

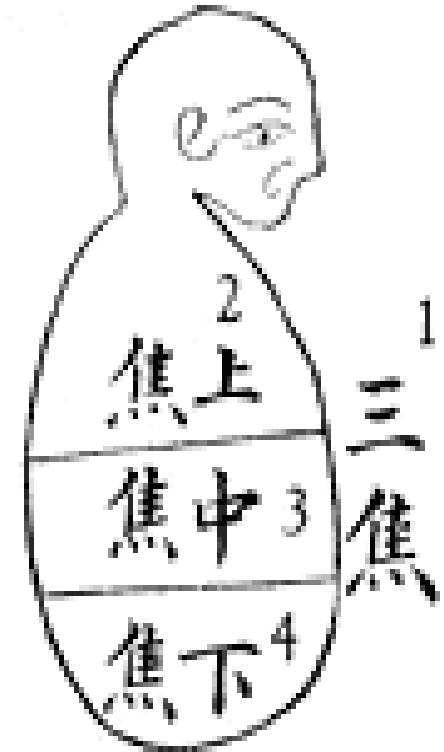
San Jiao

Name

- 三焦 古作「焦」為皮下、肌間紋理之意
- san jiao,
- triple warmer,
- triple energizer
- triple heater,
- the triple burner

三焦

- This organ-energy system, which is not recognized in Western physiology, and is responsible for the movement and transformation of various solids and fluids throughout the system, as well as for the production and circulation of nourishing energy (ying qi) and protective energy (wei qi). Suggestions have been made that the triple burner's function may be related to the pancreas (previously) and metabolism in the body, but no clear conclusion has been reached as to the nature of this organ. The San Jiao is actually a collective term for the upper, middle and lower burner. The Chinese word "triple burner" actually means "three parts which burn or scorch."



TRIPLE BURNER

三焦

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- It is not a single self-contained organ, but rather a functional energy system involved in regulating the activities of other organs.
 - It is composed of three parts, known as 'burners', each associated with one of the body's three main cavities: thorax, abdomen, and pelvis.
 - An ancient Chinese medical text states: **'The Upper Burner controls intake, the Middle Burner controls transformation, the Lower Burner controls elimination.'**

Historically

- Before the Neijing was produced, there were deemed to be 11 organs and 11 associated meridians, not 12. In the Nanjing, one can see that there is a divergence of explanations, suggesting either 5 zang and 6 fu or 6 fu and 5 zang, or 6 zang and 6 fu, the latter was finally settled upon, with the triple burner being the 6th fu, as described response to question 38 of the Nanjing. The organs that were in flux in these differing counts were the pericardium (heart protector) and triple burner.
- The Neijing unequivocally depicts the **triple burner** as one of the “fu,” but it is an “**orphan**” organ; it is unlike the other zang-fu. The saying is that the triple burner has a name but not a form or shape (mentioned in question 38 of the Nanjing).
- Despite its lack of specific physical bounds, this organ system can be described in terms of location and functions.

Recently

- With the advance of radio-florescence techniques (2017), discovered that the **mesentery** (fan-shaped fold) of visceral peritoneum that attach intestines (SI and LI) to the posterior abdominal wall contains huge abundant numbers of micro-tubules (capillary circulation) i.e. **Middle and lower burners.**
- Also, Visceral pleura and visceral pericardium (epicardium) contain also huge abundant numbers of micro-tubules (capillary circulation) i.e. **Upper burner.**

Functions

- The San Jiao is an independent functional system which is based on the morphological structure of the internal organs and tissues.
- In fact it is a **generalization of the physiological functions** of the internal organs.
- The physiological functions of the San Jiao include the following **two aspects**:

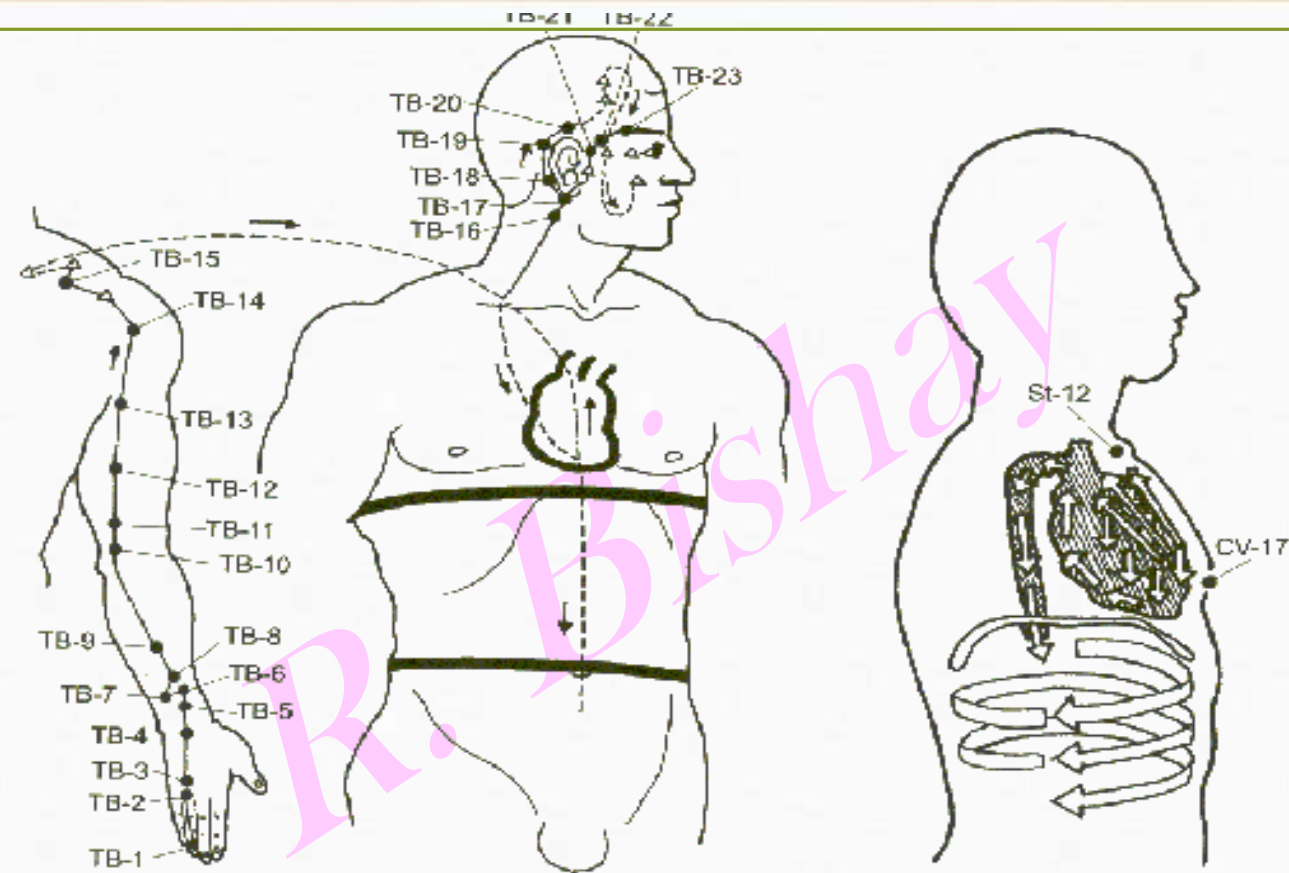
A generalization of yuan-qi (primordial qi) and water passage

- The San Jiao serves as a **transmitting system**, through which substances like the primordial qi and water are **transported and transmitted**.
- The Yuan qi, the root source of qi, comes from congenital essence and nourishes the acquired base of life. It is the primary motivation of life activity.
- The Yuan qi originates from the kidney and, through the transportation and transmission of the triple Jiao, is distributed to all parts of the body for warming and nourishing the viscera and the tissues so as to activate and promote the physiological functions of the other viscera and tissues. If the Yuan qi is deficient and the **transportation of the triple Jiao is not smooth**, it will lead to **qi deficiency in certain areas in the body**.

- When taken into the stomach and **transported and transformed** by the spleen, the water is transmitted upwards to the lung (with the pure) which, by means of regulating the water passage (pulmonary circulation), transmits the water downwards to the kidney (systemic circulation).
- The kidney separates the lucid from the turbid with its function of transforming qi. Such a continuous circulation maintains normal metabolism of water inside the body.
- The **lung is located in the upper Jiao**, the spleen in the middle Jiao and the **kidney in the lower Jiao**.
- It is the San Jiao that organizes these three organs into a system for transmitting and metabolizing water. That is why San Jiao is regarded as a very important passage of water.
- **If the San Jiao is obstructed, the functions of the lung, the spleen and the kidney will certainly be affected, leading edema.**

A generalization of the physiological functions of certain internal organs

- The generalization of the physiological functions of certain viscera with the San Jiao is mainly concerned with the digestion and absorption of food, distribution of food nutrients and metabolism of water.
- Huangdi Neijing used three similes to describe the functions of the San Jiao: the **upper Jiao is like fog**, the *middle Jiao is like maceration* and ***the lower Jiao is like sewer (conduit = drainage)***.



The internal flow of the Triple Burner Channels moves from St-12 down to CV-17, where it disperses into the chest and envelops the Pericardium. From the Pericardium, as the energy flows down through the diaphragm, it circulates through the chest and permeates the Triple Burners (a continuing branch flows upward to the St-12 points).

The Internal and External Qi Flow of the Triple Burners (TB) Channel

The upper Jiao is like fog:

上焦如霧

- The heart and the lung are located in the upper Jiao. This describes the functions of the heart and the lung to distribute essence.
- That is to say that the function of the heart and the lung to distribute food nutrients is just like fog permeating everywhere.
- When exogenous pathogenic factors invade the upper Jiao, it not only affects the dispersion and distribution of essence, but also leads to the symptoms of dysphoria, palpitation, cough and chest oppression due to dysfunction of the heart and lung.

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- The Upper Jiao runs from the **base of the tongue to the entrance to the stomach** and controls the intake of air, food, and fluids.
 - It harmonizes the functions of heart and lungs, governs respiration, and regulates the distribution of protective energy to the body's external surfaces.

The middle Jiao is like maceration:

中焦如漚

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- This describes the digestion and absorption of food by the spleen and the stomach.
 - In fact the digestion and absorption of food are not only related to the spleen and the stomach, but also to the liver and the gallbladder.
 - The stomach governs reception and digestion of food; the spleen governs transportation and transformation of food nutrients; the liver and the gallbladder smooth the activity of qi, excrete the bile and promote digestion.

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- Since the spleen, the stomach, the liver and the gallbladder are located in the upper abdomen, this simile is actually a generalization of the digesting and absorbing functions of these organs.
 - If pathogenic factors are retained in the middle energizer, the digesting and absorbing functions will be affected, leading to distending fullness of the upper abdomen, vomiting, diarrhea and jaundice.

The lower energizer is like sewer:

下焦如瀆

- This describes the functions of the kidney and the bladder that move the turbid liquid downward and discharge it out of the body.
- This is in fact a generalization of the functions of the kidney and the bladder in producing and excreting urine.
- If pathogenic factors invade the lower energizer, the excretion of urine will be affected, leading to oliguria, frequent urination, urgent urination and pain in urination.