

- Miscarriage before three months may indicate Deficiency of Blood or Essence (Kidney)
- Miscarriage after three months may indicate Stasis of Liver Blood or Sinking of Spleen Qi

Childbirth

- Nausea and heavy bleeding after delivery indicates Exhaustion of Chong Mai
- Sweating and fever after delivery indicates Exhaustion of Qi and Blood
- Postnatal depression may indicate Blood Deficiency has lead to Heart Blood Deficiency

TCM Diagnosis by Palpation (Pulse Diagnosis) - One of the 4 Pillars

- [Divisions of the Pulse](#)
- [Location of the Radial Pulses](#)
- [The Method of Pulse Diagnosis](#)
- [Factors Influencing Pulse](#)

In Western medicine, the pulse is only a minor diagnostic tool, it is, however, very important in TCM. Pulse diagnosis gives information on

1. The state of balance of the body as a whole, i.e. the state of the Qi, Blood, Yin and Yang, and even the constitution.
2. The state of individual Organs (esp. Yin Organs).

TCM practitioners feel the pulse and note the rate. They discern width or amplitude, length, how close it is to the surface, how deep and close to the bone, the strength, and other qualities.

Divisions of the Pulse

Three area of the Pulse:

Inch or Cun:	Distal or Front (at wrist crease)
Bar or Guan:	Middle (just medial to radial styloid process)
Cubit or Chi:	Proximal or Rear

Three Levels of the Pulse:

Superficial:	State of Qi and Yang Organs in general
Middle:	State of Blood
Deep:	State of Yin and Yin Organs

Three Levels Can Also Be Viewed As:

Superficial:	The condition of the Exterior or of the Upper Burner
Middle:	Stomach and Spleen diseases
Deep:	Interior diseases, esp. Liver and Kidneys

Location of the Radial Pulses

Three positions at each wrist, along the radial artery. The pulses are palpated at three positions, superficial, middle and deep.

The pulse essentially reflects the state of Qi in the different burners of the San Jiao (triple burner).

Distal:	Upper Burner
Middle:	Middle Burner
Proximal:	Lower Burner

The pulse positions mainly give information regarding the Yin Organs. It is more difficult to assess the Yang Organs at individual positions (we tend to assess the Intestines in the Lower Burner position)

In pulse diagnosis, the most important things to assess:

- Health of the Qi in general
- Relationship of Yin and Yang on the pulse
- Relative states of Deficiency and Excess
 - Whether an exterior pathogen is present

Each pulse position can reflect different phenomena in different situations. For example: The Lung pulse full can occur as a result of emotional problem (grief) affecting Lungs or from Phlegm in Lungs or from an Excess in Large Intestine channel, such as a tooth abscess.

The Method of Pulse Diagnosis

Feel pulses with the pads of the fingers (most sensitive part)

Hand must be relaxed - neither tense nor flaccid, but flexible and maintained in the pulse-taking position with the minimum of effort.

Exercise: Tense the hand as much as possible. Then relax and let the hand droop. Then gradually, with as much attention as possible, put just enough energy into your hand to lift the fingers. Imagine your fingers are like the leaves of a tree; if you waved your arm your hand and fingers would float gently after your arm. This is the optimum condition of the hand for pulse taking, relaxed, flexible but responsive.

Place the third (middle) finger pad on the radial artery just medial to the styloid process. The index finger is then placed in the distal position at the wrist crease and the ring finger in the proximal position.

NOTE: on a small person, the fingers will have to be squeezed close together but on a large person they may need to be spread out.

Try to feel the radial artery pulse with all three fingers. Use equal pressure on all three fingers and then release the pressure on the middle finger slightly to compensate for the styloid process. (The pressure of the radial artery on the styloid can produce an artificial pulse reading if the same amount of pressure is exerted there. The pulse would then appear to be excessive in the middle position.)

When you can just feel the radial artery, and have adjusted the pressure of your finger tips, release the pressure equally until you can JUST feel the pulse. This is the superficial position.

Then press as deeply as possible (maintaining the relative pressure levels as before) until you cut off the pulse altogether. Release the pressure until the pulse just returns. This is the deep position.

- Timing: Optimum time is early morning, when Yin is calm and Yang has not yet arisen.
- Position: Patient's arm should be horizontal and not higher than level of heart. Most practitioners use a table and place patient's wrists on a small cushion.
- Finger Placement: Best to keep all fingers in place as described above, and only lift fingers slightly to feel different levels.
- Breathing: Practitioner must regulate his/her breathing in order to be more receptive. Patient's pulse is traditionally correlated with the Practitioner's Breathing Cycle in order to determine if patient's pulse is slow or rapid. (This was misinterpreted for a long time in the West).

Normal pulse:	4-5 beats per practitioner's breath.
Three beats or less:	Slow Pulse
More than five beats:	Rapid Pulse

Also pulse can be counted using a watch according to following table:

Age	Rate
1-4	90 or above
4-10	84
10-16	78/80
16-35	76
35-50	72/70
50+	68

Factors that Influence a Pulse Reading

- The 4 Seasons: Pulse is deeper in Winter, more superficial in summer.
- Gender: Men's pulses are naturally a little stronger. In men, the LEFT pulse is slightly stronger and in women the RIGHT pulse is slightly stronger.
- Occupation: those doing heavy physical work should have stronger pulse.
- Patient should not have just eaten a large meal (1 hr. before OK). Otherwise, Stomach pulse will read very high and other Organ readings may be depleted.
- Allow the patient to rest after arrival at office.
- Allow 15 minutes after urination, defecation or ingestion of liquids.
- Pulse diagnosis should take place in a calm, restful environment.
- Silence should be maintained during procedure.
- Western medications can interfere with reading, as can hypertension, and structural anomalies.

The 29 Pulses in Chinese Medicine (TCM) Pulse Diagnosis

The Normal Pulse: reflects good Heart Qi and Blood. It should be calm, smooth, soft, but not too soft, and not slow, rapid, rough or hard. It should be regular. Its quality should not change very often or easily. Deep level and rear position should be felt clearly, indicating that the Kidneys are healthy.

Note: Different sources vary on both their naming conventions and on the total number of standard pulse images. We have tried to organize this information to include 29 pulse images and their various names.

The Main Pulse Images

- Fu Mai (Floating, Superficial)
- Hong Mai (Surging, Flooding)
- Ge Mai (Leathery, Drumskin, Tympanic, Hard)
- Kou Mai (Hollow or Scallion Stalk, Green Onion)
- Ru Mai (Soft or Soggy)
- San Mai (Scattered)
- Xu Mai (Forceless, Empty, Deficient)
- Chen Mai (Deep)
 - Fu Mai (Hidden)
 - Lao Mai(Firm, Confined)
 - Ruo Mai (Weak)
 - Chi Mai (Slow)
 - Huan Mai (Slowed down, Moderate, or Relaxed)
 - Se Mai(Choppy, Hesitant)
 - Jie Mai(Knotted, Bound)
 - Shi Mai (Excess, Full, Replete, Forceful)
 - Hua Mai (Slippery, Rolling)
 - Jin Mai (Tight, Tense)
 - Chang Mai (Long)
 - Xuan Mai (Wiry, Taut)
 - Wei Mai(Minute, Faint, Indistinct)
 - Xi Mai(Thready, Thin)
 - Duan Mai (Short)
 - Dai Mai (Regularly Intermittent)
 - Shuo Mai(Rapid)
 - Ji Mai (Racing, Swift, Hurried)

- Cu Mai (Rapid-Irregular, Skipping, Abrupt)
 - Dong Mai(Moving, Throbbing, Stirring)
 - Da Mai(Large, Big)
 - **Fu Mai (Floating, Superficial)**
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Description:	Located in the exterior. With the finger raised, it has a surplus, when pressing down it is insufficient, weak, or disappears. When pressure is released, it regains full strength.
Indications:	External invasion, Yin Xu with Yang floating upwards, Qi or Yang Xu
Etiology:	Mainly an exterior condition, syndromes due to Xu, or Yang Qi loosing its root in the lower part of the body and floating to the upper regions.

- **Hong Mai (Surging, Flooding)**

Description:	Floating, large (i.e. wide) comes on exuberant, departs debilitated. "Coming onto the shore with force and retreating without force"
Indications:	Extreme heat; if with thirst, high fever it can be Yangming heat or internal heat. If surging and forceless, this is Xu surging.
Etiology:	This pulse has been said to arrive strong at the chi position and depart at the cun position, thus its wave like character. The Yang is floating excess and upward, this is a manifestation of fire floating upward and water drYing internally(i.e. loss of blood, diarrhea)

- **Ge Mai (Leathery, Drumskin, Tympanic, Hard)**

Description:	Bowstring and large (wide) with an empty center; feels like the head of a drum. Felt with light pressure. Floating, large, and hard and resistant to pressure.
Indications:	Hemorrhage, Spermatorrhea, Abortion, Excessive Menstrual Flow, Xu Cold
Etiology:	The Qi becomes detached and floats to the exterior, the healthy Qi is failing to store sperm and blood.

- **Kou Mai (Hollow or Scallion Stalk, Green Onion)**

Description:	Floating, soft, large body, but empty in the center. Forceless--large and weak.
Indications:	Hemorrhage, Damage of Yin, Great Blood Loss (severe diarrhea/hemorrhage)

Etiology:	There is failure to fill the vessels by insufficient Ying and Blood causing Yang Qi to detach and float to the surface.
	Sources disagree on the description of this pulse, some say that the beats around the middle level are palpable(i.e. light or heavy pressure) and the beats at the middle level are impalpable. Bob Flaws says that "a pulse which is empty in the center is an extreme floating pulse which not only gets weaker when one presses down but disappears altogether. It only reappears again when pressure is released to the superficial level."

Ru Mai (Soft or Soggy)

Description:	Floating, fine, soft and flexible. Can be felt with light pressure but cannot be obtained by heavy pressure. "Floating, thready, and soft" "Like a silk thread in water"
Indications:	Primarily means Dampness, can be Yin Xu, Blood Xu, Spleen Xu
Etiology:	The dampness is obstructing the vessels or the Qi and Blood are unable to fill the vessels giving it its soft quality. This is distinguished from other floating pulses, which tend to be large(i.e. wide)

San Mai (Scattered)

Description:	Floating, large (ie.wide) and without root; with light pressure it is easily irregular, becoming scattered and chaotic; with heavy pressure it is impalpable.
Indications:	Dispersion of Yuan Qi, Kidney Yuan Qi Xu, severe deficiency and exhaustion of internal organ Qi
Etiology:	This pulse is without root, without definite edges and boundaries, not characterized as an irregular beat pulse, although it feels chaotic. It is a further progression from the Kou Mai (Hollow), being even weaker than the Kou Mai. "Like wind blowing hair or scattered leaves"

Xu Mai (Forceless, Empty, Deficient)

Description:	Generalized term for various types of forceless pulses or is described as a floating, large, slow, empty, deficient, soft, forceless pulse image.
Indications:	Qi and Blood Xu Can be damage by summerheat.
Etiology:	

Chen Mai (Deep)

Description:	Located near the bone. Cannot be detected with light or moderate pressure but can be felt with heavy pressure. (Not to say it is impalpable at lighter pressure)
Indications:	Interior patterns. If deep and rapid=Interior heat. If deep and slow=interior cold. If deep and forceless=Qi and Yang Xu If deep and forceful=excess of internal disease.
Etiology:	Pathogens in the interior are obstruction healthy flow of Qi and Blood.

Fu Mai (Hidden)

Description:	Difficult to feel, under the sinews, not obvious, requires heavy pressure to obtain. Almost to the bone. Deeper than the deep pulse.
Indications:	Severe pain, extreme stagnation,(of food or of pathogens), syncope, last stage of an illness, coma, and lack of circulation.
Etiology:	

Lao Mai (Firm, Confined)

Description:	Pressed superficially or moderately, it does not respond, but can be obtained by heavy pressure. Hard, firm, not changeable, replete, large, bowstring, and long.
Indications:	Internal cold, perhaps hernia, abdominal masses. Can also indicate wind epilepsy, inflexibility, and cramping, hard accumulations hidden in the interior, running piglet and sudden violent counterflow.
Etiology:	The pathogenic factors are steady, there is interior cold and decline of Yang Qi

Ruo Mai (Weak)

Description:	Deep, fine, soft like a thread.
Indications:	Simultaneous Qi and Blood Xu
Etiology:	Blood Xu results in failure to fill the vessels and Qi Xu results in its forcelessness.

Chi Mai (Slow)

Description:	Below 60 BPM or less than 4 beats per practitioners breath.
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Indications:	Cold syndromes, Forceful and slow=accumulation of cold; Forceless and slow=cold from Xu Slow and floating=external cold, Slow and deep=interior cold. Slow and choppy=blood disease. Slow and slippery=Qi disease.
Etiology:	There is stagnation of Qi due to cold. There may be other factors as well, such as obstruction of blood due to accumulation of heat, this pulse must be forceful and excessive when palpated (i.e. Yangming)

Huan Mai (Slowed down, Moderate, or Relaxed)

Description:	As a ping mai, or normal pulse it is level and harmonious, relaxed and forceful. As a bing mai or abnormal pulse it is relaxed, loose, slack, on the verge of slow. About 60 BPM. The beats come and go slowly, feels viscous, the rate is like normal but the slowness shows up at the end of a beat, before a slow pulse.
Indications:	Syndromes of Damp, SP/ST Xu Not enough Qi and Blood to fill the vessels.
Etiology:	May also be due to wind if floating and relaxed. If it is deep and relaxed is damp syndrome. If large and relaxed=liver wind internally, if relaxed and weak it may signify heart Qi Xu

Se Mai (Choppy, Hesitant)

Description:	Slow, relaxed, stagnant, difficult, fine, may stop and loose a beat but then recovers. It is not smoothly flowing. It feels like a knife scraping bamboo.
Indications:	Consumption of essence, Blood Xu, Stagnation of Qi, Blood Stagnation, Phlegm or food stagnation. It can also be due to heart palpitations.
Etiology:	Blood and essence failing to nourish the meridians. Blood is not flowing smoothly.

Jie Mai (Knotted, Bound)

Description:	Slow, relaxed, stops at irregular intervals.
Indications:	Stagnation of Qi due to excess Yin, Blood Stasis due to cold phlegm, Blood Stagnation. Sometimes abdominal masses, also indicates Heart palpitations.
Etiology:	Yin and Yang out of balance due to excess Yin. (This represents an irregular beat or palpitation stemming from the ventricle of the Heart)

Shi Mai (Excess, Full, Replete, Forceful)

Description:	Bowstring, large, hard and replete pulse which has a surplus at all 3 levels of cunkou.
Indications:	Excess condition where both pathogenic and anitpathogenic factors are strong.
Etiology:	Blood vessels are full with both Qi and Blood

Hua Mai (Slippery, Rolling)

Description:	Comes smoothly flowing and uninhibited; feels smooth like pearls rolling in a dish. Beats come and go fluently and smoothly, feeling slick to the fingers.
Indications:	Phlegm retention, indigestion, excess heat. May also indicate dampness. The Hua Mai is considered normal (ping mai) for women during pregnancy or menstruation.
Etiology:	The smooth and slick pulsation is caused by the accumulation of pathogens in the interior with sufficiency of Qi and Blood.

Jin Mai (Tight, Tense)

Description:	Tight, has strength, feels like a taut rope. Feels like a stretched and twisted rope.
Indications:	Cold or Pain. Undigested food
Etiology:	Caused by the contraction of tense vessels resulting from the conflict between cold and healthy Qi and the obstruction of Yang Qi

Chang Mai (Long)

Description:	Long and can be felt beyond its location. Felt past the cun position.
Indications:	Excess liver Yang, Yang and Heat Excess in the Interior, Strong Pathogenic factors
Etiology:	A long and smooth pulse can be normal (ping mai) for some people, the long characteristic is usually present with wiry.

Xuan Mai (Wiry, Taut)

Description:	Feels straight, long and tense, like the feeling of pressing a tight string of a musical instrument. Crisp and distinct edges, tends to reveal itself when one slightly lets up on the pressure.
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Indications:	Liver and Gall Bladder disease, various painful disorders, phlegm retention, malaria, abnormal circulation of Qi
Etiology:	Tense vascular Qi due to the liver not gently performing its function, can also be due to the retention of a pathogen in the liver. If wiry, Thready and forceful-like feeling the edge of a knife is indicative of Stomach Qi exhaustion.

Wei Mai (Minute, Faint, Indistinct)

Description:	Insufficient, extremely fine, soft, barely palpable. It may be felt and then sometimes it is lost. "Extremely Thready and soft"
Indications:	Decline of Yang Qi. Yin, Yang, Qi, and Blood Deficiency.
Etiology:	The Yang Qi cannot push the blood in the vessels or the Yin/blood cannot fill the vessels.

Xi Mai (Thready, Thin)

Description:	Soft, feels like a silken thread, weak, without strength but not scattered by pressure.
Indications:	Qi and Blood Xu, various deficiency syndromes, disorders due to Damp. Does not indicate weakness.
Etiology:	Impairment of Ying Blood fails to make the vessels plentiful. Qi is too deficient to move the blood. May also occur due to compression of vessels by dampness.

Duan Mai (Short)

Description:	Does not reach(i.e. fill longitudinally) its location or range. Can be felt most clearly at the Guan position, more indistinct at the Cun and the Chi.
Indications:	Short and forceful indicates Qi Stagnation, Short and weak indicates Qi Xu
Etiology:	Qi is failing to move the Blood.

Dai Mai (Regularly Intermittent)

Description:	Comparatively relaxed and weak, stops at regular intermittent intervals. These intervals may be strikingly long.
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Indications:	Decline of Zang Fu (organ) Qi, Wind Syndromes, Pain, Terror, Fear, Trauma.
Etiology:	Flaws: "Patients with this pulse have advanced heart disease according to western medicine and should be immediately referred to a western doctor"

Shuo Mai (Rapid)

Description:	Above 90 BIM, or more than 5 beats per breath.
Indications:	Heat Syndromes. Forceful and rapid = excess heat. Weak and rapid = Deficiency Heat.
Etiology:	Hyperactivity of heat accelerating Qi and Blood. Rapid pulse may be weak when it's Yin Xu due to a chronic disease resulting from interior deficient heat. Rapid pulse, when seen in cases of floating of Yang Xu, must be large and weak with a sense of emptiness.

Ji Mai (Racing, Swift, Hurried)

Description:	Very rapid, over 120 BIM, or 7-8 beats per breath.
Indications:	Excess of Yang and exhaustion of Yin, impending exhaustion of primary Qi Can also be due to Heart Palpitations.
Etiology:	Exhaustion of Yin in the lower body and excess of Yang in the upper parts. Often accompanies high temperatures. Swift and wiry=not enough true Yin, overabundance of Yang. Swift and forceful=Primary Yang will be exhausted. Note: This can be normal for infants.

Cu Mai (Rapid-Irregular, Skipping, Abrupt)

Description:	Rapid and irregularly interrupted.
Indications:	Excess Heat, Domination of Yang, Qi, Blood, Phlegm and Food Stagnation. This can be from an Atrial Fibrillation.
Etiology:	This is clinically very severe, Yin and Yang are not in communication.

Dong Mai (Moving, Throbbing, Stirring)

Description:	Slippery, rapid, forceful, feels like a bean--strong and throbbing abruptly. "Without head or tail" This is most distinguished at the Guan position, and is a subcategory of the short pulse.
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Indications:	Pain, Fright, Shock
Etiology:	Conflict between Yin and Yang, disturbance of ascending and descending, leading to faster circulation of Qi and Blood which makes it appear smooth, rapid, and forceful yet palpable over a narrow region.

Da Mai (Large, Big)

Description:	Large, fills up the fingertip, forceful. Similar to the Hong Mai, but does not have the wave-like shape
Indications:	Advance of a disease due to domination of pathogenic factors and also Deficiency Syndrome.
Etiology:	It is possible to differentiate exuberance or decline of pathogenic factors and the health of the Qi according to whether Large pulse is forceful or weak.

Summary Chart of Pulse Diagnosis Indications

Summary Chart of Pulse Diagnosis Indications

	Excess Heat	Excess Cold	Pain	Phlegm Stagnation	Food Stagnation	Qi and Blood Stagnation	Dampness	Qi Xu	Blood Xu	Yin Xu	Yang Xu	Excess Pathogens	Masses	Zheng Qi Xu	Other
Surging/Hong	✓														
Forceful/Shi	✓														Excess Zheng Qi
Slippery/Hua	✓			✓	✓		✓								
Long/Chang	✓											✓			
Wiry/Xuan	✓		✓	✓		✓									Liv/GB disorders
Rapid/Shu	✓														
Rapid irregular/Cu	✓		✓	✓	✓	✓									Atrial Fibrillation
Tight/Jin		✓	✓		✓										
Confined, Firm/Lao		✓	✓										✓		Hernia
Hidden/Fu			✓		✓							✓			Syncope, lack of circulation, coma
Moving, Throbbing/Dong			✓									✓			Shock
Regular Intermittent/Dai			✓											✓	Zang Fu Qi Xu, Wind, Fear

	Excess Heat	Excess Cold	Pain	Plegm Stagnation	Food Stagnation	Qi and Blood Stagnation	Dampness	Qi Xu	Blood Xu	Yin Xu	Yang Xu	Excess Pathogens	Masses	Zhen g Qi Xu	Other
Hesitant, Choppy/Se				✓	✓	✓			✓						Heart Palpitations, Consumption of Essence
Knotted/Jie				✓	✓	✓							✓		Heart Palpitations
Short/Duan						✓		✓							
Thready/Xi							✓	✓	✓						
Soft, Soggy/Ru							✓	✓	✓	✓					
Minute, Indistinct/Wei								✓	✓	✓	✓				
Scattered/San								✓							Yuan Qi Xu
Forceless/Xu								✓	✓						Damage By Summerheat
Weak/Ruo								✓	✓						Simultaneous Qi and Blood Xu
Hollow/Kou									✓	✓					Great loss of Blood
Drumskin, Tympanic, Leathery/Ge									✓						Hemorrhage, Spermatorrhea, Abortion, Heavy Menstruation
Swift, Hurried/Ji										✓					Yuan Qi Xu, Excess Yang, Heart Palpitations
Large, Big/Da												✓		✓	
Deep/Chen														✓	Interior Accumulations
Slow/Chi		✓									✓				
Slowed Down/Huan							✓								Spleen, Stomach Xu
Floating/Fu															External, Yin or Yang loosing root in lower body floating to top

Bladder Pattern Differentiation in Chinese Medicine

- Damp Heat in the Bladder
- Damp Cold in the Bladder
- Bladder Deficient and Cold

Etiology of Bladder Patterns
