and moves freely. When the tongue has ulcers, is swollen or becomes purplish-red, there is 'upward blazing of the fire in xin-heart'. When the tongue is rigid and curled up (this may be accompanied by mental symptoms) 'phlegm and heat are covering the orifice of the xin-heart'.

### **The gan-liver**

The gan-liver is the main yang organ of the body.

The gan-liver stores blood. Normally there is sufficient blood supply to all tissues. When this fails there is ischaemia, dizziness, malaise, abnormal menstruation and hemorrhage.

The gan-liver takes charge of freeing. Freeing really means the free flow of blood and qi through the body, especially digestion and the discharge of bile. When this is impaired there is irritability, mental depression, anorexia, abdominal distention and jaundice.

The gan-liver controls the jin which governs the muscle tone. When this function is disturbed there is muscle spasm, twitching, opisthotonos and convulsions. This is due to an 'insufficiency of yin and blood of the gan-liver, resulting in the malnutrition of the jin'.

The gan-liver takes the eye as its orifice and opens through it. Usually there is normal vision and normal eye movement. When this function is disturbed there is poor vision, night blindness, nystagmus and abnormal eye movements. This is due to an 'insufficiency of yin and blood in the gan-liver causing malnutrition of the eyes and stirring of the inner wind of the gan-liver.'

### **The pi-spleen**

The pi-spleen governs the transportation and transformation of food, i.e. digestion. When digestion is abnormal there is anorexia, distention of the abdomen, diarrhea, emaciation, lassitude and oedema. This is due to 'a deficiency of the qi of pi-spleen'.

The pi-spleen commands the blood. Normally the blood circulates within the blood vessels but when this function fails there is extravasation of blood, chronic recurrent hemorrhage and bruising.

The pi-spleen dominates the muscles. This really means controlling the muscle bulk. Normally there is no muscle wasting, but when there is malnutrition of the muscles they are weak and wasted.

The pi-spleen takes the mouth as its orifice and opens through it. Normal people have a good appetite, a sense of smell and taste and red and moist lips. Abnormally there is anorexia, tastelessness or a sweetish, greasy taste, and pale sore lips. This is due to 'heat and damp in the pi-spleen'.

In addition the qi of pi-spleen lifts and fixes the internal organs in their normal position.

### **The fei-lung**

The fei-lung takes charge of respiration. Normally respiration is even and the tissues are well oxygenated. When this function fails breathing is uneven, there is a cough, dyspnoea, shallow respiration and anoxia. This is due to 'a deficiency of qi of fei-lung which causes an impairment of dissipation and descent of clean qi (oxygen).

The fei-lung frees and regulates the water passage. This function covers the transportation and distribution of nutrients and water, the secretion of sweat and the excretion of urine. Abnormally there will be hyperhydrosis or hypohydrosis, oedema and difficulty in urination due to 'obstruction of the water passage'.

The fei-lung dominates the hair and skin. Normally the skin is lubricious, the hair lustrous, and sweating is normal. Abnormally the skin is rough, the hair dry and withered and the skin is 'loose'. This looseness opens the pores and increases the susceptibility to invasion by pathogenic factors.

The fei-lung takes the nose as its orifice and opens through it. Normally the nose is open and there is an acute sense of smell. Abnormally it may be obstructed, there may be anosmia, epistaxis and flaring of the alae nasi (usually accompanied by fever). This is due to 'invasion of the fei-lung by wind and cold or wind and heat'.

### **The shen-kidney**

The shen-kidney is the main yin organ of the body. The shen-kidney dominates growth, reproduction and development. When this function fails there is a loss of reproductive function, retardation of growth, failure to thrive, and premature senility due to 'an insufficiency of the qi of shen-kidney'.

The shen-kidney produces marrow, filling the brain with marrow, dominating the bones and producing blood. Normally the spinal cord and the brain are fully developed, the bones are strong and the blood sufficient. Abnormally there will be dizziness, tinnitus, insomnia, poor memory and lassitude. The bones will be weak and brittle and the blood will be insufficient. This is due to 'an insufficiency of the essence of shen-kidney'.

The shen-kidney controls body water. This entails normal urine production and micturition. Abnormally there will be oliguria or anuria, oedema, difficult or dribbling micturition, polyuria, enuresis and incontinence. This is due to 'an insufficiency of yang of the shen-kidney failing to control body water'.

The shen-kidney controls the intake of clean qi (air). Abnormally there will be wheezing due to 'the failure of the shen-kidney to control the intake of clean air'.

The shen-kidney takes the ear as its orifice, opening through it. Normally there is sharp hearing, abnormally there is tinnitus, hearing loss, and even total deafness.

### **The pericardium**

This may be called the organ of circulation in some texts. It is the least important of the zang organs.

It encloses and protects the xin-heart and the diseases of the pericardium result in dysfunction of the xin-heart.

## **The Functions of the Fu Organs**

In general the traditional functions of the fu organs are very similar to their functions in Western medicine. Each fu organ channel connects internally and externally with a zang organ channel. This can have therapeutic importance in that a point on the fu channel may be used to treat a problem on its connected zang channel, and vice versa.

### **The small intestine**

The small intestine connects with the xin-heart. The small intestine receives and digests food from the stomach. It absorbs the pure part and distributes it to the whole body, the impure part going on to the large intestine. This function of the small intestine belongs to the transforming and transporting function of the pi-spleen.

### **The gallbladder**

The gallbladder connects with the gan-liver. It stores and discharges bile. The expulsion of bile from the gallbladder is closely related to the freeing function of the gan-liver. The gan-liver and the gallbladder take charge of freeing together, and jaundice results when this function is deranged.

### **The stomach**

The stomach connects with the pi-spleen. The stomach stores and digests food, passing it on to the small intestine. A deficiency of qi of the stomach causes indigestion, epigastric pain and sour regurgitation. When the qi of the stomach ascends then nausea, heartburn, vomiting, hiccoughs and flatulence occur.

### **The large intestine**

The large intestine connects with the fei-lung. The large intestine absorbs the residue of water and turns the rest of the food into feces. Disturbance of this function results in diarrhea or constipation due to the 'descent of qi'.

### **The urinary bladder**

The urinary bladder connects with the shen-kidney. The bladder stores and then discharges urine from the body.

### **The sanjiao**

In Chinese the sanjiao means the three cavities. The xin-heart and the fei-lung are in the upper jiao (the chest), and they transport qi and blood to all parts of the body in order to nourish the body. The pi-spleen and stomach are in the middle jiao (the epiastrum) and they digest and absorb food. The shen-kidney and bladder are in the lower jiao (the hypogastrum) and they control water metabolism and the storage and excretion of water. The sanjiao is also sometimes called the triple warmer organ. This is because the three body cavities are intended to control the body temperature.

## **Extra Organs**

### **The brain**

The brain is a sea of marrow, i.e. it is an enlarged part of the spinal cord. The shen-kidney produces the marrow that fills the brain. If the essence of shen-kidney is absent then there is inadequate marrow for the brain. In traditional Chinese medicine the function of the mind is included in that of the xin-heart.

### **The uterus**

The function of the uterus is to control the menstrual cycle, develop the embryo and nourish the foetus. The qi and blood of the channels pass into the uterus through the chong and the ren

channels, so that the qi of the body is able to influence the flow and regularity of the menstrual cycle.

#### **IV. Qi, Blood And Body Fluid**

Qi, blood and body fluid are important substances and structures in the body. They sustain the vital activities and they nourish the body, thereby keeping the functions of the tissues, organs and channels in good order. The production and circulation of qi and blood also depends on the health of the tissues and organs that are nourished by these substances.

##### **Qi**

Qi is a complex concept; it relates to both substance and function. Clean qi (oxygen), waste qi (carbon dioxide) and qi (nutrients) are generally known as material qi, and the existence of material qi is shown by the functional activity of various organs. The function of an organ depends on the functional qi of that organ; for instance, qi of xin-heart or qi of pi-spleen is the vital energy and functional activity of the xin-heart or pi-spleen. The function of an organ, or its functional qi, cannot exist without material qi, and vice versa.

##### **Zhong qi**

Zhong qi is found mainly in the chest. It nourishes the structures and functions of the xin-heart and fei-lung.

##### **Nourishing qi**

Nourishing qi circulates in the channels and collaterals, mainly in the viscera

##### **Defensive qi**

Defensive qi is in the muscles and skin. It circulates outside the channels, in the subcutaneous tissues, and it defends the body against invasion by pathogens.

The original qi is nourished and maintained by qi derived after birth. These combine to form genuine qi, i.e. the total sum of qi in the healthy body. This contrasts with pathogenic factors that are known as pathogenic qi.

##### **Blood**

The nutrients from food are digested by the pi-spleen and stomach and they are then transported to the xin-heart and fei-lung and turned into red (oxygenated) blood by qi. The essence of shen-kidney produces bone marrow, and bone marrow uses the digested food to produce blood.

Qi of shen-kidney promotes digestion by pi-spleen, which in turn strengthens the xin-heart and fei-lung. This interaction therefore promotes haemopoiesis.

There is a close relationship between qi and blood. The formation and circulation of blood depends on qi, whereas the formation and distribution of qi, as well as the health of the various organs of the body, is dependent on adequate nourishment from the blood. If the flow of blood 'stagnates' the circulation of qi is 'retarded' and, conversely, if the circulation of qi is 'retarded' then the blood flow 'stagnates'.

##### **Body Fluid**

Body fluid is formed from food and drink. It exists in the blood, the tissues, and all the body openings and cavities.

##### **Pathogenic Factors**

These are divided into three main groups, exogenous pathogens, mental pathogens and various

miscellaneous pathogens. 'Phlegm and humor and 'stagnant blood' are pathological products; once they are formed new pathological changes will ensue so they are considered to be secondary pathogens.

Pathological factors serve as a generalization of clinical symptoms and signs, reflecting the struggle of normal qi and pathogenic qi. By differentiating the clinical symptoms and signs the cause of the disease can be traced, and then treatment can be determined. In order to do this the diseased organs must be defined and the pathogen causing that disease must also be diagnosed. This is called the 'determination of treatment on the basis of the differentiation of a syndrome', and it is the basis of diagnosis and treatment in Chinese medicine.

## **The Exogenous Pathogens**

These refer to six relatively abnormal meteorological conditions; wind, cold, summer heat, damp, dryness and heat (fire, warmth). The diseases caused by these pathogens include most viral, bacterial and protozoal diseases and some 'allergic' conditions such as urticaria.

cold and damp normal qi of invade pi spleen pi-spleen is impairing its function overpowered symptoms of disease—impairment of the anorexia. abdominal distention, function of pi-spleen pain, diarrhea, cold extremities, greasy white tongue, deep thready pulse

The treatment is to eliminate the cold and damp and strengthen the pi-spleen

## **Syndrome Differentiation of six climatic factors**

### **Wind**

This pathogen is characterized by movability (of symptoms) and changeability. The clinical manifestations are abnormal limb motion, such as spasm or twitching, and a wandering symptomatic site as in urticaria or arthralgia. The symptoms may vary in intensity and they usually include a dislike of wind, fever, sweating, headache and an itchy throat.

### **Cold**

Invasion of cold will consume the yang causing a contraction of the channels and the blood vessels, and therefore a poor circulation of qi and blood. The symptoms are those of a slight fever, a dislike of cold, hypohydrosis, headache, muscular pain and spasm, and occasionally a dark blue and painful area in the local muscles and skin; a frozen shoulder is a good example of the pathogen cold.

### **Summer heat**

This only occurs in the summer; it damages the yin and may progress to affect the level of consciousness. The symptoms are excessive body heat, profuse sweating, thirst, a dry mouth, dry red skin and, in severe cases, delirium (this is known as heat exhaustion in Chinese medicine). Summer heat may combine with wind and cause convulsions. Summer heat often combines with damp to produce dizziness, nausea, a stuffy sensation in the chest and general malaise.

### **Damp**

Diseases caused by damp are sticky, muddy, greasy and stagnant. Damp causes a generalized heavy feeling associated with distention, dizziness and a heavy head, general malaise and a stuffy sensation in the chest. The patient may also complain of abdominal swelling and an exudative and prolonged skin disease.



## **Dryness**

Dryness consumes yin fluid. There may be a dry sore feeling in the nose, mouth and throat, a coarseness of the skin, or a cough with scanty sputum and possibly haemoptysis. Tuberculosis is an example of the pathogen dryness.

## **Heat (fire, warmth)**

All these represent the same pathogen, but at different intensities. Fire is the most severe and warmth the mildest. As with summer heat the yin may be damaged and this will affect the level of consciousness. The main difference is that summer heat only occurs in the summer and is generally less severe than fire. Diseases that are caused by heat are generally of abrupt onset and rapid change, they are nearly always acute infections. Initially the patient may complain of a high fever, chill, thirst, restlessness, irritability and profuse sweating. In severe cases the patient may be in coma with convulsions.

## **Mental Pathogens**

These are overjoy, anger, anxiety, overthinking, grief, fear and fright.

Excessive fear and fright, or overjoy, injures the xin-heart. This causes palpitations, insomnia, irritability, anxiety and mental abnormality.

Excessive anger causes dysfunction of the gan-liver. This impairs the function of freeing, and causes pain and distention in the costal and hypochondriac region, abnormal menstruation, depression and irritability. If the function of storing blood is disturbed then menorrhagia and hemorrhage can result.

Excessive grief, anxiety and overthinking cause dysfunction of the pi-spleen and stomach. This causes anorexia and a feeling of fullness or distention after meals.

Excessive grief, anxiety and anger cause poor circulation of qi and blood. If there is retardation of qi and stagnation of blood then this can cause a tumor.

## **Miscellaneous Pathogens**

### **Irregular feeding**

Overeating, or eating too much uncooked or cold food, impairs the function of pi-spleen and stomach and causes nausea, vomiting, heartburn, sour regurgitation and diarrhea, for example dyspepsia, gastritis and enteritis.

Overindulgence in alcohol and an excess of fatty or hot, pungent food produces damp and heat, or phlegm and heat, in the pi-spleen and stomach. Initially dyspepsia results but in more severe cases hypertension, enteritis, gastritis, cirrhosis, cancer or ischaemic heart disease can result. All these are related to nutritional habits.

Too little food intake, or lack of some essential material in food may cause malnutrition. This results in a deficiency of qi and blood which causes emaciation, lassitude, palpitations and sometimes coma.

The intake of contaminated food may impair the function of pi-spleen and stomach, and cause intestinal infections and various parasitic diseases.

## **Syndrom differentiation of Qi, Blood and body fluid**

Stagnant blood and phlegm and humor are pathogenic products that may cause further pathological change if they are not eliminated. They have substantive and non-substantive meanings. Substantively they could be described as a blood clot or sputum, the non-substantive meaning is a generalization of a clinical syndrome, for instance, the stertorous breathing that may occur after a severe stroke is described as 'phlegm covering the orifice of the xin-heart'.

### **Stagnant blood**

Stagnant blood can cause pain. The painful area is fixed and has a stabbing, boring or colicky nature.

Stagnant blood causes hemorrhage. This produces deep purple blood, often with clots.

Stagnant blood causes ecchymosis or petechia.

Stagnant blood can cause a mass. This can be any sort of mass, tumor, splenomegaly or hepatomegaly.

### **Phlegm and humor**

Phlegm and humor are formed when water metabolism is disordered; an accumulation of excess water then turns into phlegm or humor. Phlegm and humor in the lung causes cough, dyspnoea and excessive sputum.

Phlegm and humor in the stomach causes abdominal distention and a succession sound.

Phlegm covering the heart orifice causes coma and a rattling sound from the sputum in the throat, such as in a stroke.

Phlegm blocking the channels and collaterals causes hemiplegia, numbness of the extremities and difficulty in speech, such as in a stroke.

Phlegm accumulating subcutaneously occurs when there is a subcutaneous lymph node.