

# 9

## Depth

*Hamilton Rotte, A.P.*

DEPTH GIVES US INFORMATION ABOUT the location and stage of a disease. Generally, the superficial pulses are associated with acute diseases involving the surface protective qi and the deeper pulses are a sign of more profound, chronic illness of the yin organs. Exceptions to this are mentioned in the discussion of individual qualities; as a general exception, heavier people normally have slightly deeper pulses. This discussion of pulse depth is organized by superficial and submerged (deep) qualities.

### EXCESS AND DEFICIENCY

---

Pulses that are Deep are associated with internal conditions. Theoretically, they could be due to excess, but most commonly in modern times, they reflect deficiency.

### SUPERFICIAL PULSE QUALITIES

---

#### COTTON

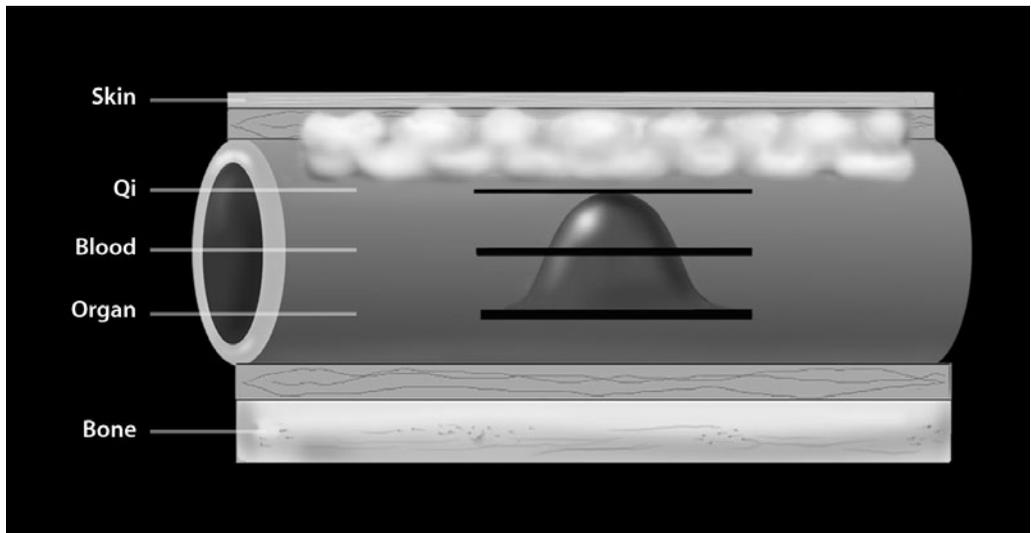
CATEGORY: This quality, demonstrated clinically by Dr. Shen, is not discussed elsewhere in the literature. It is a commonly identified quality with a reliable clinical meaning. The Cotton quality is felt only above the qi depth and to the depth at which other qualities are first accessed; therefore it is classified as a superficial pulse.

**SENSATION:** The Cotton quality (Fig. 9-1) usually manifests over the entire pulse and less often at individual positions. It is spongy, amorphous, structureless (connective tissue) and has a resistance that increases as gentle pressure is exerted from the surface down to whichever depth other qualities can be first accessed. If the qi depth is absent, the Cotton quality is felt down to the blood depth, or to the organ-qi depth if the blood depth is absent, and even down to the organ-blood (O-B) and organ-substance (O-S) depths if the pulse is Feeble-Absent. Neither individual beats nor the wave are palpable with the Cotton quality. Obese individuals have a thickening of the connective tissue that is distinguished from the Cotton quality by its sensation of hardness.

Where the wave of the radial pulse is above the qi depth or the structure of the artery protrudes above the surrounding tissue, the Cotton quality is palpated to the side of the artery.

**INTERPRETATION:** The Cotton quality is a sign of superficial qi stagnation with several etiologies. Over time, the body's efforts to overcome the stagnation will cause depletion, and eventually the blood circulation will be affected. The Cotton quality is usually caused by suppression of emotions and less commonly by physical trauma.

**Fig. 9-1** Cotton quality



### **Emotional Suppression and Resignation**

The Cotton quality reflects feelings of oppression, resignation, sadness, and hopelessness due to the perception that one cannot change adverse conditions in one's life. One example of this is an unhappy marriage in which the individual cannot leave even though the commitment to make it work is clearly not present. Individuals with a pronounced Cotton quality tend to blame others for their predicament, thereby suppressing awareness of the cause of their feelings, although it is close to the surface of consciousness. The conditions that create

the Cotton quality are often present in a person's daily life, and are more likely to be consciously accessible to them than other causes of emotional problems. Treatment of Kidney yang-essence deficiency and concomitant diminished will power have been found to diminish the Cotton quality.

## Trauma

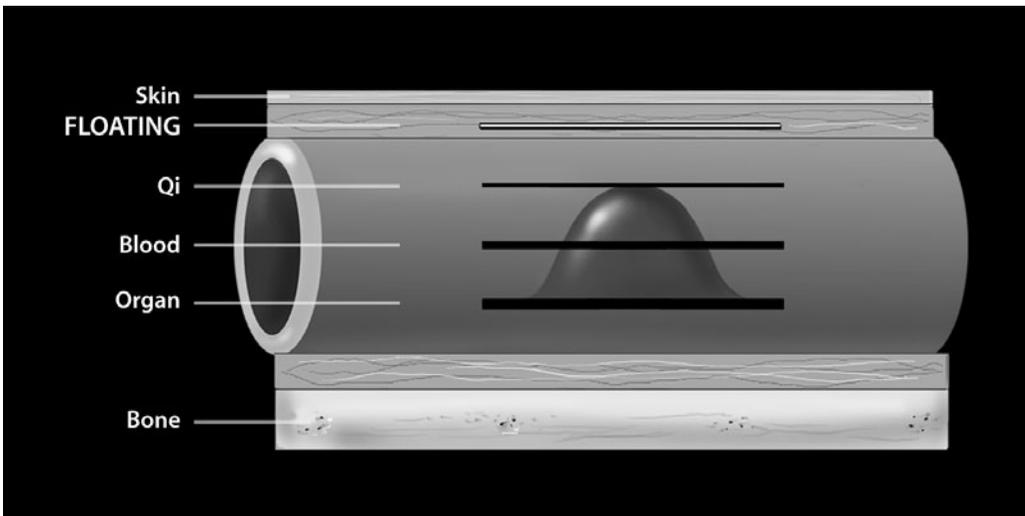
A major physical trauma obstructs qi circulation in the channels and at the surface of the body and may give rise to the Cotton quality. The Cotton quality can reflect this stagnation when pain is present; and the qualities at the qi, blood, and organ depths of the pulse are Tight. The facial color is darker, and there may be a horizontal line at the back of the inside of the lower eyelid and a purple blister on the tongue at the side of the body affected by the trauma.

## FLOATING

**CATEGORY:** The Floating quality is a superficial pulse found above the qi depth just under the skin. The qi depth is located using a very specific amount of finger pressure, but almost no pressure is required to access the Floating quality.

**SENSATION:** The Floating quality (Fig. 9-2) is accessed by gently laying the fingers on the skin with almost no pressure; it does not have a wave form. The Floating quality is not connected to other qualities found deeper in the pulse, even if those other qualities at times rise above the qi depth. The Floating pulse sensation can be Tense, Tight, Slippery, or Yielding.<sup>1</sup>

Fig. 9-2 Floating quality



## DIFFERENTIATING FLOATING FROM OTHER QUALITIES

In the literature, expansive qualities, chiefly the Empty, Hollow Full-Overflowing and Flooding Excess pulses, are classified as Floating. We differentiate these qualities as follows.

## **Floating and Empty, Hollow Full-Overflowing, and Flooding Excess**

When the body mounts a response to an external pathogen, energy is brought to the surface to expel the pathogen. When a Floating pulse manifests, some of the substance of the pulse within the three depths may be diminished, but essentially it remains intact. The Empty quality, with which the Floating quality is sometimes confused in the literature, is the result of a profound separation of yin and yang energies. It is felt clearly at the qi depth but not above it, and the blood and organ depths are separating or absent. When the blood and organ depth are finally absent and only the qi depth remains, observers in the past have classified this as Floating, although the qi depth is well below the skin. The Hollow-Full Overflowing and Flooding Excess qualities are described in Ch. 8.

### **ETIOLOGY, PATHOGENESIS, AND INTERPRETATION OF THE FLOATING PULSE**

#### **External disharmony**

Usually the Floating quality is a sign of increased activity of the superficial, fast-moving protective energies of the body.

The entire pulse, or the right distal position alone, will be Floating in the early stages of an external pathogenic factor invasion, such as an attack of wind-cold or wind-heat. Later, when an external pathogenic factor invades the Lungs and reaches the deeper qi level (four levels)—as seen with allergies, asthma, bronchitis, and pneumonia—the right distal position can still be slightly Floating, and there may also be signs of internal heat in the Lungs, such as the Robust Pounding quality. In such instances, the Special Lung position is usually Floating and may also have Robust Pounding and Slippery qualities.

#### *Wind-cold*

The pulse is Floating Tense and slightly Slow. The Floating quality usually affects the entire pulse, but in mild conditions it may be confined to the right distal and to the Special Lung positions.

#### *Wind-heat*

The pulse is Floating Yielding and slightly Rapid; this may include the entire pulse or be confined to the right distal and Special Lung positions.

#### *Wind-water (phlegm with wind-cold or wind-heat)*

When dampness (and the resultant phlegm) accompanies a wind-cold or wind-heat pattern, the Floating quality is attended by the Slippery quality. This quality, also known as wind-water, is a sign of stagnation of qi (wind-cold) or agitation of qi (wind-heat), which interferes with the movement of fluids at the surface of the body. The Floating Slippery quality is also sometimes associated with hives.

## Internal disharmony

**FLOATING TIGHT** The Floating Tight quality is a sign of Liver ‘wind’. Initially it is found at the left middle position and, as the condition becomes more serious, the Floating Tight quality appears over the entire pulse. This quality may be a precursor to stroke, preceded or accompanied by wind in the channels, and characterized by transient neurological symptoms such as numbness, tingling, other parasthesias and transient ischemic attacks (TIA). Prior to a major stroke, the Floating Tight quality may accompany the very Tight Full-Overflowing quality that is most pathognomonic of an impending stroke.

### **EMPTY**

**CATEGORY:** The Empty quality is categorized as superficial because it is most clearly felt at the qi depth.

**SENSATION:** With the Empty quality (Figs. 9-3a-c) the qi depth is fully intact. With greater pressure, the blood and organ depths separate or disappear entirely. The ability to discern the separating movement at the blood and organ depths is essential to identifying the Empty quality. When the pulse is Empty, we may find the qi depth to be Tight, Tense, Leather, or Yielding depending on the associated disorder.

There has been some confusion between the sensations of Reduced Substance and Separation (Empty). With Reduced Substance there is less resistance side to side. With the Empty pulse the reduced resistance is from distal-proximal and there is no pounding under the finger in the middle of the position.

It is important to keep this distinction since Reduced Substance is a sign of qi-blood deficiency while the Empty quality is a sign of the more serious ‘separation of yin and yang’ and suggests a much more serious ‘qi wild’ disorder.

**ETIOLOGY:** The Empty quality found in a single position is a sign of profound deficiency of yin or yang that will induce a functional alienation between yin and yang (‘separation of yin and yang’). When found over large parts of the pulse, we have the extreme physiological chaos known as ‘qi wild’.

Yang, or functional qi, is expansive and is held in place by the centripetal, sinking, and heavy aspects of yin, or nourishing qi. If the yin energies are not strong enough to hold the yang, the yang energies will float aimlessly away to the surface and functionality will be lost. If the yang is not strong enough to move the yin, a similar process of separation and consequence occurs.

**INTERPRETATION:** The Empty quality, when found over the entire pulse, is a sign of a ‘qi wild’ disorder. The ‘qi wild’ condition is characterized by chaos. It is the most serious disruption and disorganization of normal physiology and is associated with illnesses such as cancer, autoimmune and mental illness. If found over the entire pulse, the presence of an Empty quality demonstrates that a person is in the early stages of a ‘qi wild’ condition, and without corrective

Fig. 9-3a Empty (early stage)

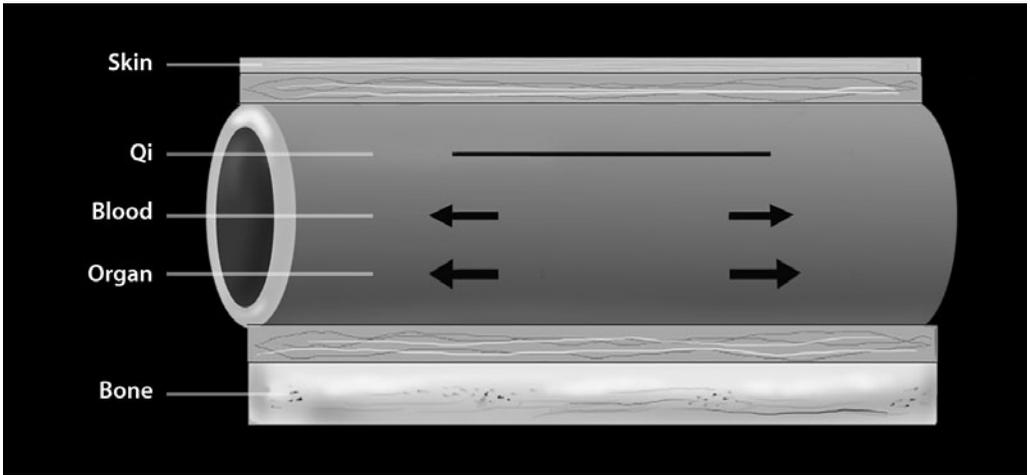


Fig. 9-3b Empty (middle stage)

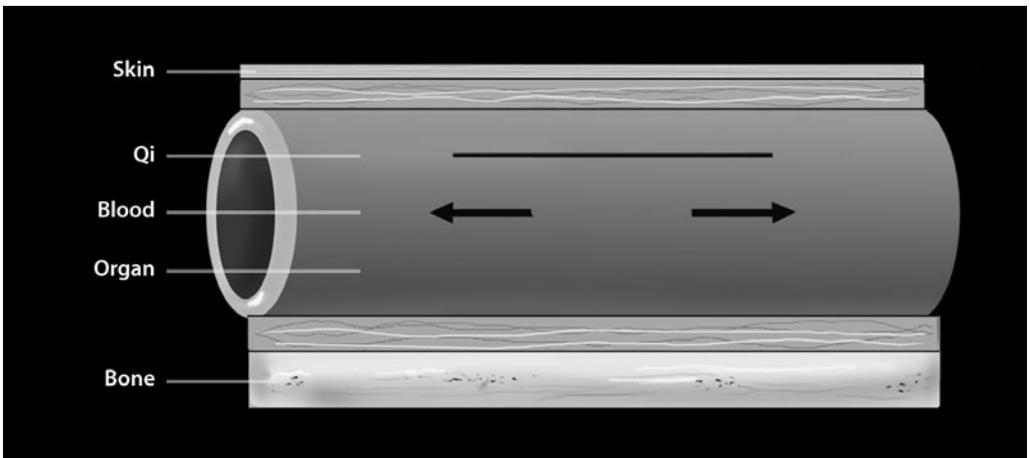
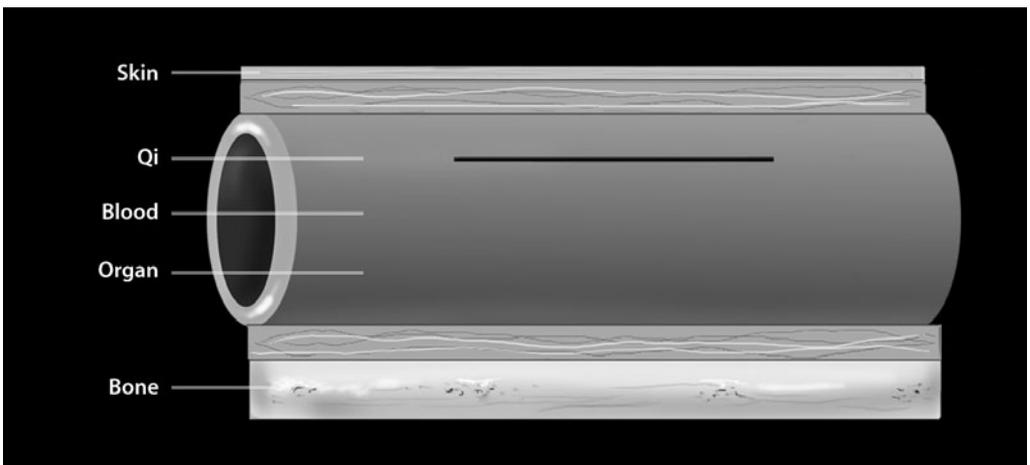


Fig. 9-3c Empty (later stage)



measures will suffer a major illness within six months to three years. Severe early malnourishment, overwork, or over-exercise beyond one's energy, significant fetal distress, as well as long use of the cold-natured recreational drugs are common etiologies, the latter accessed primarily at the left distal position. Found in the course of a serious illness, it denotes a poor prognosis and is one of the eight pulses of death.<sup>2</sup>

The Empty quality over the entire pulse for a short period of, say, a few weeks, may also manifest acutely in an individual who is in acute emotional distress and whose energy comes to the surface to cope with the circumstances. This should be interpreted and treated as a post-traumatic stress disorder rather than a 'qi wild' condition. Treating it as a 'qi wild' disorder could make the person's condition worse.

Another condition in which the Empty quality can appear for a short time, days to weeks, is with an invading common cold where the qi rises to eliminate it. It is important to inquire when finding the Empty quality whether or not the person may have a cold because, again, treating the invading cold as if there is a deficient condition associated with 'qi wild' might make the condition worse.

#### YIELDING EMPTY THREAD-LIKE

**CATEGORY:** Although this quality can be classified with the reduced-volume pulses, it has been placed with the superficial pulses because it is only at the depth at which the Yielding Empty Thread-like quality is felt.<sup>3</sup>

**SENSATION:** The Yielding Empty Thread-like quality (Figs. 9-4a and 9-4b) feels like a thread floating on water at the qi depth. Like the Empty quality, the Yielding Empty Thread-like quality separates or disappears under pressure.<sup>4</sup>

**Fig. 9-4a** Yielding Empty Thread-like (early stage)

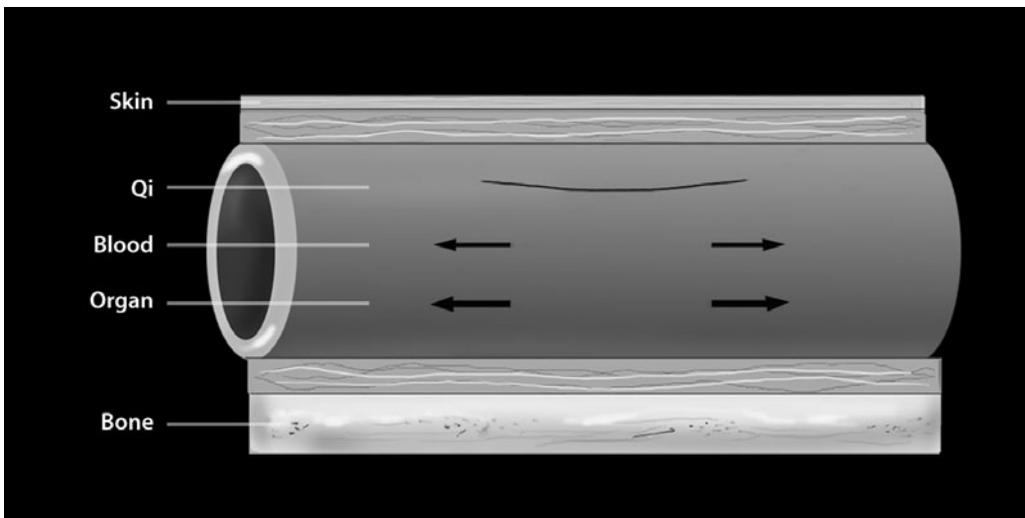
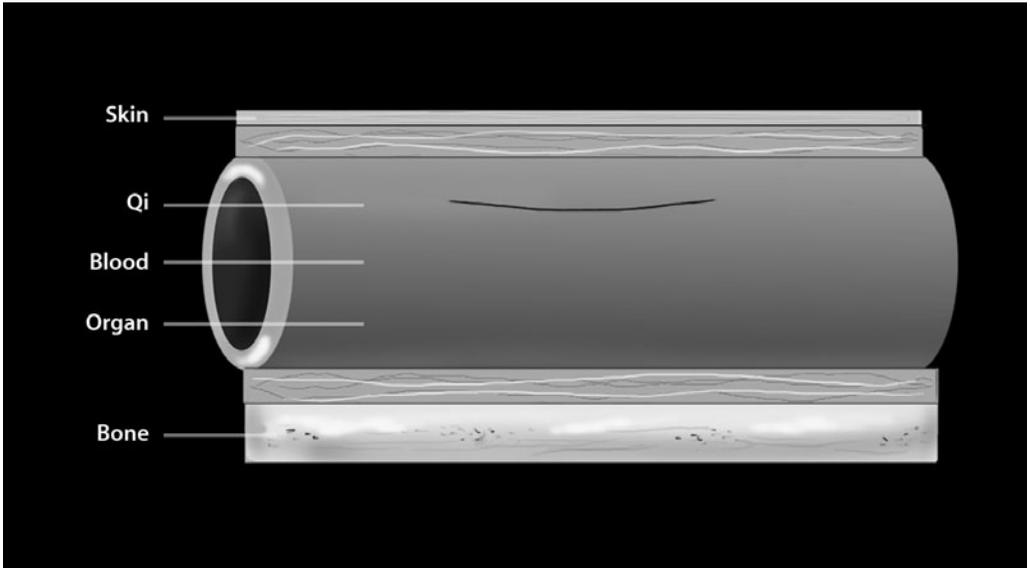


Fig. 9-4b Yielding Empty Thread-like (later stage)



INTERPRETATION: Yielding Empty Thread-like is a rare pulse quality that indicates extreme deficiency of yin and yang. It is found primarily in persons who are in the terminal stages of disease, and is a more severe sign of a 'qi wild' disorder than the Empty pulse.<sup>5</sup>

**LEATHER-EMPTY**

CATEGORY: The Leather quality is classified as a superficial pulse because it is accessed at the qi depth.

Fig. 9-5a Leather (early stage)

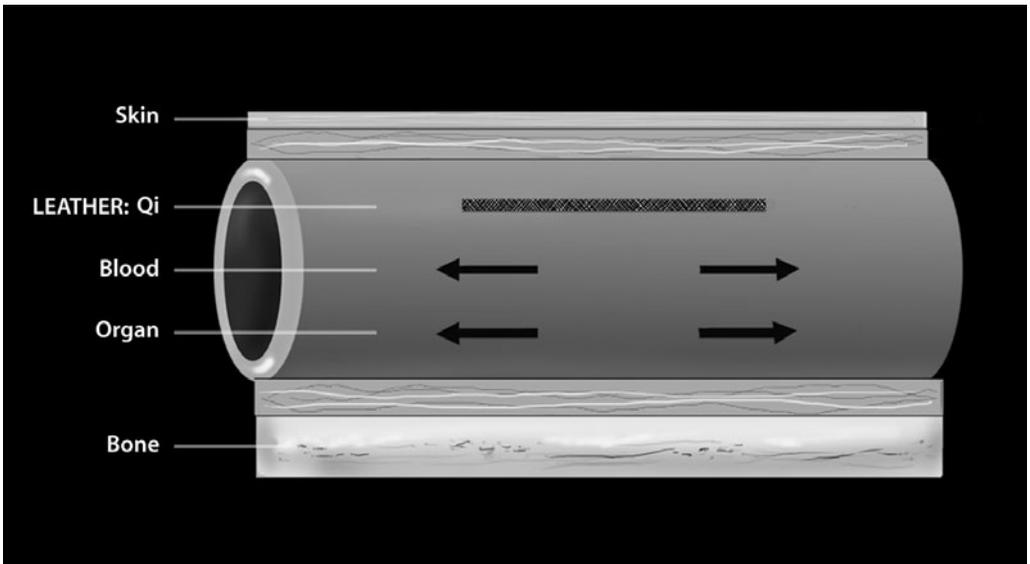
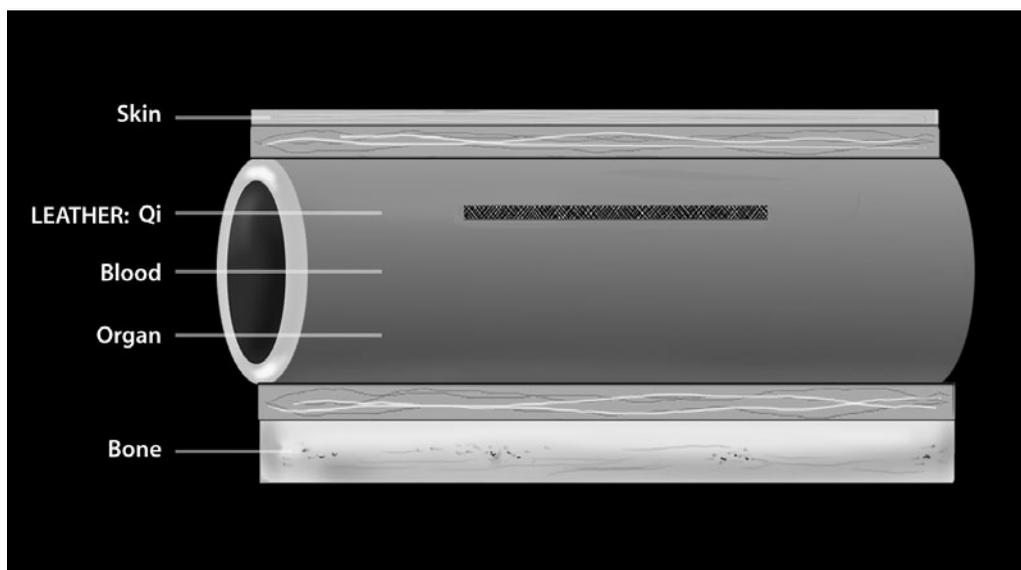


Fig. 9-5b Leather (later stage)



**SENSATION:** Found at the qi depth, the Leather quality (Figs. 9-5a and 9-5b) feels hard, like the surface of a drum, and separating at the blood and organ depths, especially in the later stages of the Leather-Empty quality.

**INTERPRETATION:** The Leather-Empty quality is a sign of extreme yin, blood, and especially essence depletion. It is similar in meaning to the Empty quality in terms of its association with the separation of yin and yang in a 'qi wild' disorder. The hardness that is accessed at the qi depth communicates the profound depletion of the yin-essence energies of the body associated with prolonged chronic disease and damage to the bone marrow.

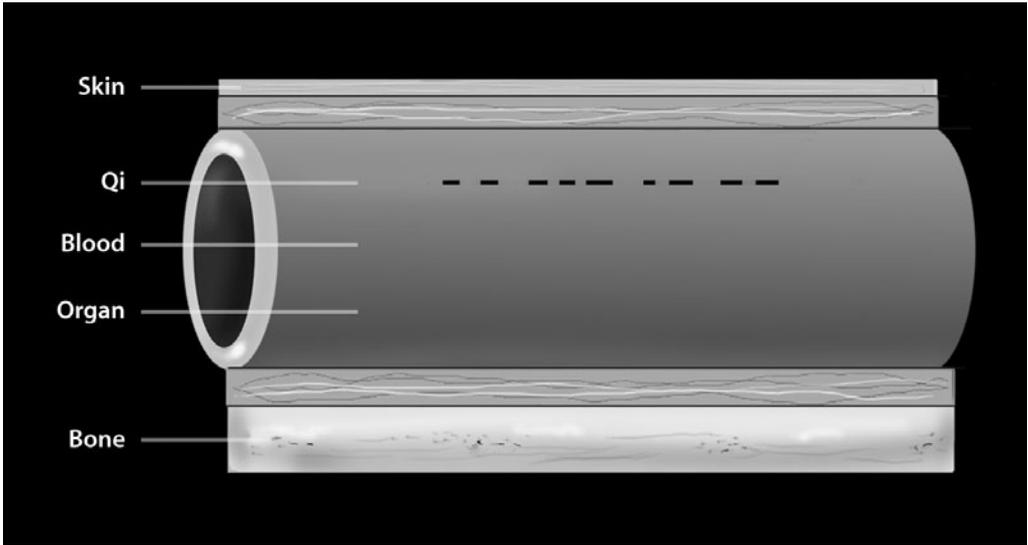
### SCATTERED

**CATEGORY:** The Scattered quality is one of the most serious Empty qualities, falling into the category of extreme 'qi wild'.<sup>6</sup>

**SENSATION:** The Scattered quality (Fig. 9-6) is felt at the qi depth. Instead of feeling continuous, as one rolls one's finger longitudinally, it disperses into separate pieces, as if divided. A very apt classical metaphor describes the sensation as a "superficial pulse, like willow flowers scattering in the wind."<sup>7</sup>

**INTERPRETATION:** The Scattered quality occurs with profound deficiency of qi, blood, and yang (especially Kidney yang) and is a sign of extreme 'qi wild'. Attendants to late stage AIDs patients have described it as the 'dripping ceiling' pulse.

Fig. 9-6 Scattered quality

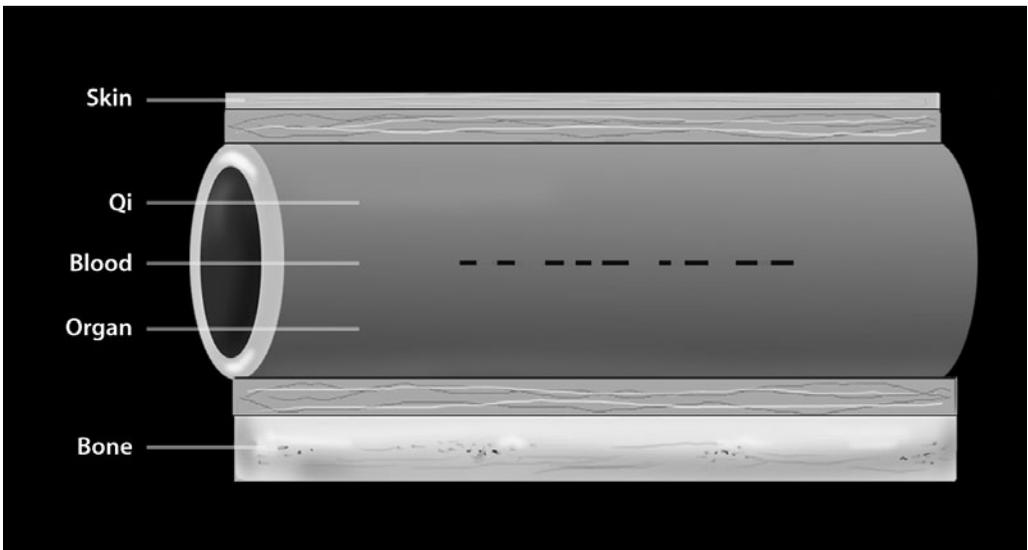


### MINUTE

**CATEGORY:** The Minute pulse, like the Empty and Scattered qualities, is absent or markedly diminished at the organ depth and has a similar meaning to the Empty and Scattered 'qi wild' qualities, except more serious.

**SENSATION:** The Minute quality (Fig. 9-7) is found only at the blood depth. It is Thin but ill-defined ('blurry'), gives way under pressure like the Empty quality, and, like the Scattered quality, is not continuous as the fingers are rolled from the proximal to distal positions.

Fig. 9-7 Minute quality



**INTERPRETATION:** The Minute pulse signifies an extreme deficiency of qi and yang and is a 'qi wild' quality that represents a more advanced pathology than even the Empty or Scattered qualities. The presence of the Minute quality indicates that there is not enough yang left to rise to the surface. The Minute quality is uncommon but has been found in AIDS patients and in the terminal stages of other illness.<sup>8</sup>

## **HOLLOW**

**CATEGORY:** The Hollow quality is classified as a superficial pulse because it is primarily accessed at the qi and organ depths.

**SENSATION:** The Hollow pulse is felt clearly at the qi depth. As pressure is increased to the blood depth, the pulse separates (moves to the sides) and diminishes or altogether disappears until the organ depth is reached, where the pulse returns. The Leather-Hollow pulse has no sensation at the blood depth, but all other Hollow qualities have the separating quality at the blood depth. It is important to distinguish the Hollow pulses from the Empty quality. Both can be palpated at the qi depth, both can separate or are absent at the blood depth, but unlike the Empty quality, the Hollow pulse feels as though it has a bottom when pressure is applied from the qi through the blood and to the organ depths.

The Hollow quality is sometimes mistaken for the Slippery quality because the pulse separates at the blood depth, and to some this separating movement of the substance of the pulse feels like Slipperiness. However, a Slippery quality moves on its own in only one direction, while a Hollow quality separates and moves both proximally and distally only under pressure.<sup>9</sup>

The Hollow quality is also often confused with the Inflated Yielding quality. The Inflated quality is like a compressible balloon and sometimes gives the impression of hollowness. However, unlike the Hollow quality, it does not separate at the blood depth with pressure, and when pressure is released, the Inflated quality fills out and follows one's finger up to the qi depth. Though it does not expand beyond the qi depth, it feels as if it will. The Hollow quality separates, diminishes, or disappears at the blood depth and has much less sense of filling out with the release of pressure.

**INTERPRETATION:** There are multiple types of Hollow qualities and the interpretation varies according to each type. Almost every Hollow quality is an indication that the blood vessel wall and the blood itself are sufficiently out of contact and that there is a notable functional disengagement of yin and yang in the blood vessels.

## **Types of Hollow qualities<sup>10</sup>**

### *Tense Hollow Types*

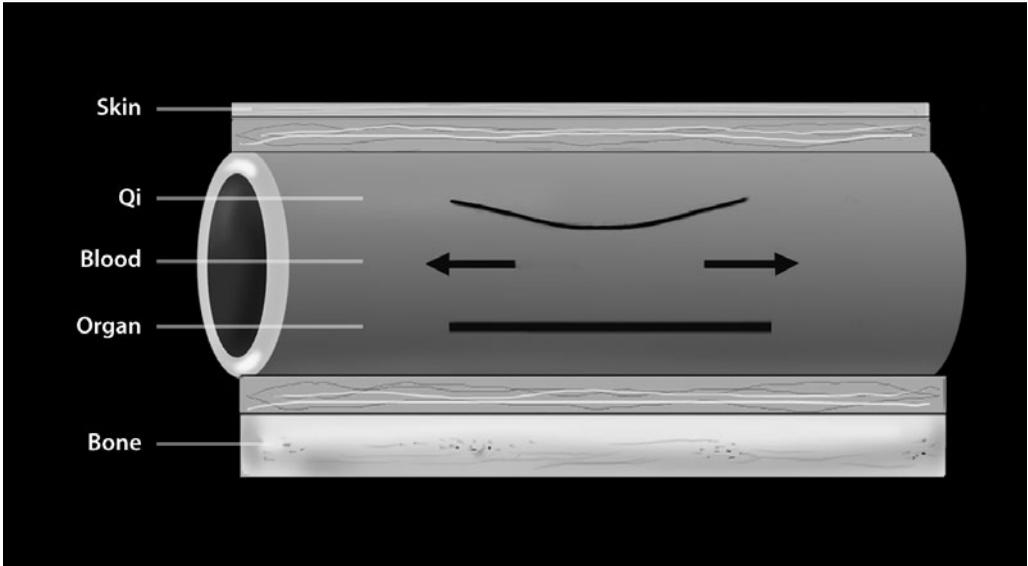
**TENSE HOLLOW FULL-OVERFLOWING** The Tense Hollow Full-Overflowing

quality, described fully in Ch. 8, is associated with excess heat in the blood due to any of its varied causes.

### *Yielding Hollow types*

**YIELDING PARTIALLY HOLLOW** The Yielding Partially Hollow quality (Fig. 9-8) is a sign of mild general blood deficiency, less so than with a Thin quality, but more than with a Spreading quality.

**Fig. 9-8** Yielding Partially Hollow quality



**YIELDING HOLLOW FULL-OVERFLOWING** When found over the entire pulse, the Yielding Hollow Full-Overflowing quality signifies one of the most severe types of the ‘qi wild’ disorder, considerably more of a ‘qi wild’ condition than is signified by the Empty quality.

The Yielding Hollow Full-Overflowing quality with a Slow rate is caused by inordinately excessive exercise or labor, especially in childhood; significant deprivation of food, clothing, or shelter in childhood or prolonged, severe menorrhagia can also lead to this quality.

The slightly Yielding Hollow-Full Overflowing quality with a Normal or slightly Rapid rate occur together when an individual who has been exercising beyond his or her energy capacity for a prolonged period of time suddenly stops exercising. When the exercise is stopped suddenly, the blood volume contracts more quickly than the blood vessels and the yin (blood) and yang (vessels) lose contact. The symptoms—which develop quickly—include severe fatigue, severe anxiety, panic, dissociation and depersonalization, explosive anger, cold extremities, migrating joint pain, and many other seemingly bizarre symptoms.

The Yielding Hollow Full-Overflowing quality with the Intermittent or

Interrupted rate is a sign of a severe form of 'qi wild' where the instability is already in the yin organs, especially the Heart (the 'emperor'). Here we have the combination of general yin organ and circulatory chaos. The presence or imminence of serious disease and death is great.

**YIELDING HOLLOW ROPY** The Yielding Hollow Ropy quality is caused by excessive exercise over a long period of time beyond one's energy, especially in an individual who is still maturing, though I have found it in the moderately elderly. The blood volume is gradually reduced due to its overconsumption by this excessive activity; when it is unable to nourish the vessel walls, they eventually become harder.

## SUBMERGED PULSE QUALITIES

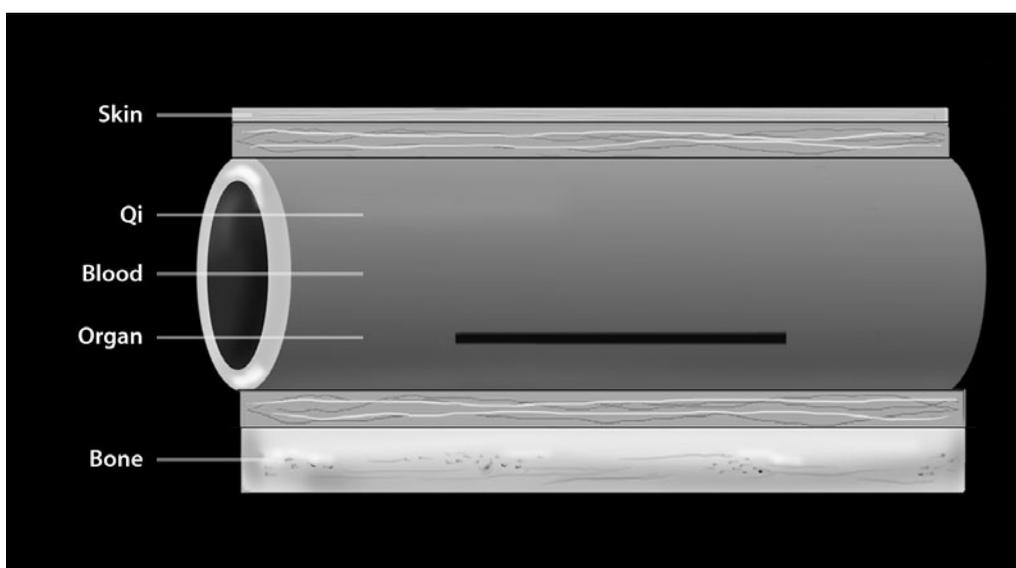
---

### DEEP

**SENSATION:** The Deep quality (Fig. 9-9) is only accessed at the organ depth; the qi and blood depths are absent.

**INTERPRETATION:** Traditionally, a Deep quality over the entire pulse is associated with depletion of the true qi and blood from chronic or serious internal disease that is difficult to cure. True qi is strongly linked with the yang basal metabolic heat that drives the body and is based on the integrity of Kidney yang. The pulse will become deeper as this energetic heat is used up through either physical or mental work beyond a person's energy, or from poor eating habits like anorexia and bulimia, lack of sleep, excessive sex, or chronic illness.

Fig. 9-9 Deep quality



A rare cause of the Deep quality in our time, in developed countries with central heating, is stagnation of qi due to excess cold that prevents the yang qi from rising. Usually this occurs with an external pathogenic factor when the yang qi is already deficient.

In an obese person, a relatively Deeper pulse in all positions may be normal. In a healthy person the entire pulse will be slightly Deeper in the winter, but this is barely discernible. A transient Deep quality can be found in very introverted people whose initial response to new social contact is to energetically withdraw; this quality will, on repeated examination, revert to the enduring and valid pulse picture.

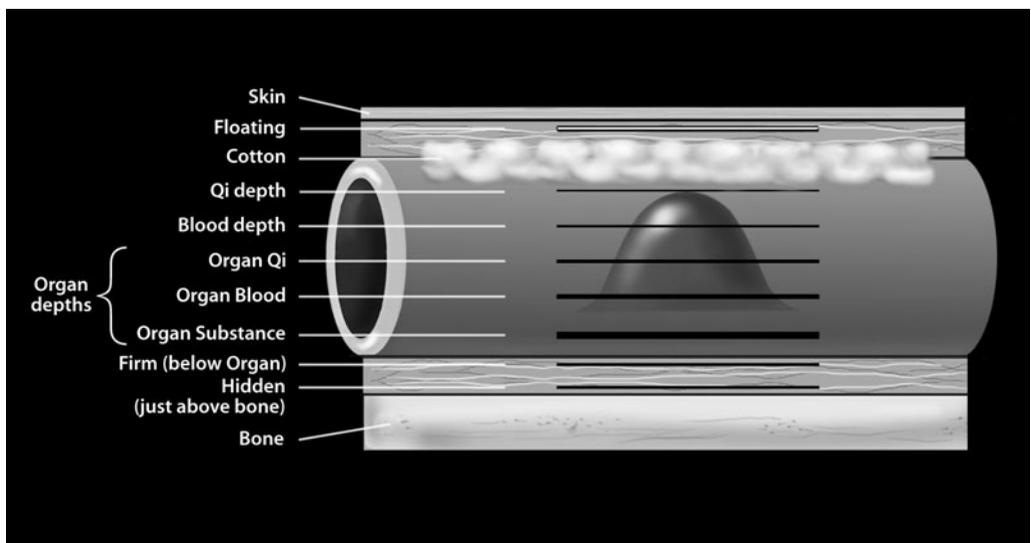
On the positive side, although the presence of the Deep quality implies that the true qi is depleted, the yin organ energies are still more or less intact and functioning. The Deep quality is less serious than the Feeble-Absent quality or the 'qi wild' condition associated with the Empty qualities.

### THE ORGAN-BLOOD AND ORGAN-SUBSTANCE DEPTHS

According to Dr. Shen, there are three divisions of the organ depth (Fig. 9-10), which have been identified as the organ-qi, organ-blood (O-B), and the more material organ-substance (O-S) depths. These names replace what has previously been called the organ depth, blood subdivision of the organ depth, and the deepest part of the organ depth. Thus, for example, we find at the Liver organ depth, the Liver organ-qi, Liver organ-blood, and Liver organ-substance depths.

Recent investigation into these three levels of the organ depth indicate that the organ-blood and organ-substance levels tell us about the hidden pathogens

**Fig. 9-10** The nine depths

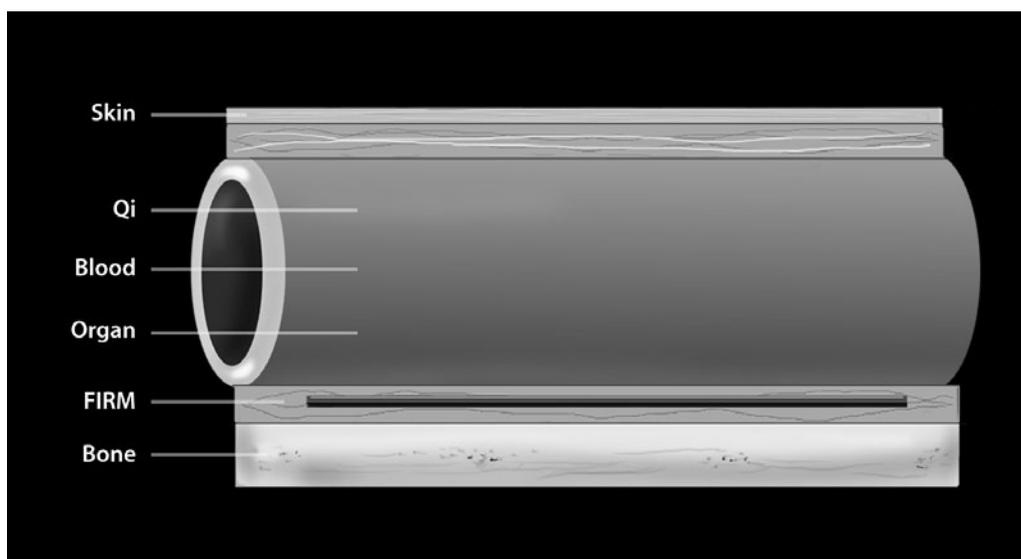


in the body, especially damp-heat of diverse etiologies, since the Slippery quality and increased Robust Pounding can be found here when not found at the organ-qi level. Increasingly, the Choppy quality also appears at these depths, informing us about the burgeoning problem of retained toxicity.

### FIRM

**SENSATION:** The rarely found Firm quality (Fig. 9-11) is slightly deeper than the Deep quality (below the divisions of the organ depth) and slightly more superficial than the Hidden quality. It feels hard and unyielding to the touch, and, as Wu Shui-Wan says, it “does not respond to the finger.”<sup>11</sup> This aspect clearly differentiates it from the organ-blood and organ-substance positions described above.

Fig. 9-11 Firm quality



**INTERPRETATION:** In the literature,<sup>12</sup> stagnation and serious interference with qi, blood, and fluid circulation by internal cold are associated with this quality. This factor was more significant in times and places of the distant past when people were subjected to extreme cold and had limited sources of heat. Currently it could occur with hypothermia in winter mountain climbers. Found in any position, it must be viewed as a sign of serious illness until proven otherwise.<sup>13</sup>

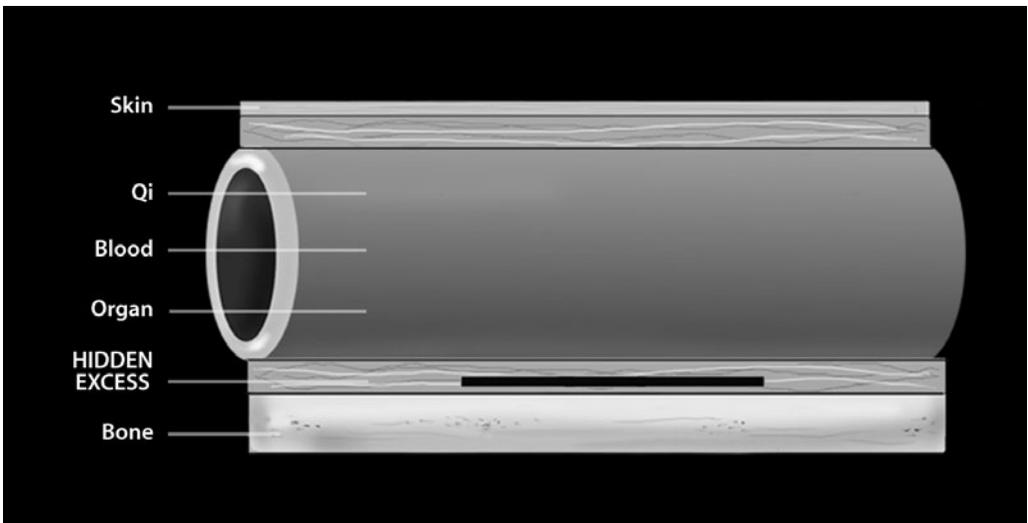
### HIDDEN

**SENSATION:** The Hidden quality (Figs. 9-12a and 9-12b) is felt only with extreme pressure below the organ depth, on or just above the radius bone. (NB: In learning this quality, there is a danger that students will mistakenly learn to exert excessive pressure when taking the pulse. In fact, the most common mistake in pulse-taking is the tendency to press too deeply, beyond the fine parameters of

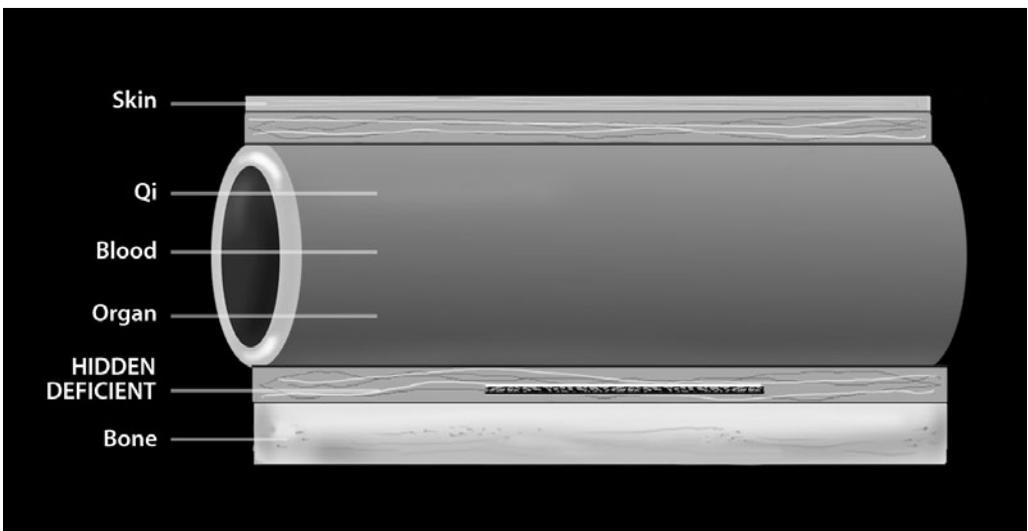
this model and beyond the realm of its interpretive function.)

**INTERPRETATION:** With the Hidden Deficient quality, the yang qi is severely deficient and unable to bring the pulse wave to the surface. It is a sign of serious illness in which the disease process has entered profoundly into the yin organ system. With the Hidden Excess quality (like the Firm quality), cold may be a factor, as described above. It is very rare, though it is reported in the literature. It may be due to internal cold that has transformed into heat, or even more rarely, to stagnation of food, phlegm, or blood, or to extreme heat transforming into internal wind.

**Fig. 9-12a** Hidden Excess quality



**Fig. 9-12b** Hidden Deficient quality





This page left intentionally blank.