THE CHANNELS AND COLLATERALS

经络
THE FUNCTIONS OF THE CHANNELS

1. Transporting qi and blood throughout the body and rendering the body an integrated whole
2. Protecting the body
3. Responding to dysfunction in the body
4. The channels serve to transmit qi to the diseased area
Channels and collaterals

12 primary channels
8 extraordinary channels
12 divergent channels
12 muscular regions
12 cutaneous regions
15 collaterals
Minute collaterals
Superficial collaterals
12 primary channels

- Three hand yin
  - Lung channel of hand taiyin
  - Pericardium channel of hand jueyin
  - Heart channel of hand shaoyin

- Three hand yang
  - Large Intestine channel of hand yangming
  - San Jiao channel of hand shaoyang
  - Small Intestine channel of hand taiyang

- Three foot yin
  - Stomach channel of foot yangming
  - Gall Bladder channel of foot shaoyang
  - Bladder channel of foot taiyang

- Three foot yang
  - Spleen channel of foot taiyin
  - Liver channel of foot jueyin
  - Kidney channel of foot shaoyin
Naming of 12 primary channels

Based on:

**Hand or foot** (upper extremities – hand channel; lower extremities – foot channel)

**Yin or Yang** (inside of the arm or leg – yin channel; outside of the arm or leg – yang channel)

**Zang or Fu** (Yin channel – Zang; Yang channel – Fu)

<table>
<thead>
<tr>
<th>Foot channel</th>
<th>Hand channel</th>
<th>Yin</th>
<th>Yang</th>
<th>Hand channel</th>
<th>Foot channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spleen</td>
<td>Lung</td>
<td>Taiyin</td>
<td>Yangming</td>
<td>Large intestine</td>
<td>Stomach</td>
</tr>
<tr>
<td>Liver</td>
<td>Pericardium</td>
<td>Jueyin</td>
<td>Shaoyang</td>
<td>San jiao</td>
<td>Gall bladder</td>
</tr>
<tr>
<td>Kidney</td>
<td>Heart</td>
<td>Shaoyin</td>
<td>Taiyang</td>
<td>Small intestine</td>
<td>Bladder</td>
</tr>
</tbody>
</table>
### Distribution on four extremities
(while the palms facing the legs / superficial)

<table>
<thead>
<tr>
<th>Hand channel</th>
<th>Foot channel</th>
<th>Yin</th>
<th>Yang</th>
<th>Hand channel</th>
<th>Foot channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside of the arm</td>
<td>Inside of the leg</td>
<td>inside</td>
<td>outside</td>
<td>Outside of the arm</td>
<td>Outside of the leg</td>
</tr>
<tr>
<td>Lung</td>
<td>Spleen</td>
<td>Taiyin</td>
<td>Anterior portion</td>
<td>Yangming</td>
<td>Large intestine</td>
</tr>
<tr>
<td>Pericardium</td>
<td>Liver</td>
<td>Jueyin</td>
<td>Middle portion</td>
<td>Shaoyang</td>
<td>San jiao</td>
</tr>
<tr>
<td>Heart</td>
<td>Kidney</td>
<td>Shaoyin</td>
<td>Posterior portion</td>
<td>Taiyang</td>
<td>Small intestine</td>
</tr>
</tbody>
</table>
Three hand yin

- Lung hand taiyin
- Pericardium hand jueyin
- Heart hand shaoyin
Three hand yang

Large intestine
hand yangming

San jiao
hand shaoyang

Small Intestine
hand Taiyang
Three foot yin

Spleen foot taiyin
Liver foot jueyin
Kidney foot shaoyin
Three foot yang

Stomach foot yangming

Gallbladder foot shaoyang

(urinary) Bladder foot Taiyang
### Interior or exterior related channels

<table>
<thead>
<tr>
<th>Taiyin</th>
<th>Yangming</th>
<th>Interior</th>
<th>Exterior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lung</td>
<td>Large intestine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spleen</td>
<td>Stomach</td>
</tr>
<tr>
<td>Jueyin</td>
<td>Shaoyang</td>
<td>Pericardium</td>
<td>San jiao</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Liver</td>
<td>Gall bladder</td>
</tr>
<tr>
<td>Shaoyin</td>
<td>Taiyang</td>
<td>Heart</td>
<td>Small intestine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kidney</td>
<td>Bladder</td>
</tr>
</tbody>
</table>
### Direction of the pathway

<table>
<thead>
<tr>
<th></th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three hand yin channel</td>
<td>Chest</td>
<td>Hand</td>
</tr>
<tr>
<td>Three hand yang channel</td>
<td>Hand</td>
<td>Head</td>
</tr>
<tr>
<td>Three foot yang channel</td>
<td>Head</td>
<td>Foot</td>
</tr>
<tr>
<td>Three foot yin channel</td>
<td>Foot</td>
<td>Abdominal (chest)</td>
</tr>
</tbody>
</table>

Where does the yang channels meet?
- Head (head belongs to yang)

Where does the yin channels meet?
- Chest

Where does yin channel meet yang channel or yang channel meet yin channel?
- Hand or foot (jing-well points)
The three complete circuits of the pathway of primary channels

Taiyin – yangming
(1st circuit)

Shaoyin-taiyang
(2nd circuit)

Jueyin-shaoyang
(3rd circuit)

Yin

Lung
Spleen
Heart
Kidney
Pericardium
Liver

Yang

Large intestine
Stomach
Small intestine
Bladder
San jiao
Gall bladder
THE EIGHT EXTRAORDINARY VESSELS (channel) 奇经八脉

<table>
<thead>
<tr>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>奇-special None of them pertains to the Zang organs or Fu organs. They may <strong>connect with extraordinary organs</strong> (brain, marrow, bone, vessels, gallbladder, uterus) have no points of their own, but share points of the fourteen channels (have their own confluent points)</td>
</tr>
<tr>
<td>branch off from the trunks of the primary channels, and interlink the primary channels to each other</td>
</tr>
<tr>
<td>奇-odd: Not exteriorly-interiorly related</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Channel</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conception (Ren)</td>
<td></td>
</tr>
<tr>
<td>Governing (Du)</td>
<td></td>
</tr>
<tr>
<td>Penetrating (Chong)</td>
<td></td>
</tr>
<tr>
<td>Girdling (Dai)</td>
<td></td>
</tr>
<tr>
<td>Yin Motility (Yin Qiao)</td>
<td></td>
</tr>
<tr>
<td>Yang Motility (Yang Qiao)</td>
<td></td>
</tr>
<tr>
<td>Yin Linking (Yin Wei)</td>
<td></td>
</tr>
<tr>
<td>Yang Linking (Yang Wei)</td>
<td></td>
</tr>
</tbody>
</table>
FUNCTIONS OF THE EXTRAORDINARY VESSELS

1. **link the twelve primary channels**
   - Du (Governor): (meets all the Yang channels) the sea of the Yang channel
   - Ren (conception): the sea of the Yin channel
   - Chong (penetrating): the sea of the 12 primary channels; the sea of blood
   - Dai (belt): binding up all the channels

2. **act as reservoirs**

3. **protect the body**
12 Divergent meridians

Characteristics

A. Distributions

1. **diverge**: from its related regular (primary) channel at a big joints (shoulder, armpit, hip, knee, popliteal fossa…)
2. **enter**: into abdomen or chest (deeply)
3. **exit**: at neck or above (superficial)
4. **converge**: at the related Yang meridians
   - Yang channel: at its regular channel
   - Yin channel: at its related Yang channel (coupled Yang channel)
Characteristics (cont.)

B. most divergent channels pass through HT organ (LU and LI not enter HT)

C. supplement the distribution of the regular meridians

D. no points on divergent channels (runs deeper than regular channels)
Functions

1. strengthen the yin yang relationship between internally externally paired channels and zangfu (*converge*)
2. distribute qi and blood to head and face (*exit:* at neck or above)
3. integrate areas of the body not supplied or interconnected by the primary channels (*supplement the distribution of the regular meridians*)
Functions (cont.)

4. help explain the clinical action of some commonly used acupuncture points
5. pass through the HT organ → HT controls the whole body (extremities → inward) (*most divergent channels pass through HT organ*)
6. integrate body tissues as a whole: joints → HT → face/sensory organs
12 Muscular regions  十二经筋

Pathways are similar to their relates primary meridians

Pathways

1. **start**: terminals of extremities (jing-well points)
2. **bundle**: big joints (wrist/elbow/ shoulder; ankle/knee/hip)
3. **distribute**: superficial area (along its relates primary meridians), NEVER connect to internal organs
4. **unite**: at head (Yang channels) or trunk (Yin channels)

- **3 arm yang**: GB 13  
- **3 arm yin**: GB 22  
- **3 leg Yang**: ST 3 or SI 18  
- **3 leg yin**: REN 3
Functions

1. Nourish muscle, tendon, joints (in charge of movements...)

2. Form defensive layer of body (Skin → muscle...
Symptoms and treatment

• **symptoms:** muscle or joint pain (arthritis, spasm, numbness, limitation of movement…)

• **treatment:** Ashi points (acupressure, massage…)}
THE TWELVE CUTANEOUS REGIONS

• The twelve cutaneous regions are not channels as such, but skin regions overlying the broad network of superficial channels and linked to them.
Functions of 12 cutaneous region

1. provide the theoretical foundation for the idea of invasion by exogenous pathogenic factors through the skin to the deeper layers of the jingluo system.

2. manifest disorders of the deep-lying channels, for example by abnormal skin sensations, skin lesions or discoloration:
   . a blue-green (qing) color indicates pain
   . a red color indicates heat
   . a white color indicates deficiency and cold

3. explain how treatment applied at the level of the skin (for example medicinal ointments, massage, cupping, plum blossom needling, skin scraping and dermal needling) is able to have a deep therapeutic effect.
THE LUO-CONNECTING CHANNELS

- There are fifteen principal luo-connecting channels which branch out from the primary channels and the extraordinary vessels and are distributed superficially over the body.

- Luo-connecting channels branches out from:
  1. twelve primary channels (four extremities)
  2. Conception vessels (REN)
  3. Governing vessels (DU)
  4. the great luo-connecting channel of the Spleen.
Pathway of collaterals

from the luo-connecting point of their own channel to connect with their internally-externally paired channel. After joining with their paired channel they usually continue to follow their own pathways.

Luo-connecting point
(start from 12 primary channel)

Certain area where Luo-connecting channel (collateral) distribute to
external or internally related meridian
FUNCTIONS OF THE LUO-CONNECTING CHANNELS

• strengthen the connection between internally-externally paired channels and zang-fu.