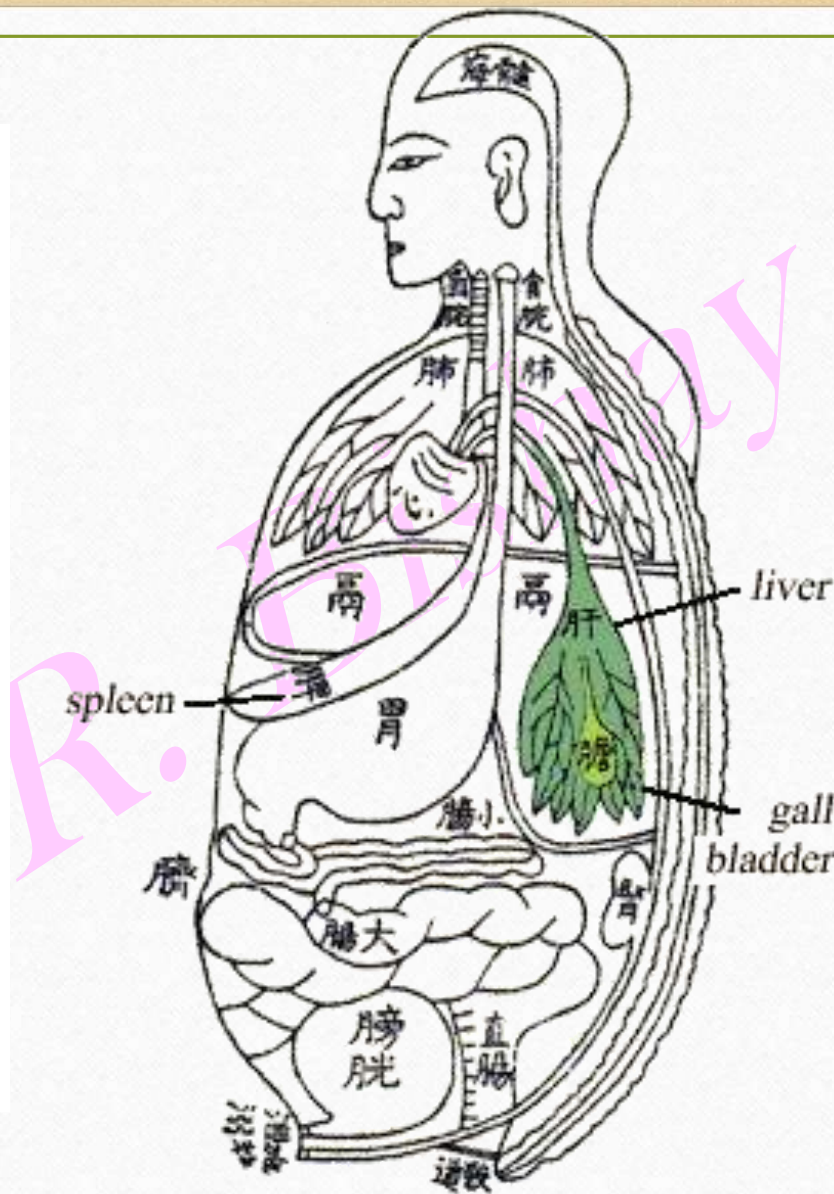


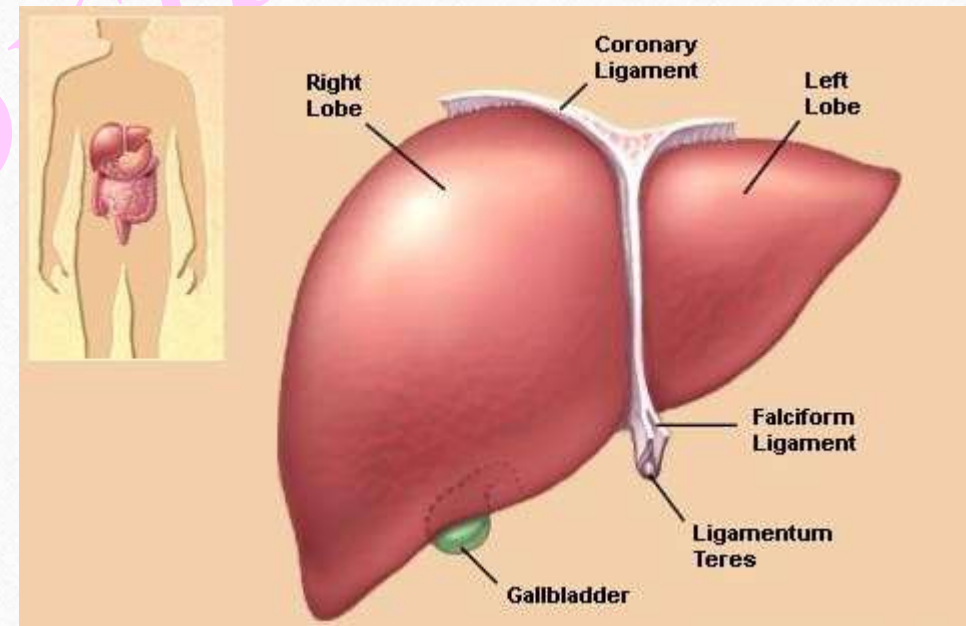
Liver 肝



肝重二斤四兩，
左三葉右四葉，凡
七葉，主藏魂。

Western Liver

- In western physiology, the liver is responsible for a number of important body functions, including the production and excretion of bile, which is used to break down fat and the detoxification of blood.



Liver

- Liver Ensures Smooth Flow of Qi
- Stores the Blood
- Controls The Sinews
- Manifests in the Nails
- Opens into the Eyes
- Houses the Hun (Ethereal Soul)
- Wood
- Green
- Spring
- Anger
- Loathes Wind
- Tends towards Stagnation

肝位於腹部右脅之內。主要生理功能是主藏血和主疏泄，體陰而用陽。在體合筋，為“罷及之本”，其華在爪，開竅於目；在液為淚，在志為怒。肝氣與春氣相通應。肝的生理特性是，喜條達而抑鬱，其氣易亢易逆，為剛臟，稱為“將軍之官”

Liver Ensures Smooth Flow of Qi 主疏泄

- It is extremely common to find Stagnation of Liver Qi in clinic. Liver ensures smooth flow of Qi throughout all the body, in all directions.
- Any activity that depends on Qi relies on the Liver's "flowing and spreading".
- 疏泄: in Chinese means to unclog and clear.
- 1. 液體或氣體排出：排～。～洪。～瀉。
- 1. 去掉阻塞使通暢：～導。～通。～浚。～解

Cont.

- This refers to the Liver's ability to smooth the flow of Qi in the body.
- The movement of Qi in the body is described as **Qi Ji** 氣機. The function of liver to regulate Qi activity is demonstrated in the following aspects

The Smooth Flow of Liver Qi Affects Three Main Areas:

- Circulation (son)
- Emotion (grandpa)
- Digestion (grandson)
- Menstruation (mother)

Circulation

- Circulation of blood and **Jin Ye fluid = body fluid**: Blood and circulation and body fluid metabolism all depend on the propelling function of the visceral Qi (臟腑之氣), the normal flow of which relies on the regulating and draining function of the Liver. Which are prerequisite to constant blood circulation and normal metabolism of body fluid.

Cont.

- If the movement of Qi is abnormal due to failure of liver to drain and regulate, it may affect blood circulation and body fluid metabolism, bringing on corresponding pathologic changes.
- Example, if liver is weak in draining and regulating, the activity of Qi will be stagnated and blood circulation will be obstructed, leading to **blood stagnation**; or if Liver is hyperactive in draining and regulating, blood will flow adversely with Qi, causing **haematemesis (stirring)**; or if Qi activity is obstructed, water passage will be stagnated, leading to **phlegm, and edema**.

Emotions

- The emotional state is seriously affected by the Liver's function of "Flowing and Spreading" Qi. When it flows normally, emotions are approximate and easy. When the spreading of Qi impaired or the circulation of Qi restrained, there will be emotional **depression, frustration**, repressed anger, and physical symptoms.
- There is a relationship between emotional state and Liver Qi. "**Anger makes Qi rise and Blood stagnates in the chest.**" **Grandson insulting the grandpa**
- The normal mental activity depends on sufficiency of blood and smooth activity of Qi which can be promoted by the liver.

Cont.

- Stagnation along channels related to Liver: hypochondriac and costal pain, "plum pit Qi", chest oppression, swollen/tender breasts and genitals, lower abdominal pain
- Failure of liver to drain and regulate, it will lead to abnormal changes of mental activities, such as heavy heart, melancholy, sentimentality (sadness and nostalgia), hiccup and sigh due to stagnation of liver-qi.
- If liver qi flow adversely, qi will stagnate and transform into fire, bringing on symptoms of irritability, susceptibility to rage, reddish complexion and eyes, head distension and headache due to hyperactivity of Liver-Qi

Digestion

- Digestion and the Liver - Five element: Wood controls Earth.
- The Liver's function of spreading Qi aids the Spleen and Stomach's digestive functions, and is important to ensure harmonious Qi movement in Middle Burner.
- Liver qi regulates the activity of Spleen Qi and Stomach Qi, to elevate clear Food Qi and descend the turbid Qi.

Cont.

- Stagnant Liver Qi can "invade" or "attack" the Stomach or Spleen (**Wood overacts on Earth**).
- When this happens both the Spleen and Stomach functions will be affected, leading to disturbance in digesting and absorbing food. This leads to abdominal distension, ***abdominal pain and diarrhea*** due to ***failure of Spleen-Qi to ascend*** and gastric ***distension and pain, vomiting and hiccup*** due to ***failure of Stomach-Qi to descend***.
- Smooth flowing of Liver Qi affects bile flow. Stagnant Liver Qi can obstruct bile flow (**bitter taste, belching, or jaundice**).

Stores Blood 主藏血

Regulates volume of Blood according to physical activity

- **When at rest, Blood returns to Liver** (Liver contributes to restoring energy). When body is active, Blood nourishes muscles to enable them to perform.
- Blood regulation function influences energy level: if this function impaired, lack of Blood (= nourishment) where needed, hence easily tired.
- Regulates menstruation, liver is very important in gynecology. If Blood storage function is abnormal, can affect quality of Blood.

Regulates menstruation

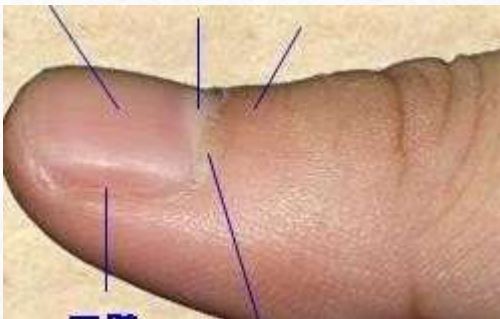
- Liver is very important in gynecology. If Blood storage function is abnormal, e.g. Liver Blood is deficient, menstrual problems e.g. amenorrhea, oligomenorrhea. If Liver is Hot or Excess, menorrhagia can occur.
- If Liver Qi stagnant, Liver Blood can stagnate (dysmenorrhea, PMS, dark clots).
- Liver malfunction influences energy of Ren Mai & Chong Mai which are closely related to uterus.
- Blood & Liver function reciprocally affect each other. Where Blood is Deficient or Hot, Liver function can be affected. If Liver function abnormal, can affect quality of Blood. For example: **If Liver is Hot, Blood can become Hot (causing skin eruptions, eczema, etc.: Blood becomes heated by being stored in a hot "container").**

Controls Sinews在體合筋

- Sinews (tendons) depend on Liver Blood to moisten and nourish them so they can contract and relax as needed (smooth movement of joints and good muscle action). Deficient Liver Blood leads to lack of nourishment in the tendons, which leads to contractions, spasms, impaired extension/flexion, numbness of limbs, cramps, tremors, muscle weakness, etc.
- The Liver controls the Sinews (tendons), or the contractile aspect of the muscles. The Spleen controls the muscles, or the mass or bulk. **Liver imbalances are more likely to affect movement, and Spleen weakness more likely affects flaccidity, atrophy**, etc.

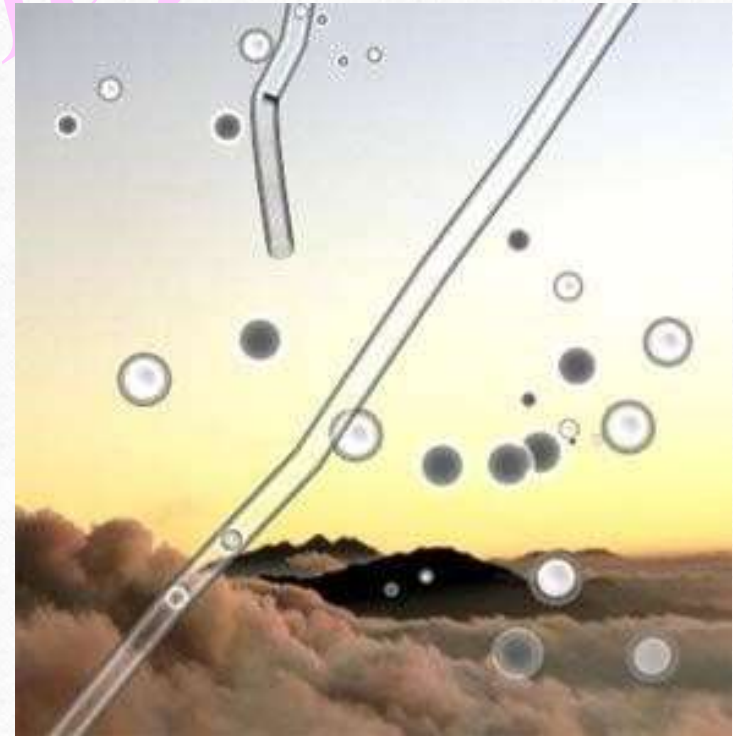
Manifests in the Nails 其華在爪

- The finger and toe nails are the outgrowth of sinews and are influenced by Liver Blood. When Liver Blood is deficient, the nails will lack nourishment and become dark, indented, dry, cracked, brittle, etc.



Opens to the Eyes 開竅於目

- Liver Blood nourishes and moistens eyes and gives capacity to see. Liver Blood deficient: *blurred vision, myopia, "floaters" color blindness, dry "sandy, gritty" eyes.* If heat in Liver, eyes bloodshot, sore and burning.



Houses the Hun 肝主藏魂

- The Hun is also called the **ethereal Soul**. Hun is related to ability to be resolute, to **plan** and have **creative drive** and **assertiveness**. When the Liver is out of balance in excess for instance, this becomes anger.
- "If one were to put an English word to them, they are our "**wits**" (*mental sharpness and intelligence*), our ability to demarcate clearly, and like the English concept of "wits," they can be scared out of us or can dissipate in old age."

Daoist view

- Daoism proposes a soul structure of sanhunqipo 三魂七魄; that is, "three hun and seven po".
- The **three hun** is 胎光、爽 (shì, 尸) 靈、幽精

TCM

- *Hun and Po (soul of lung) are a pair of opposite polarity which mutually influence each other.*
- Hun is the 'Qi of Heaven'
- Hun is Yang
- *At birth: Hun enters Po and Po encloses Hun; and at death: Hun disperses, and Po falls, sinking and returning to earth.*

魂 Hun

- Lingshu Jing medical text spiritually applies five element theory to the Zang-fu "organs", associating the hun soul with liver and blood, and the po soul with lung and breath.
- The *Lingshu* also records that the hun and po souls taking flight can cause *restless dreaming, and eye disorders* can scatter the souls causing *mental confusion*. Han medical texts reveal that **hun and po departing** from the body does **not necessarily cause death but rather distress and sickness**.

Anger (怒) Nù

- Anger makes the qi rise, and it is important to take into consideration that it is a sudden internal movement, immediate and uncontrollable.
- Being angry is feeling ‘the rage mounting’, which corresponds precisely with the classic description “anger, then the qi rises” (怒則氣上) Su Wen, Chapter 39. With anger qi rises in an unstoppable way, **heat rises attacking the heart, berating is short** (HT overacting Lus) as though one is about to die, there is **no air to breathe**.

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- This movement may not have an immediate direct expression in words or deeds, due to its natural tendency to subside (if not too powerful) or due to a constraint which keeps it on hold.
 - The **relationship between anger and aggressiveness** was already recognized in Nei Jing in its affirmation that when liver qi empties there is fear.

Liver and Other Organs

Liver and Lungs

- Reflects the relationship of Qi and Blood.
- Lungs govern Qi, and the Liver regulates and stores the Blood.
- They rely on each other in that the **Liver relies on Lung Qi to regulate Blood**, and the Lungs rely on Liver Qi to smoothly move Qi.
- Deficient Lung Qi can affect Liver's smooth movement of Qi (fatigue, depression, cough and hypochondriac pain).

Liver and Lungs

- **Liver Qi can stagnate in the chest** and interfere with the Lung's function of descending (**cough, dyspnea, asthma**).
- Stagnation of Liver Qi can cause **Liver Fire to rise and injure Lung Yin** (Hypochondriac pain, coughing blood, pain on breathing).

Liver and Spleen

- When healthy, Liver Qi aids Spleen in digestion, and ensures smooth flow of **bile to aid digestion**.
- By ensuring smooth flow of Qi in all directions of the body, Liver ensures that *Spleen Qi flows upwards in its right direction*.
- **Stagnant Liver Qi** disrupts Spleen ability to *transform and transport* food and fluids and to "*raise the pure*". (abdominal distension, hypochondriac pain, diarrhea).

Liver and Kidneys

- Based on mutual exchange between Blood and Jing (essence).
- Kidney Jing contributes to the making of Blood. (Jing produces bone marrow which is connected with manufacture of Blood in the body).
- "Liver and Kidneys have a common origin".
- "Essence and Blood have a common source".
- **Kidney Yin nourishes Liver Yin (including Liver Blood).**
- Deficient Kidney Jing may lead to Blood becoming Deficient (dizziness, blurred vision, tinnitus).
- *Kidney Yin fails to nourish Liver Yin, causing hyperactivity of Liver Yang (blurred vision, tinnitus, headaches, irritability, dizziness).*