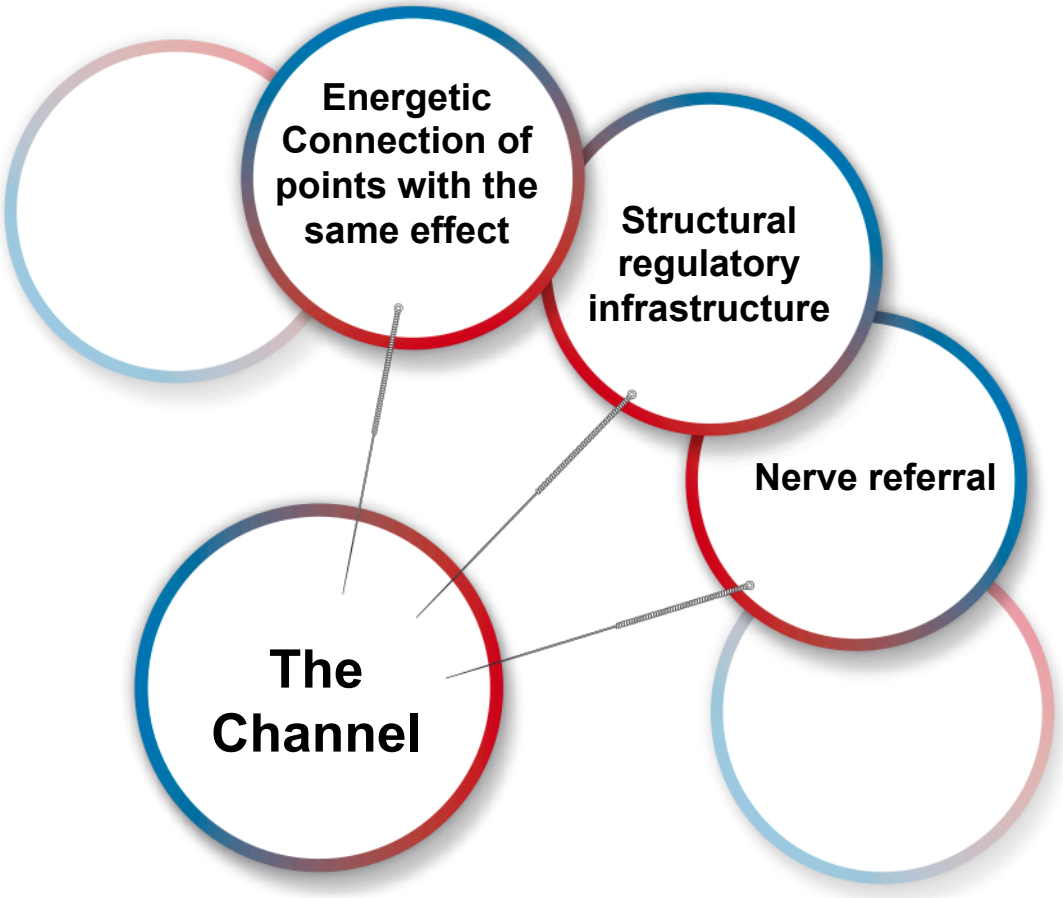
Introduction to Meridians and Needle Technique

Joseph Audette, MD

Meridian System

- Jing Luo
  - 12 Main Meridians
  - Tendino-Muscular or Cutaneous
  - Transverse Luo
  - Longitudinal Luo
  - Divergent or Distinct
  - Curious or Extraordinary
- If there is a smooth flow of Qi and Blood in body, pernicious factors should not cause illness
  - Meridian Defenses should succeed

The Channels



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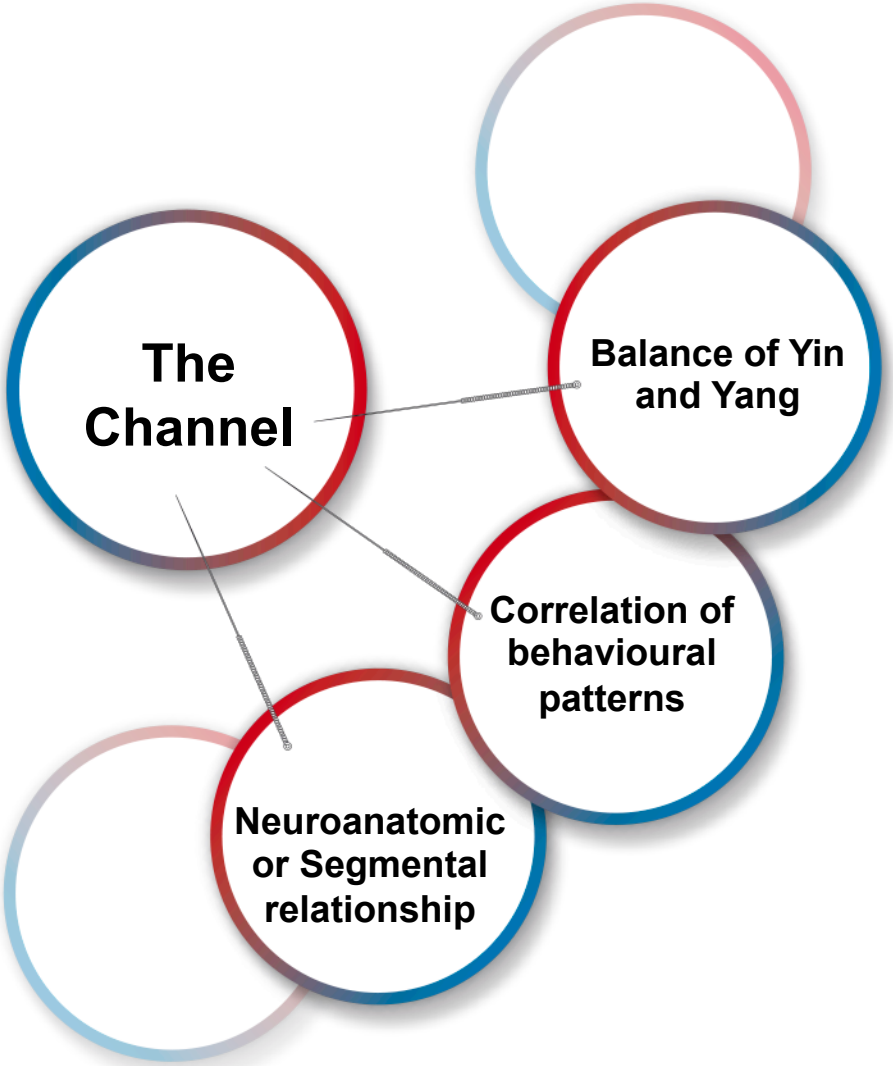

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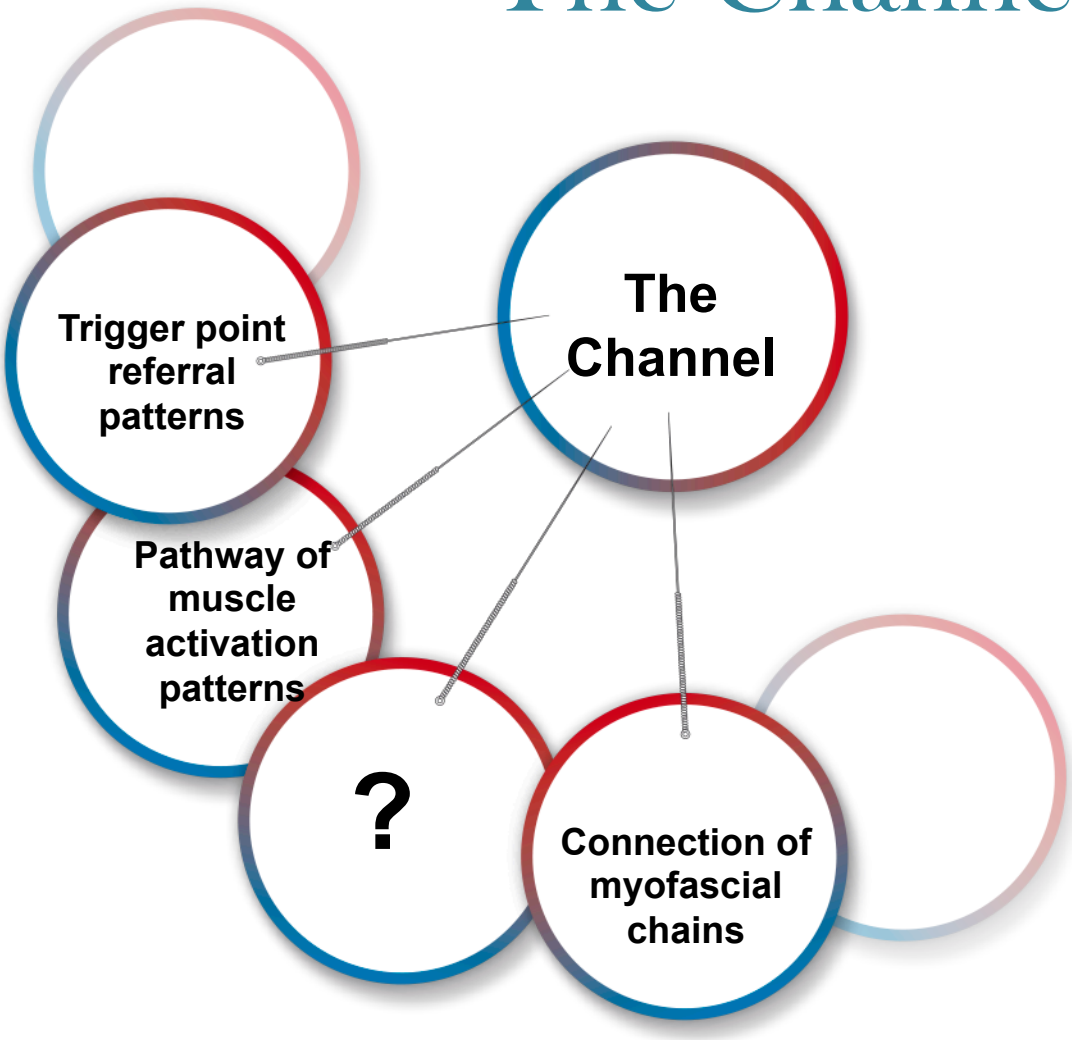

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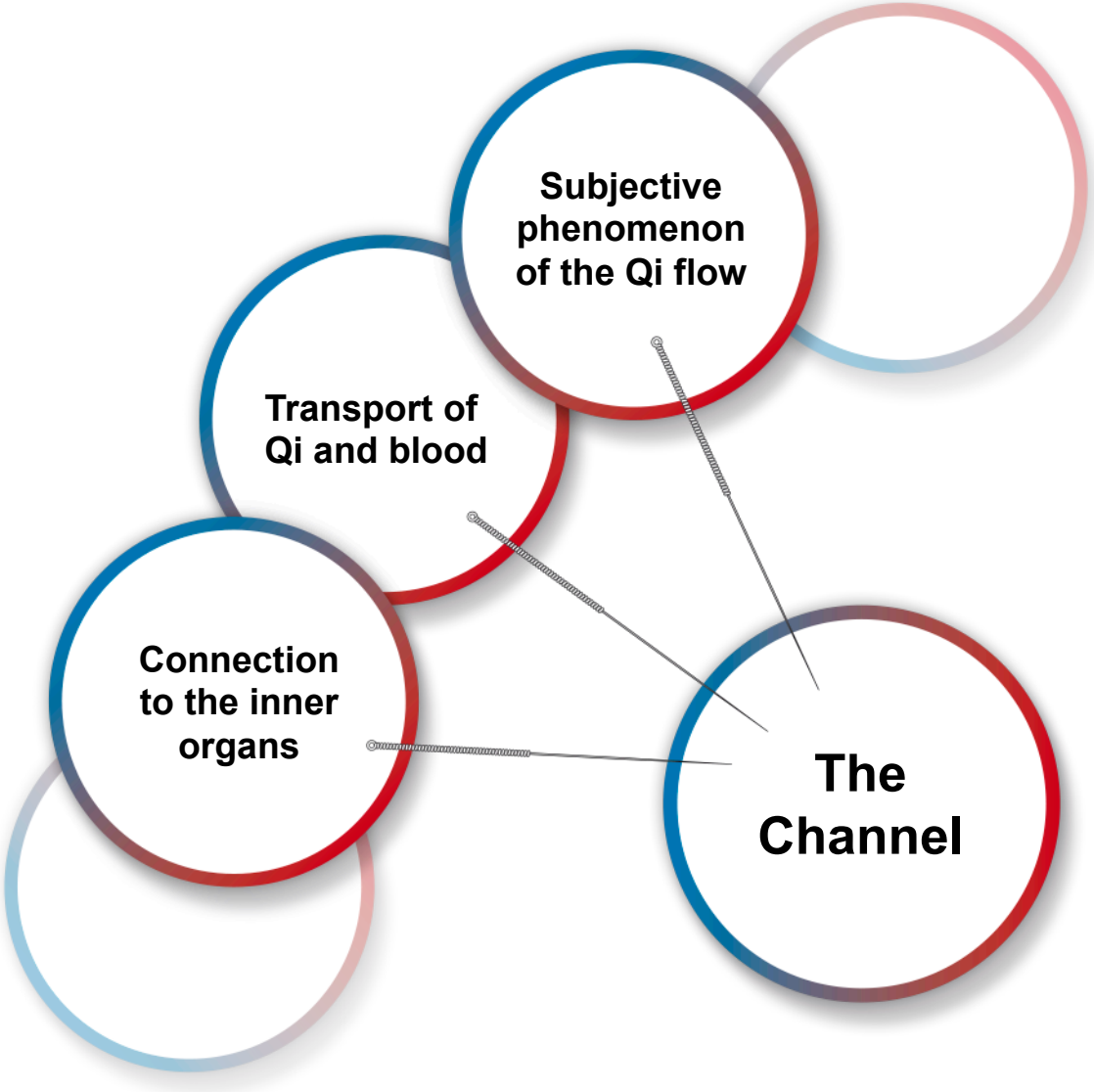
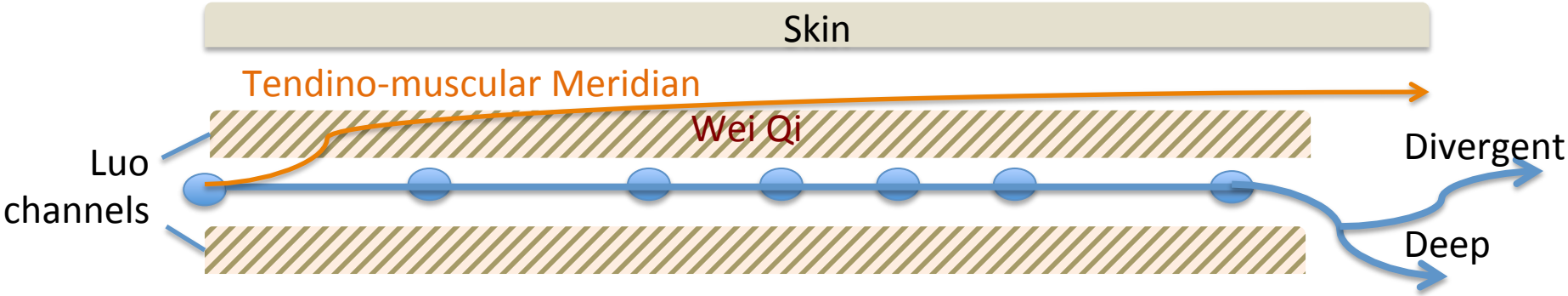


The Channels

Meridian System



Jing Well or Tsing — Arrival or Departure Pernicious Qi enters here Yang Meridian

Ying Spring — Rapid force of flow

Shu Stream — Pernicious Qi enters here Yin Meridian

Yuan Point

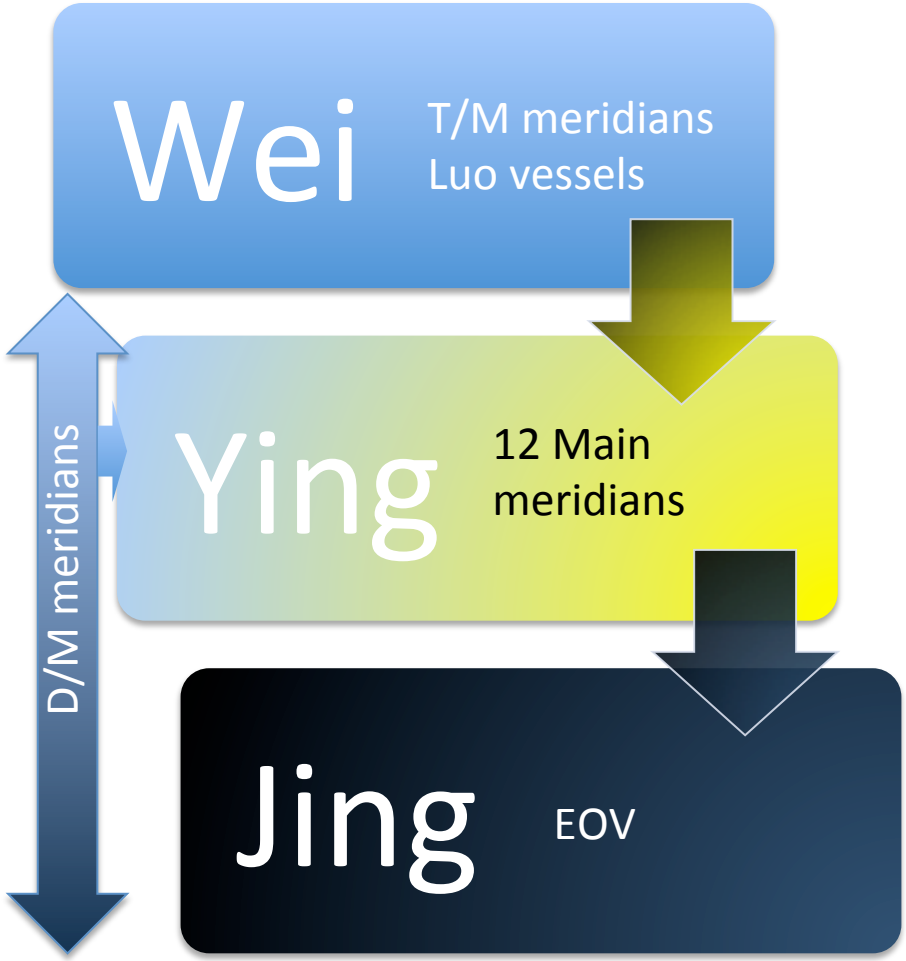
Jing River — Crossing point Pernicious Qi can leave to influence tissues, other meridians

Luo Point

He Sea — Entry or Exit from superficial to deeper levels

Energy Layers

- The Meridian system reflects the overall layering of energy in the body from the exterior to the skin and fascia, down to the organs and finally deeper to the level of the ancestral and embryological origins of our body

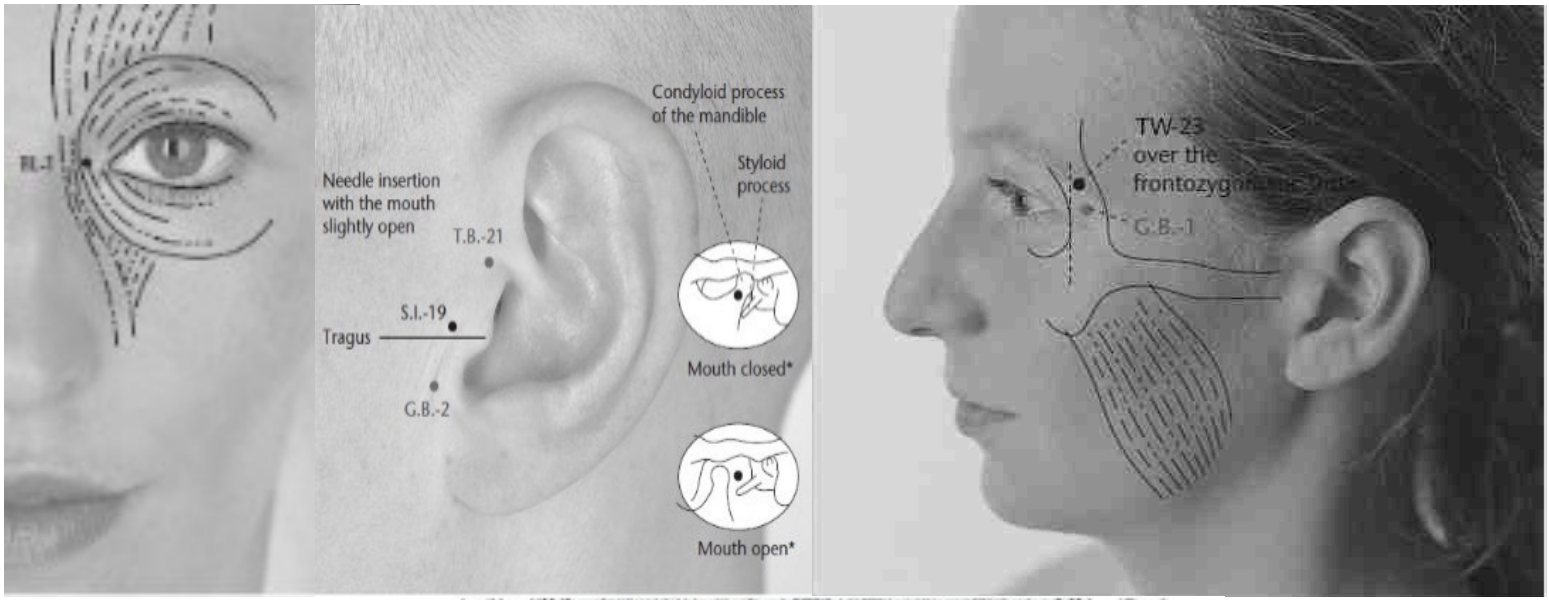


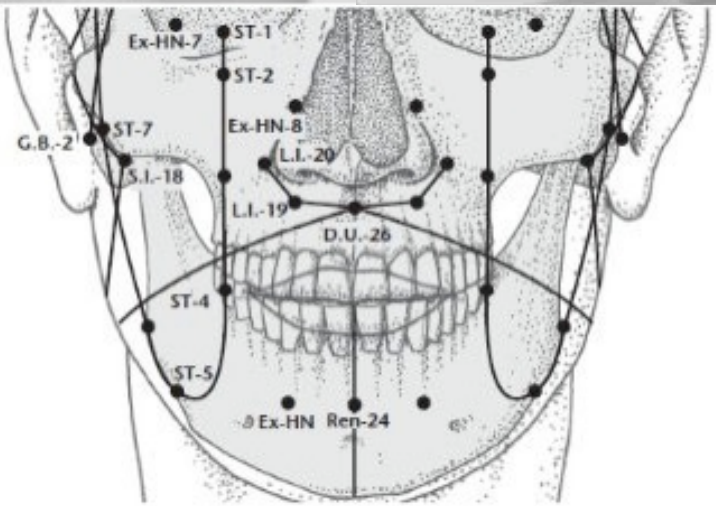
12 Main Meridians: Energetic View

- 12 main meridians are really energetically 6 meridians that travel from Hand to Foot.
  - In case of Tai Yang, pathway starts at SI 1 to SI 19 in the face, then via an internal pathway, connects to BL 1 and down the Bladder meridian to the foot to end at BL 67.
  - In case of Shao Yang, pathway starts at TW 1 to TW 23 where it connects through internal pathway to GB 1 and then down to the foot to end at GB 44
  - In case of Yang Ming, pathway starts at LI 1 to LI 20 in face where it connects through internal pathway to ST 1 and then down to the foot to end at ST 45

- Energetic View of Meridians
  - Tai Yang or GREAT YANG of Hand & Foot – Most Superficial
    - DORSAL ZONE
    - Small Intestine & Bladder
  - Shao Yang or LESSER YANG of Hand & Foot – Middle Layer
    - LATERAL ZONE
    - Triple Warmer & Gall Bladder
  - Yang Ming or BRIGHT YANG of Hand & Foot – Deepest Layer
    - VENTRAL ZONE
    - Large Intestine & Stomach

Energetic Connections Face





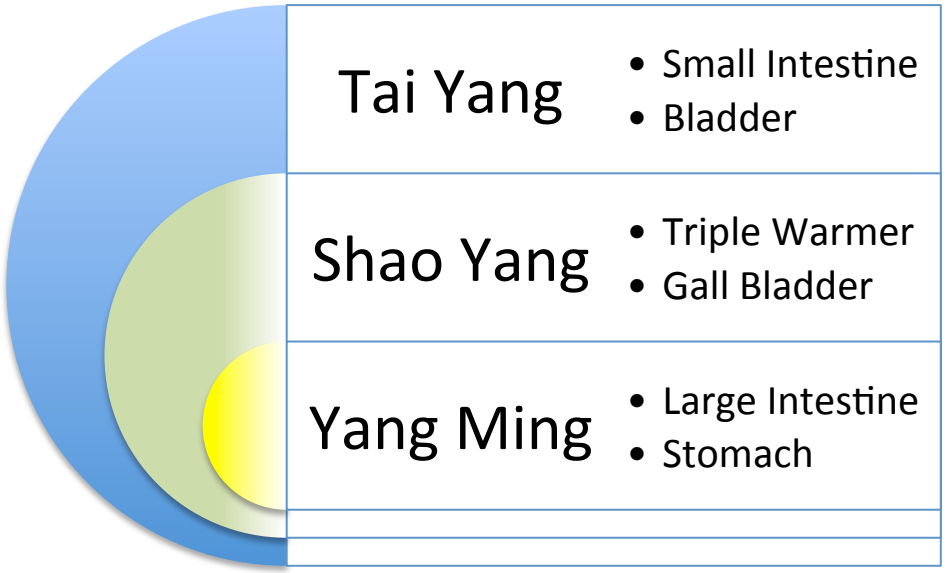
12 Main Meridians: Energetic View

- Yin Pairs
  - YIN PAIR to Tai Yang
    - SHAO YIN or LESSER YIN
  - YIN PAIR to Shao Yang
    - JUE YIN or ABSOLUTE YIN
  - YIN PAIR to Yang Ming
    - TAI YIN or GREAT YIN

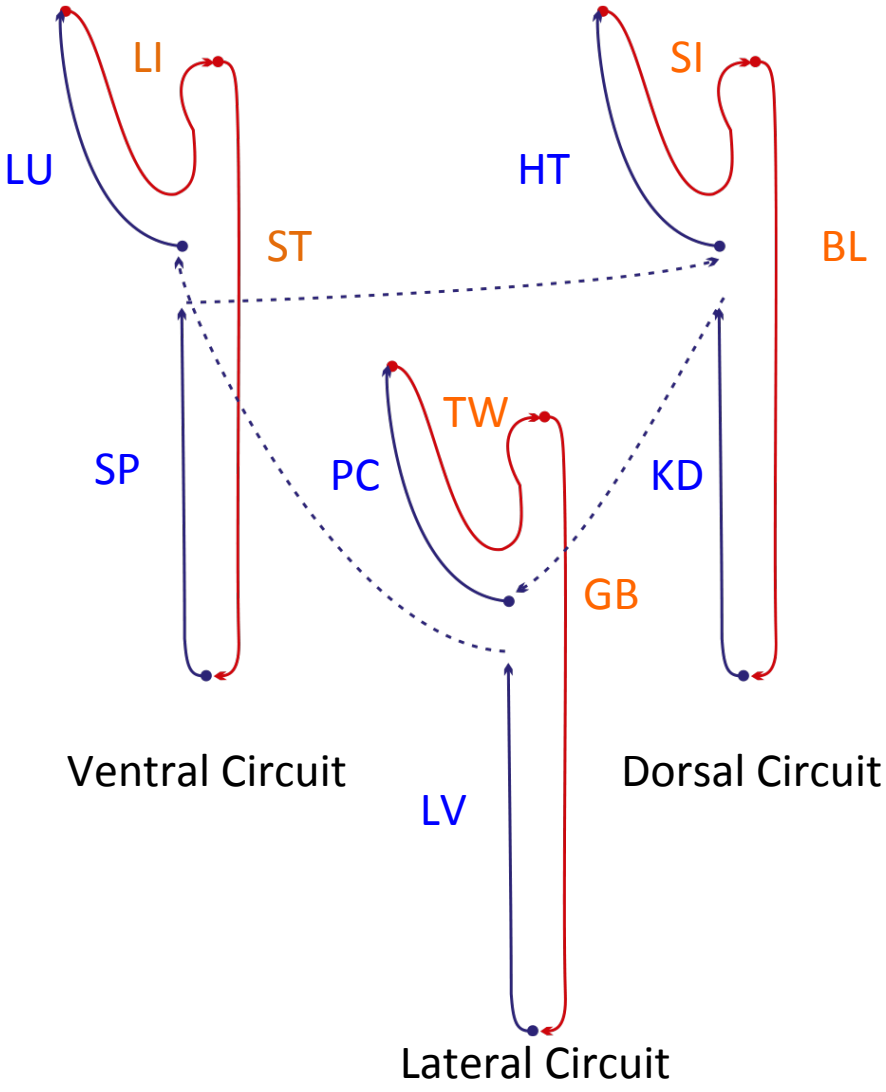
- Energetic View of Meridians
  - Tai Yang of Hand & Foot – Small Intestine & Bladder
    - Yin Pairs: Heart & Kidney – Shao Yin of Hand & Foot
  - Shao Yang of Hand & Foot Triple Warmer & GallBladder
    - Yin Pairs: Pericardium & Liver – Jue Yin of Hand & Foot
  - Yang Ming of Hand & Foot – Large Intestine & Stomach
    - Yin Pairs: Lung & Spleen – Tai Yin of Hand & Foot

Meridian Energetic Layers

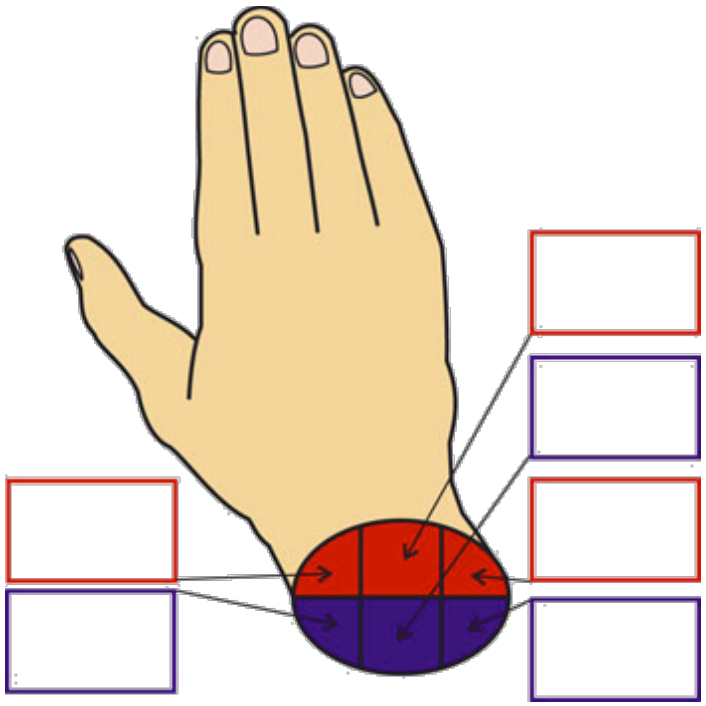
Yang		Yin
Tai Yang	⟷	Shao Yin
SI/BL		HT/KD
Shao Yang	⟷	Jue Yin
TW/GB		PC/LV
Yang Ming	⟷	Tai Yin
LI/ST		LU/SP



The Meridian Circuits



Hand Channel Couples



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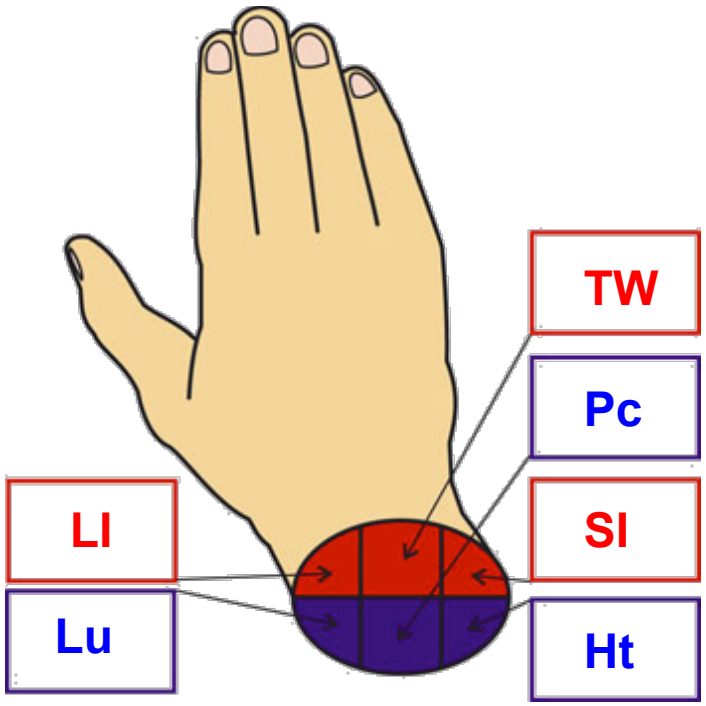
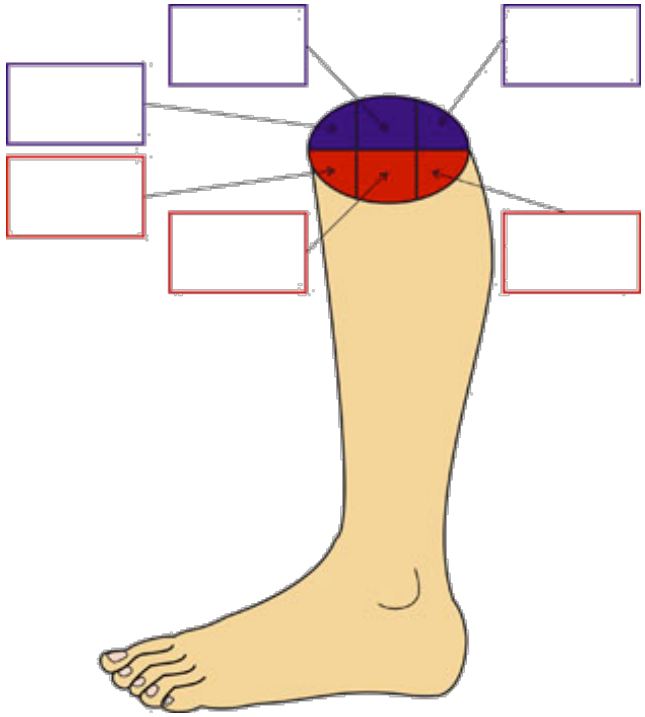


Foot Channel Couples



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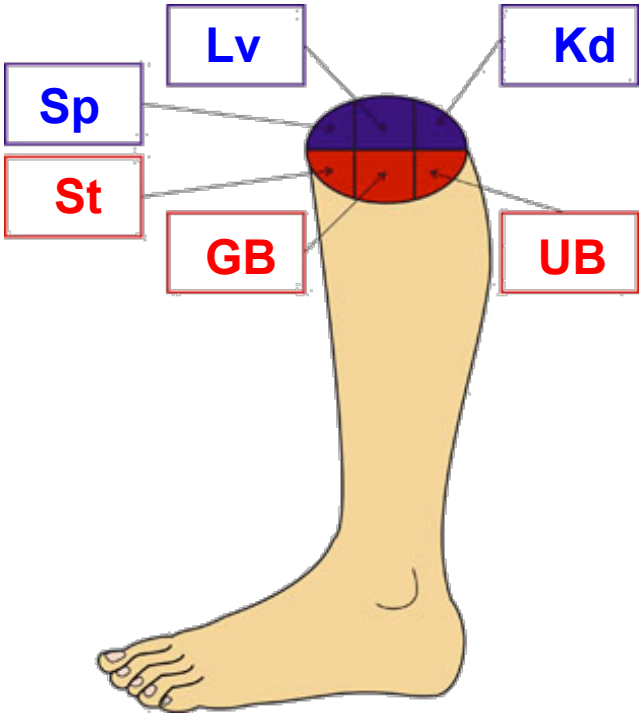
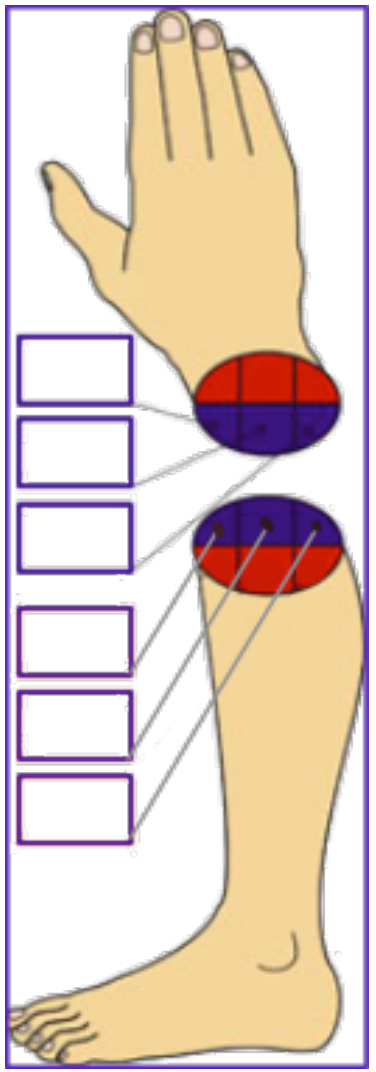


The Channel Structure

The Yin Channels

run ascending to the front and inside of the body from earth to heaven.

Front: Tai Yin: Lu, Sp
Side: Jue Yin: Pc, Lv
Back: Shao Yin: Ht, Kd



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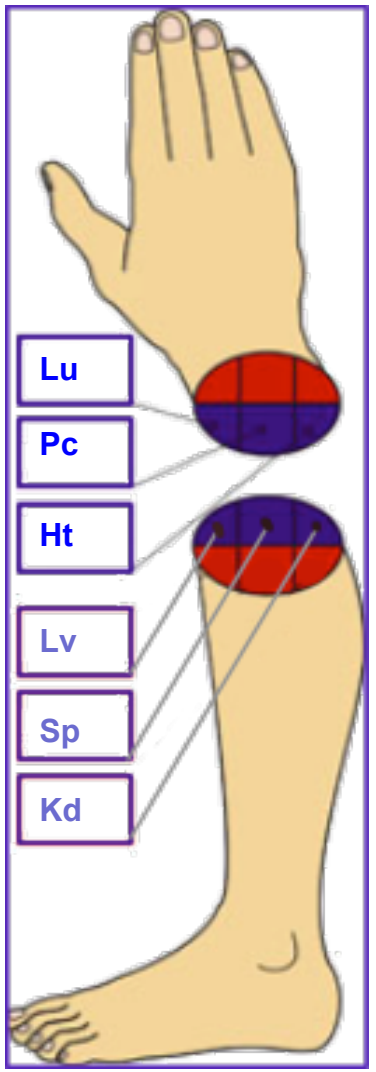

The Channel Structure

The Yang Channels

extend descending on the outside and rear of the body from heaven to earth.

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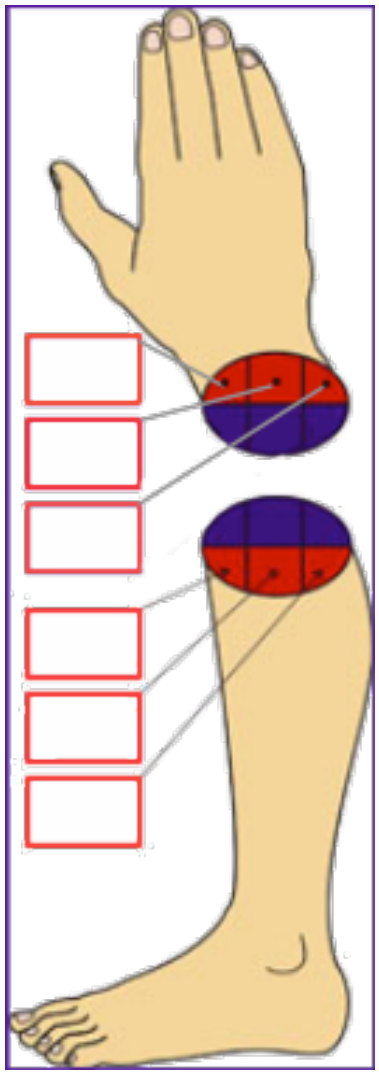
Front: Yang Ming: LI, St
Side: Shao Yang: TW, GB
Back: Tai Yang: SI, UB



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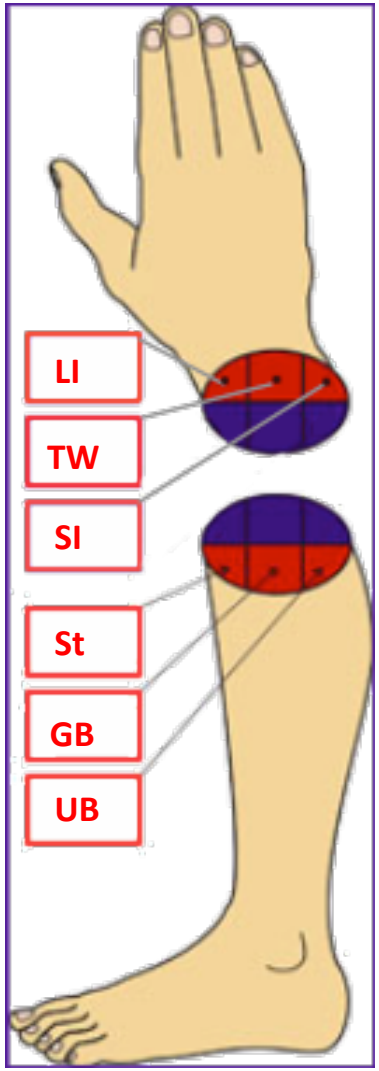
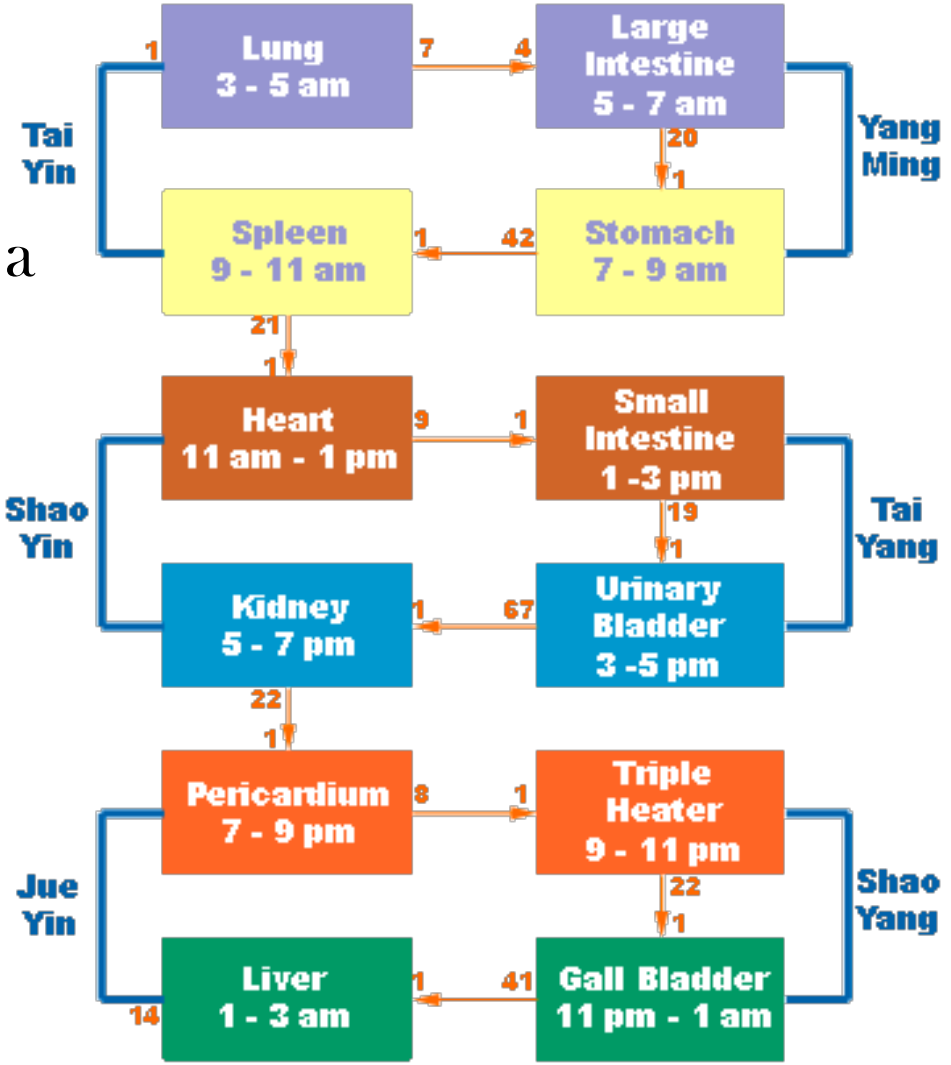


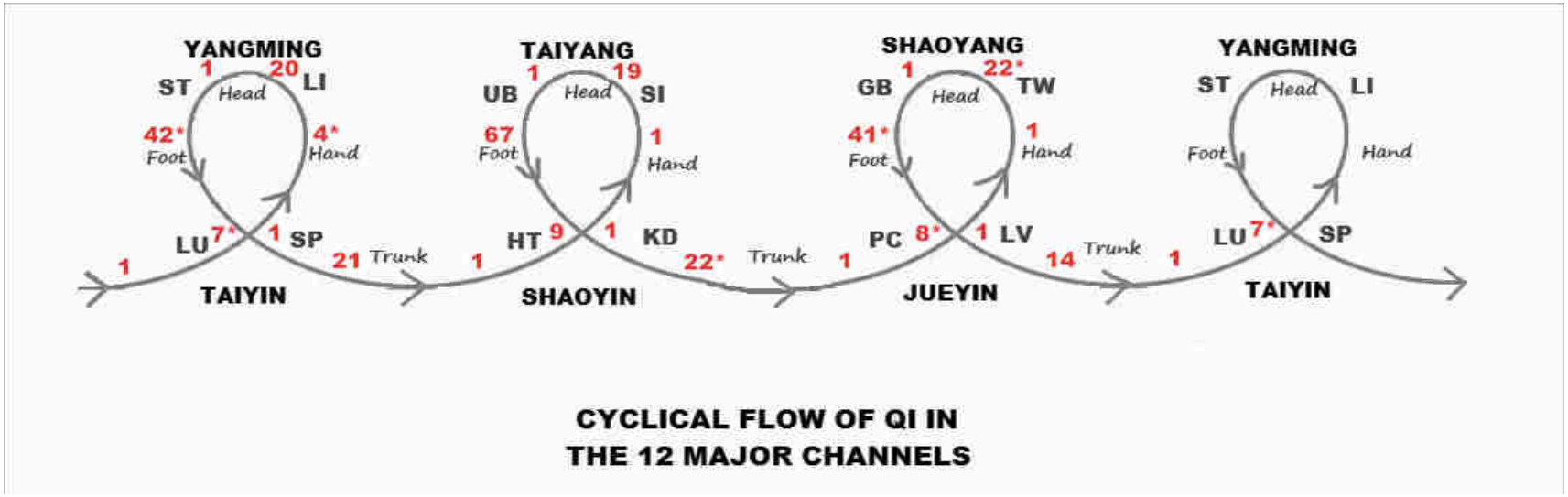
Qi Circulation through Meridians

- The cyclical flow of Ying Qi through the main meridians is believed to follow a time course with a particular meridian and organ having a peak of energy for 2 hours each day
- Called Chinese Clock
  - Starts with Lung
  - Cycles back to Lung from Liver



Entry and Exit Points

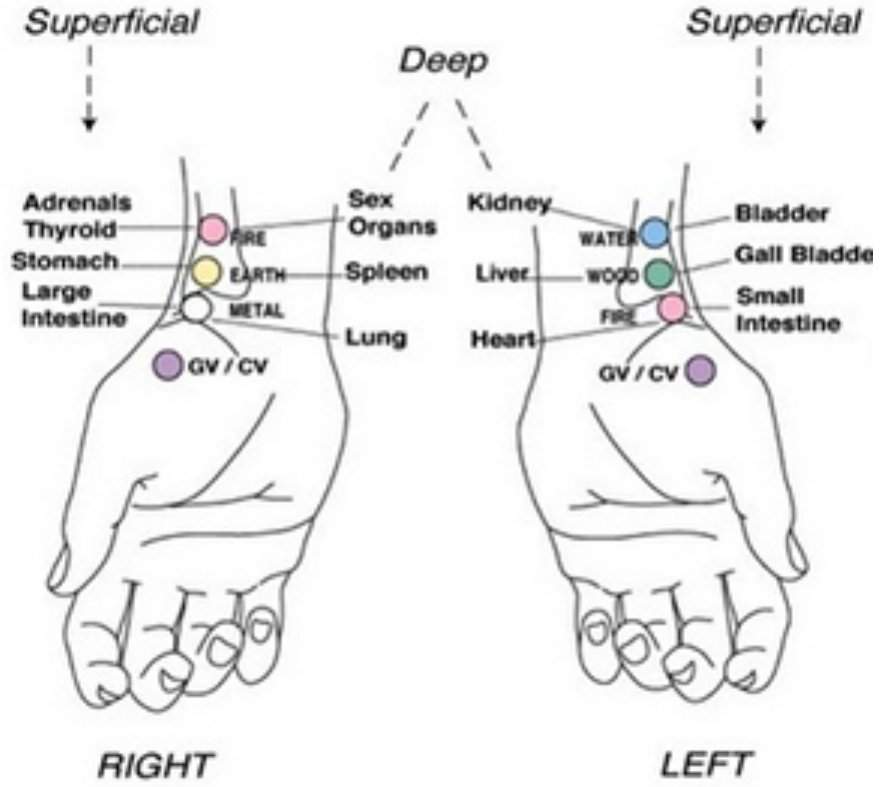
- Associated with cyclic flow between meridians is the concept of Entry and Exit points
  - Used to re-establish flow if a meridian has developed a blockage
  - Typically the meridian with the “block” will be in excess and the subsequent meridian will lack flow and be deficient
  - Could use pulse to test if for example Heart position is weak but Spleen feels full or strong, then needle SP 21 and HT 1 to balance
  - Scar blocking flow of meridian at LV 13 area, re-establish flow GB 41 with LV 1

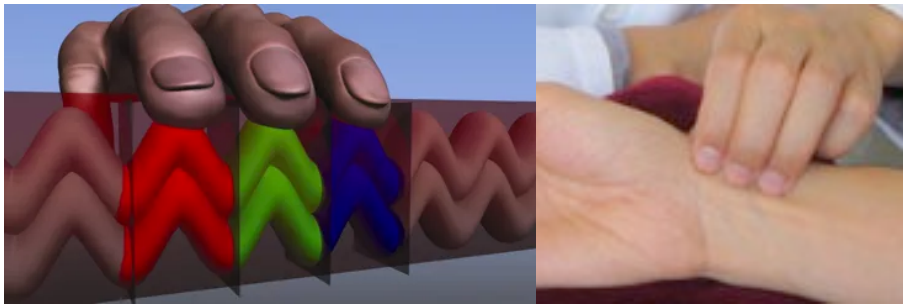


CYCLICAL FLOW OF QI IN
THE 12 MAJOR CHANNELS

Brief Side on Pulse

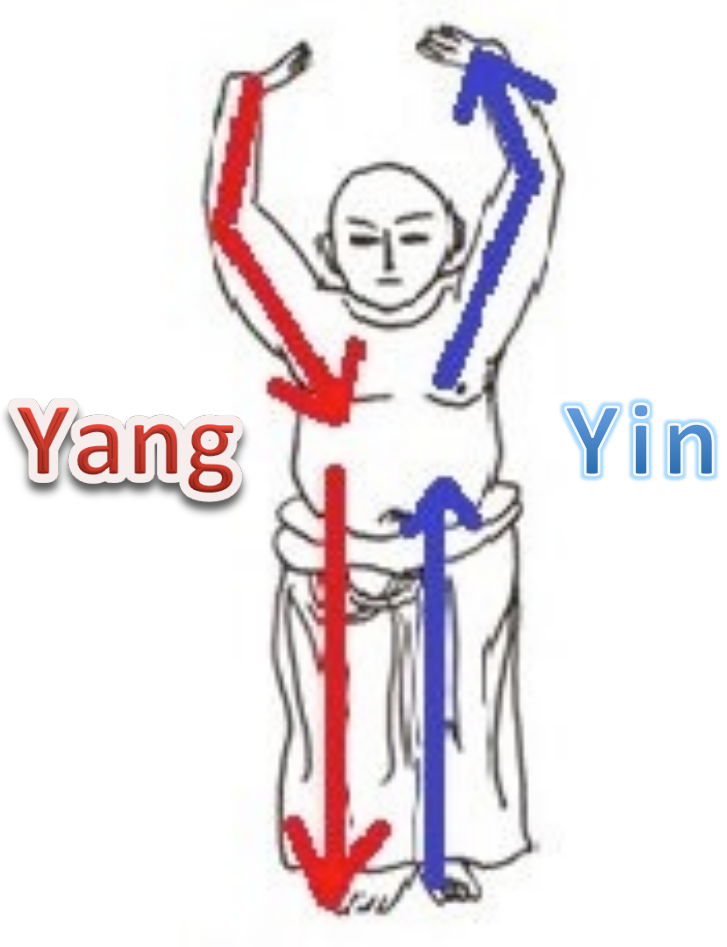
- Radial Pulse reflects balance of energy in meridians/organs
  - Palpated in 3 locations on radial artery with middle finger just inside the radial styloid
  - Distal position (close to wrist) – Organs/ Meridians in Upper Burner
  - Middle Position – Organs/Meridians in Middle Burner
  - Proximal Position – Organs/Meridians in Lower Burner
- Superficial position: Fingers lightly placed over skin
- Normal position: Fingers apply moderate pressure, push artery until against bone (pulse disappears) then lift pressure off and pulse returns – that is normal position
- Deep position: Pulse stronger when pressing artery against bone, becomes weaker when pressure let up



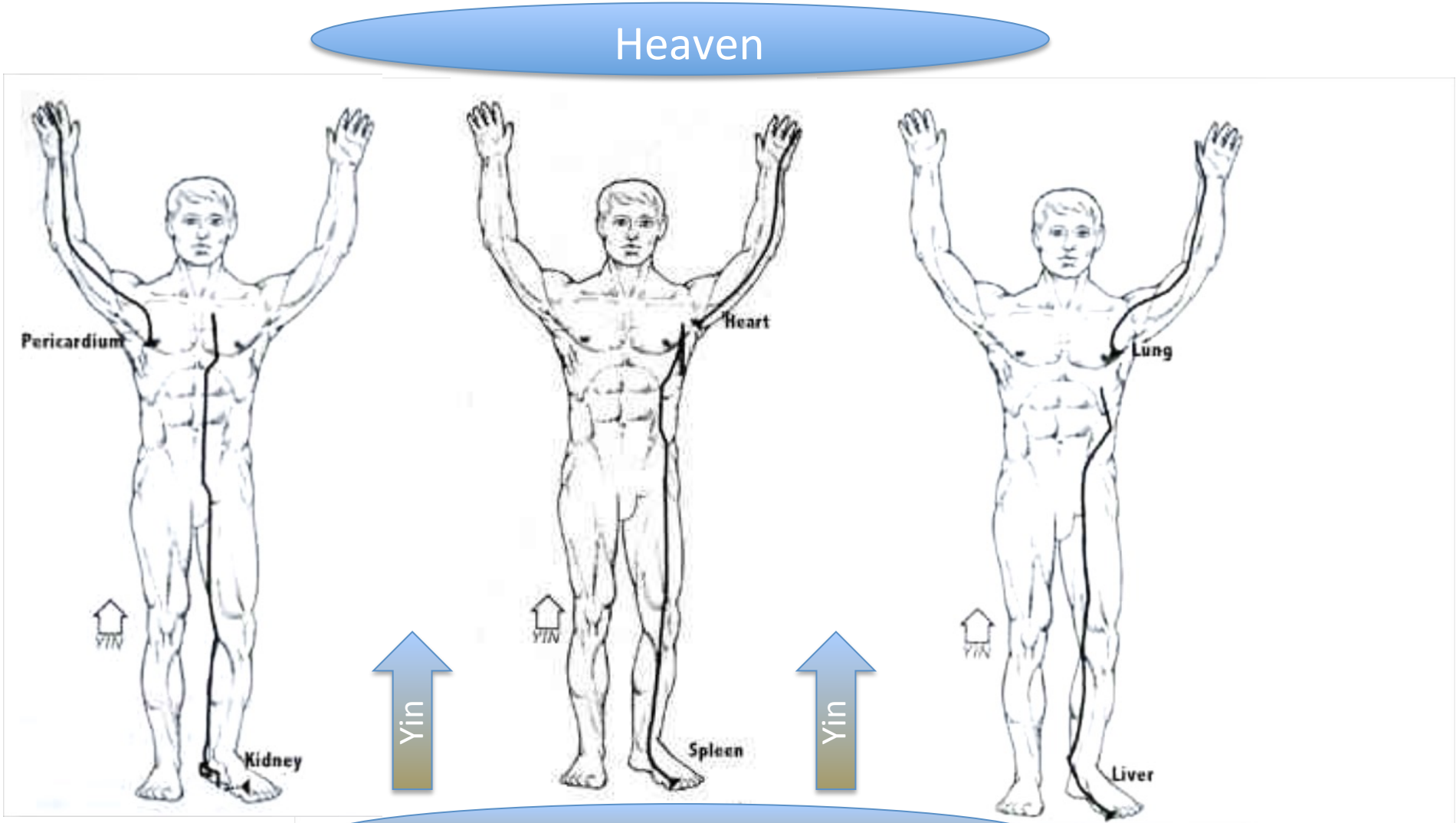


Yin and Yang Aspects to Meridian

- Yin
  - Yin meridians start closer to Earth and ascend to Heaven (Anatomical Position in Chinese Medicine – Hands Up)
  - More medial or ventral
- Yang
  - Yang meridians start closer to Heaven and descend down to Earth
  - More lateral or dorsal

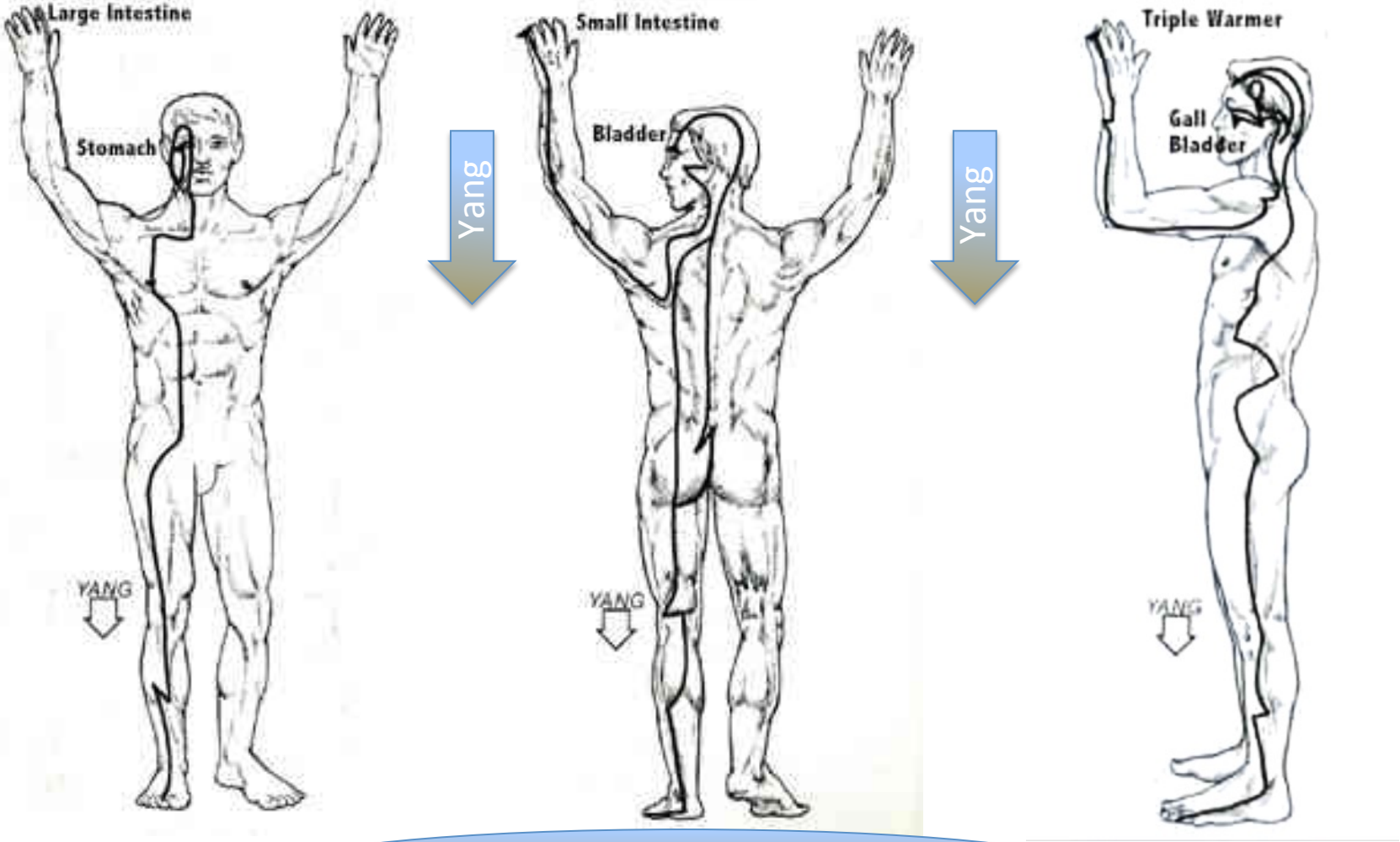


Yin Meridians



Yang Meridians

Heaven



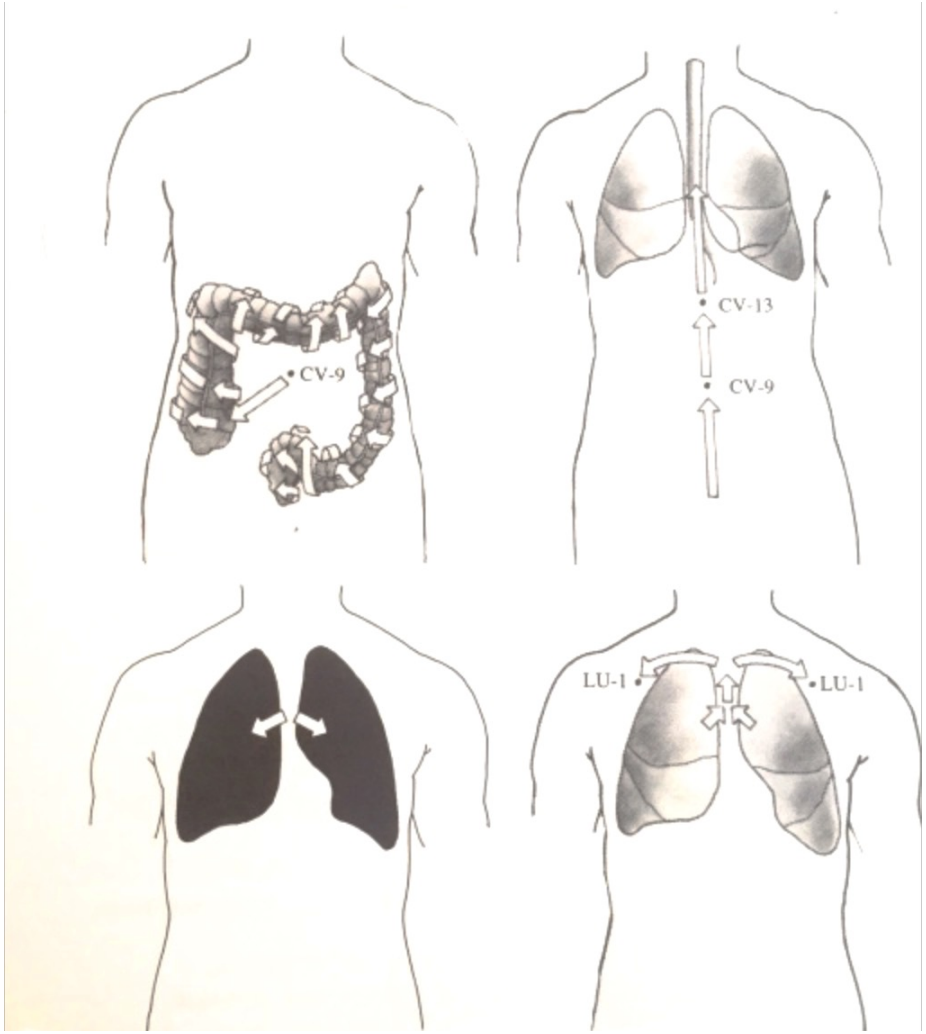
Earth

Internal Projections

- Historically, the internal projections of the meridians led to the current Zang-Fu names associated with the 12 main meridians
  - The meridian is said to permeate organ it is associated with – (Chinese word Shu)
  - Meridians also connect to their yin/yang pair or coupled organ (Chinese word Luo) which implies a more energetic connection (spirally wraps)
- Yin meridians always start internally
- Yang meridians always start in either hands or face
- Classically it was the internal projections that were the "main" meridians and the surface meridians we focus on were just branches from the root
  - Exceptions: For Bladder, Stomach and Heart meridian, the surface meridian we use and can palpate is the "main" meridian
  - Diagnostic palpation of some of the most important points in the body occur on these 3 meridians

Lung Internal Projection

- Lung meridian starts at CV12 and goes down to CV 9 and then wraps (Luo) the Large Intestine (coupled yang pair)
- Then returns up to CV 13 and passes the diaphragm to enter and permeate the lungs
- Finally surfaces at Lu 1 to start the external trajectory of the meridian
  - Constipation can be treated with points on Lung Meridian
    - Lung 6



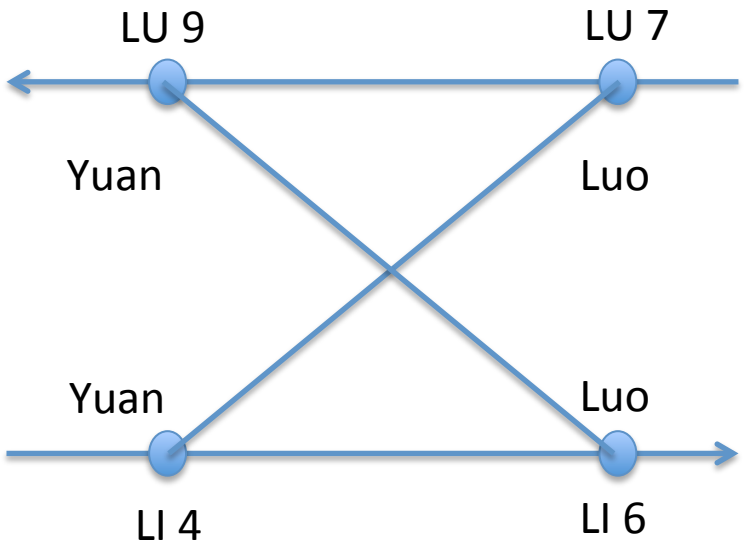
Transverse, Connecting or Linking (Luo) Channels

- 16 Connecting Luo Channels
  - 12 for the 12 main meridians
  - 2 for the extraordinary channels Governing Vessel and Conception Vessel
  - 1 Great Connecting Channel for Spleen and 1 for Stomach
    - No point associated with Stomach Great Connecting Channel
  - Used to balance coupled channels and treat superficial stagnation

Meridian	Luo Point	Yuan Point
LU LI	LU 7 LI 6	LU 9 LI 4
ST SP	ST 40 SP 4	ST 42 SP 3
HT SI	HT 5 SI 7	HT 7 SI 4
BL KD	BL 58 KD 4	BL 64 KD 3
PC TW	PC 6 TW 5	PC 7 TW 3
GB LV	GB 37 LV 5	GB 40 LV 3
DU REN	GV 1 CV 15	
Dabao (SP)	SP 21	

Transverse, Connecting or Linking (Luo) Channels

- Link coupled Yin and Yang Meridians
  - Can transfer energy from one to the other if one is weak
  - Can drain off excess energy from one to the other as well
  - Connection occurs between the Luo Point on one meridian to the Yuan or Source point on the coupled meridian
    - Lung deficient with normal or strong LI: Treat Yuan point of Lung (LU 9) to strengthen Lung with Luo point of LI (LI 6) to bring energy from LI to help Lung



Transverse, Connecting or Linking (Luo) Channels

- The Luo connecting channels do just that – connect the space between meridians in the superficial layers of skin and superficial loose connective tissue
  - Distributed like a net to provide nourishment between skin and muscle
  - When local stagnation occurs, superficial tissues swell and Luo points can be needled
  - Linking channels do not pass through the joints themselves, just the connective tissues all around joints
- Ling Shu says "The major meridians cannot be seen. Whether they are replete or not one must use the wrist pulse to know. The vessels which can be seen are all luo", and "Therefore, when needling the luo vessels, one must needle the places where they collect together on the surface, where there may be an accumulation of blood”

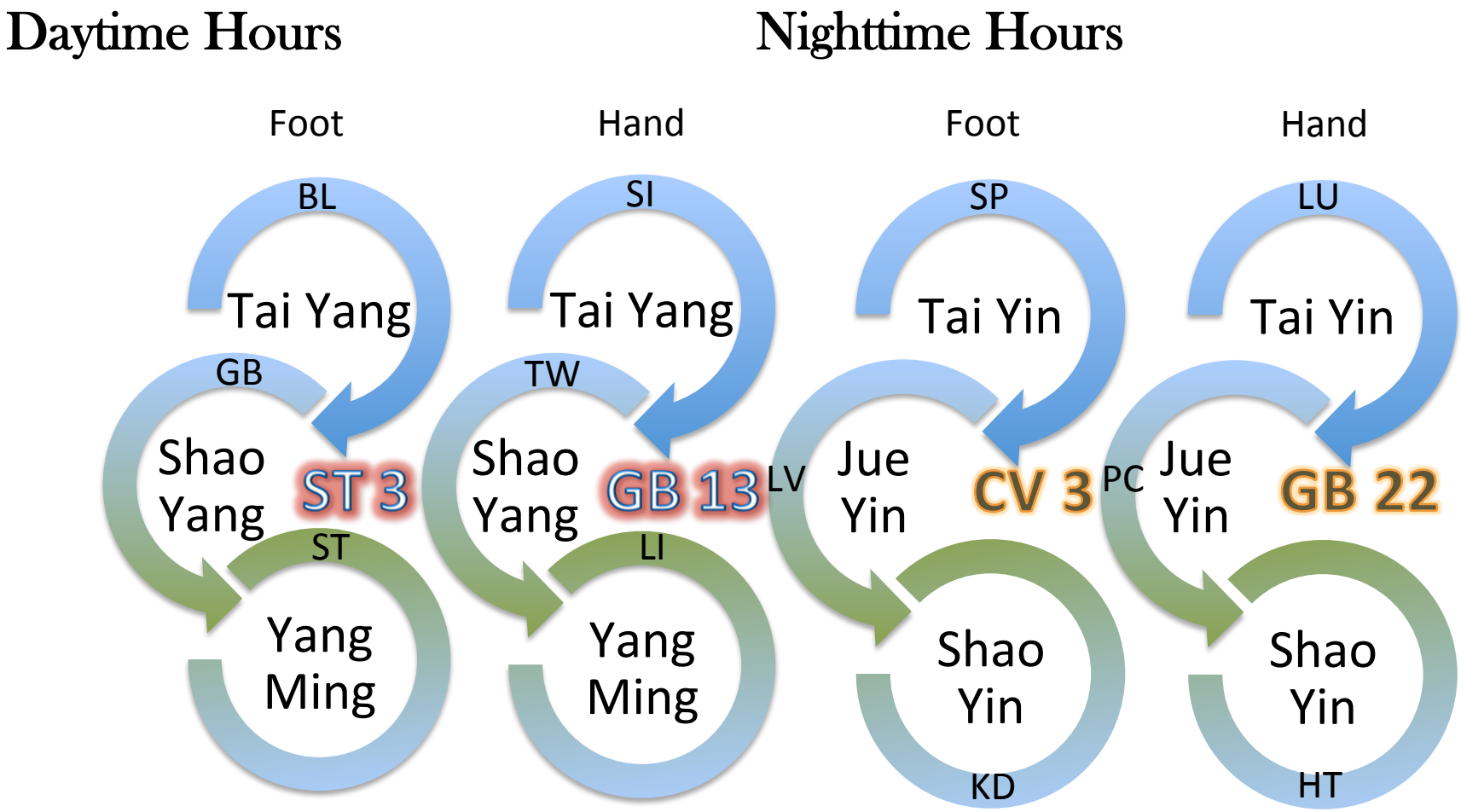
Luo Channels

- Another barrier to keep pernicious Qi from invading main meridians
- Connects organs to surface to spread nourishment to all connective tissue in region

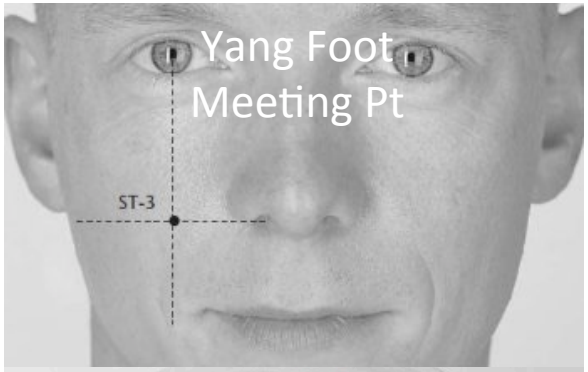
Tendino-Muscular Meridians or Sinew Channels

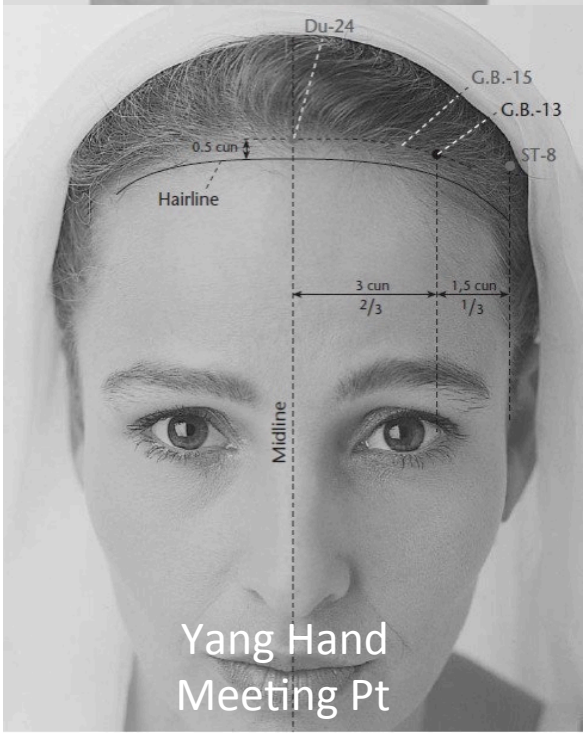
- Superficial network ramifying over whole body starting at the skin with invaginations in the fascial holes and planes between muscles and tendons
  - Flow is always upwards towards head
  - 12 sinew channels associated with the 12 main meridians
- Energetically contain the Wei or Defensive Qi
- Body's first line of defense from external devils or pernicious factors
  - Connect withTsing or Jing Well points so if overcome, the pernicious devil can enter main meridian
  - Governed by flow of Wei Qi which circulates through Yang meridians during the day and Yin meridians at night

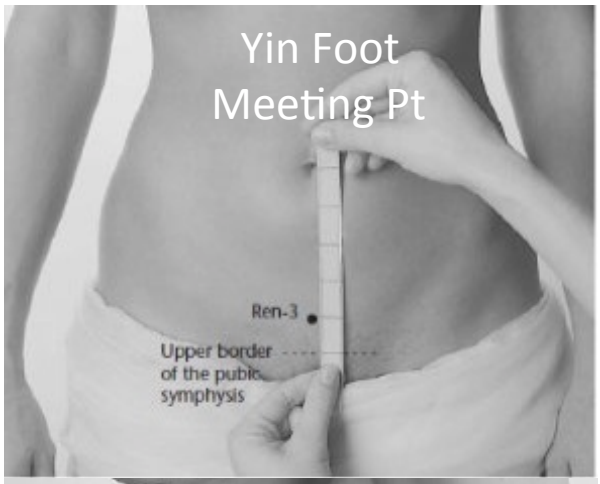
Circulation Cycle

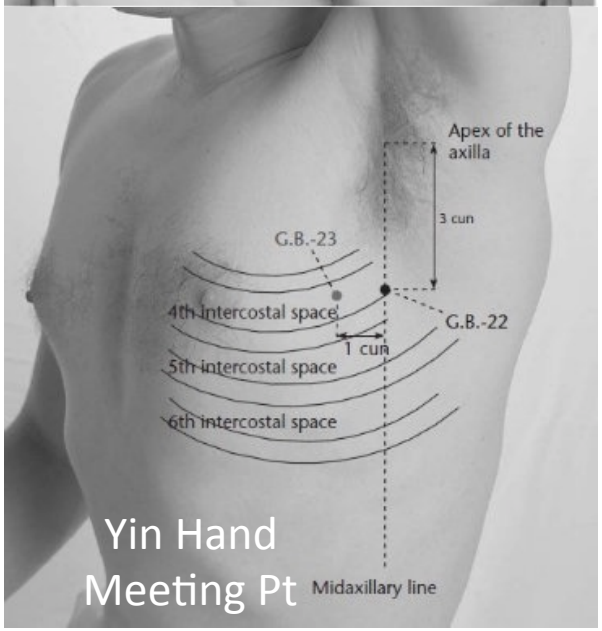


Details of Meeting Points









Tendino-Muscular Meridians

- Yang in nature
  - Tend to be aggravated by Cold
  - Muscles become taught and prone to spasm
  - Extreme heat can also adversely effect causing flaccidity
  - Syndromes such as shingles were historically considered a wei level struggle with an external devil and manifests in skin (part of the T/M system)
- Ah Shi points (tender points either on or off meridian) part of T/M sysetem
- In West – Myofascial Pain
  - Osteopathic concept of trigger point chains
  - Muscle groups that work together to perform normal postural and motor activity that can become dysfunctional in a unit

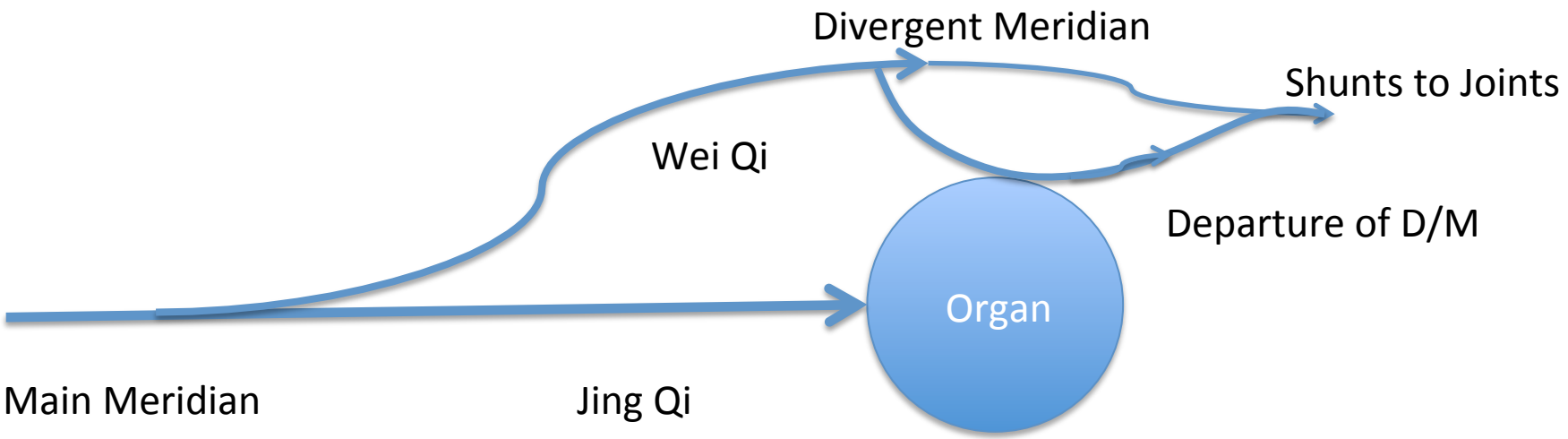
Bladder Tendino-Muscular Meridian

- Tai Yang or Dorsal Zone

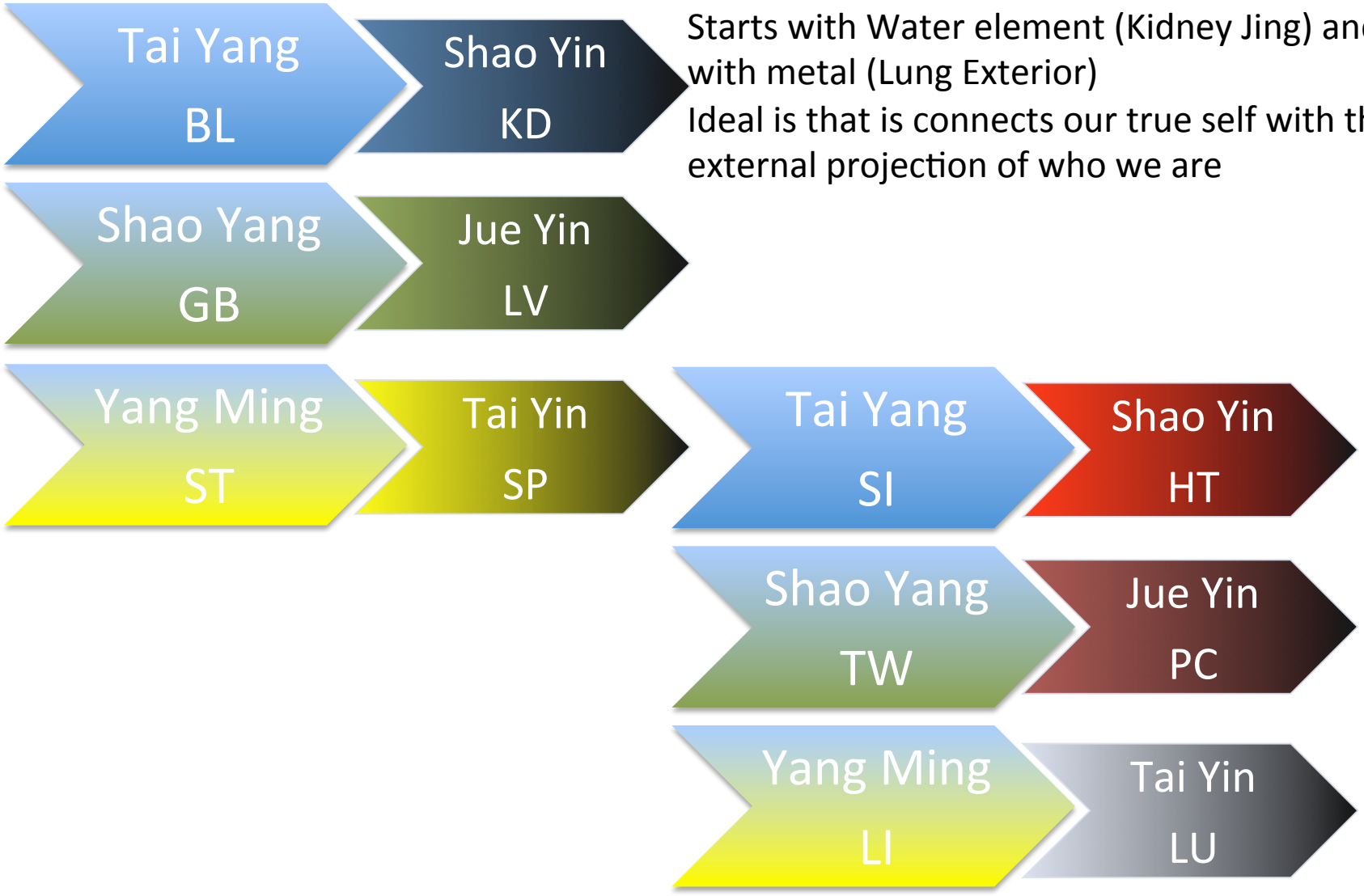
Divergent or Distinct Meridians

- Related to 12 Main Meridians
  - Start superficial at Wei level of body, associated with main meridian in limbs, but then go deep
  - Then connect to the related organ and the Yuan Qi at that level
  - Start in vicinity of major joints such as knee or shoulder
- Symptoms involving Divergent meridians tend to be intermittent
  - Reactivate when Wei Qi aggravated
- Also found in symptoms that are on one side of body even thought pathology on contralateral side
- Contain Wei Qi only unlike the Main meridians that contain Ying Qi
  - In connecting surface Wei level to organ, it connects the Wei to the level of the Source or Yuan Qi that resides in the organs
- Acts to shunt away pernicious factors that may be affecting organ
  - Lessen the ill effects on the organ
- In chronic conditions, can act like a collateral vessel to maintain function of organ
  - Can use to help to revitalize an organ dysfunction in chronic condition just as heart uses collateral vessels to maintain cardiac function when the primary vessels are diseased

Divergent Meridian



Divergent Meridian
Wei Qi Circulation



Starts with Water element (Kidney Jing) and ends with metal (Lung Exterior)
Ideal is that is connects our true self with the external projection of who we are

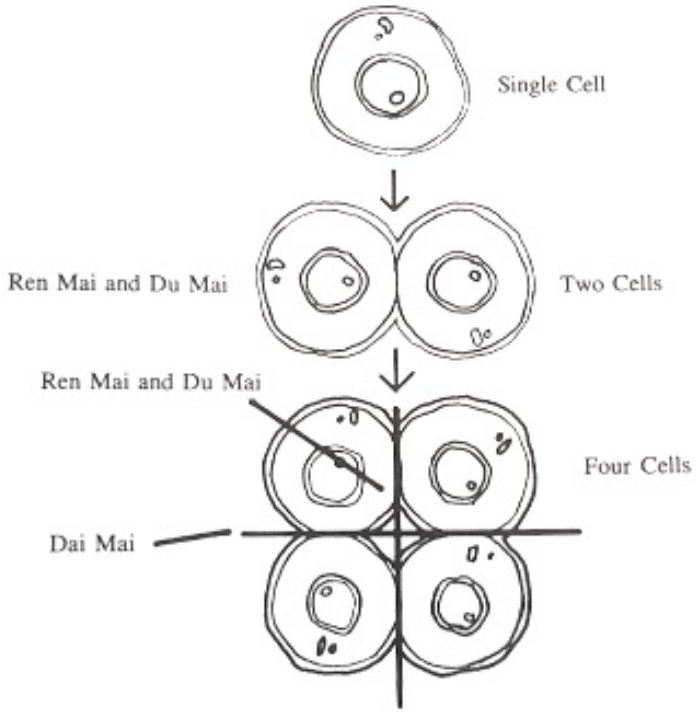
Divergent Meridians

- Yin and Yang couple unite at a *confluent* point near joints and at head or neck on Main Meridian
- Divergent meridian branches off of main meridian at Divergent point on main meridian
  - Also usually near major joint

Meridian	Divergent point	Confluent joint	Confluent Head
BL/KD	BL 40/ KD 10	BL 40	BL 10
GB/LV	GB 30/ LV 5	CV 2	GB 1
ST/SP	ST 30/ SP 12	ST 30	BL 1
SI/HT	SI 10/ HT 1	GB 22	BL 1
TW/PC	GV 20/ PC 1		TW 16
LI/LU	LI 15/ LU 1	ST 12	LI 18

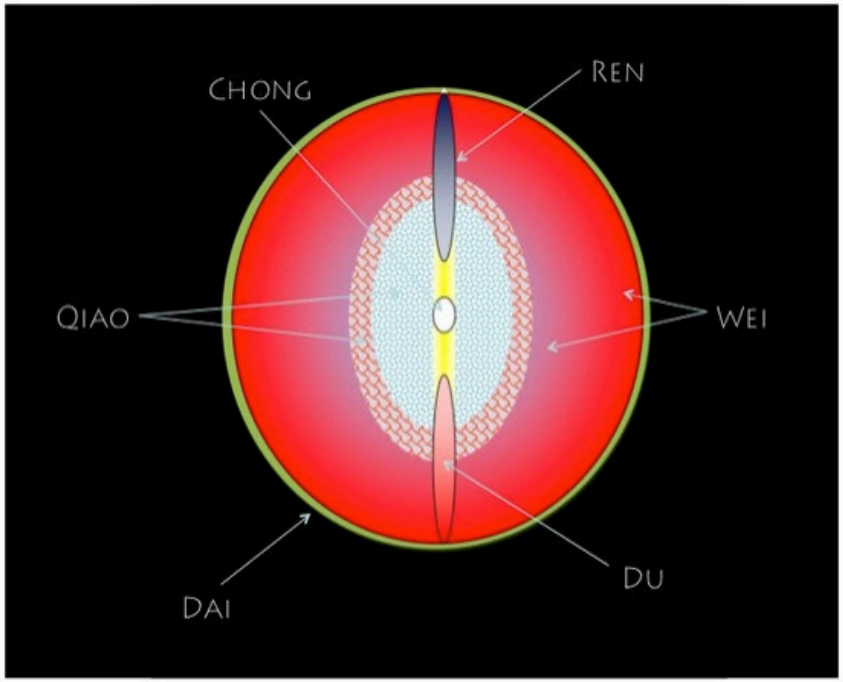
Extraordinary or Curious Vessels

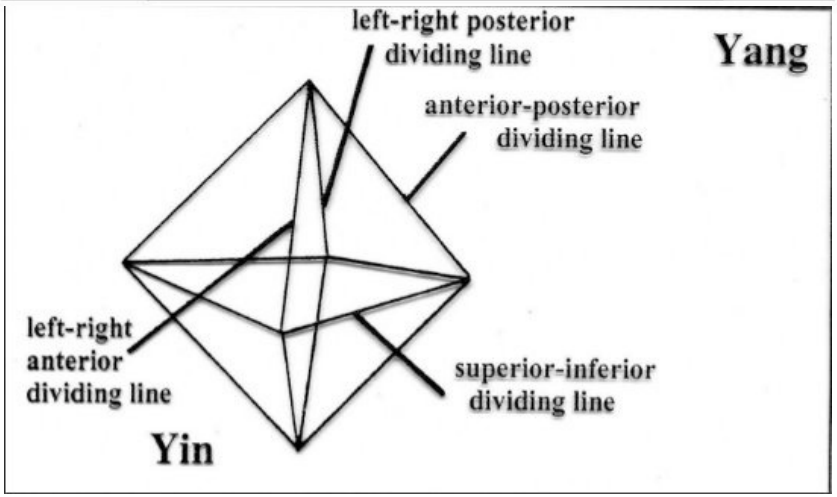
- Part of structural, energetic underpinnings of 12 main meridians
  - Provide the matrix for embryological development
- Carry prenatal Yuan or Source Qi
  - Serve as reservoirs for 12 main meridians: Excess can be drained, Deficiency can be strengthened



Extraordinary or Curious Vessels

- 8 Extraordinary or Curious meridians or vessels
  - 2 have surface acupuncture points
    - Governing Vessel (Du Mai)
    - Conception Vessel (Ren Mai)
  - The other 6 utilize points on main meridian to open
    - Chong Mai (Penetrating Vessel)
    - Dai Mai (Belt or Girdle Vessel)
    - Yin and Yang Qiao Mai (Heel Vessel)
    - Yin and Yang We Mai (Linking Vessel





Extraordinary Vessels

- EOV opened by command points on main meridians
  - Often couple pairs of EOV to balance effect
  - Given embryological origins, EOV Couples influence regions of body
    - Dorsal Zone: Du Mai/Yang Qiao Mai
    - Lateral Zone: Dai Mai/ Yang Wei Mai
    - Ventral Zone: Ren Mai/Yin Qiao Mai or Chong Mai/ Yin Wei Mai

EOV	Command	Zone
Du Mai	SI 3	Dorsal Zone
Yang Qiao Mai	BL 62	
Dai Mai	GB 41	Lateral Zone
Yang Wei Mai	TW 5	
Ren Mai	LU 7	Ventral Zone
Yin Qiao Mai	KD 6	
Chong Mai	SP 4	Ventral Zone
Yin Wei Mai	PC 6	

Meridian Organ Connections
Mu Shu

- Mu Points (Front Collecting Points)
  - Should be used diagnostically to assess organ health (tender on palpation = dysfunction of related organ)
  - Can needle in Acute diseases of the organs
  - In Chronic conditions of Fu or Yang Organs, Front Mu can be treated (Chronic isssues of Zang or Yin organs – use Shu points)

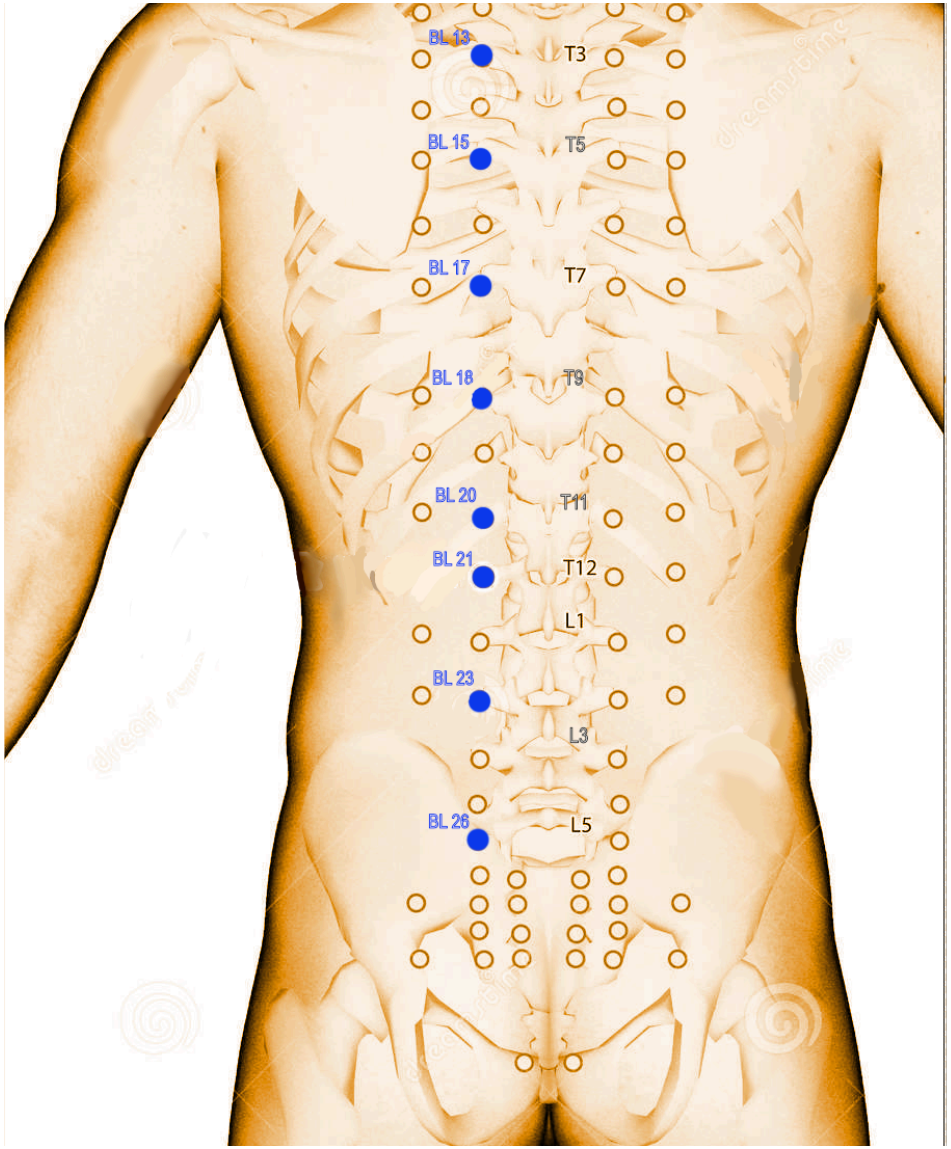
- LU → LU 1
- LI → ST 25
- ST → CV 12
- SP → LV 13
- HT → CV 14
- SI → CV 4
- BL → CV 3
- KD → GB 25
- PC → CV 17
- TW → CV 5
- GB → GB 24
- LV → LV 14

Meridian Organ Connections
Mu Shu

- Shu Points (Back Transporting Points)
  - Extremely important both diagnostically and in treatment
  - Strong correlation with neuroanatomical relationships between organs and spinal cord level of innervation
  - Should be used diagnostically to assess organ health (tender on palpation = dysfunction of related organ)
  - Needle in diseases of the organs – especially Zang or Yin Organs and in chronic conditions

- LU → BL 13
- PC → BL 14
- HT → BL 15
- LV → BL 18
- GB → BL 19
- SP → BL 20
- ST → BL 21
- TW → BL 22
- KD → BL 23
- LI → BL 25
- Guan → BL 26
- SI → BL 27
- BL → BL 28

Meridian Organ Connections
Mu Shu



- LU → BL 13
- PC → BL 14
- HT → BL 15
- LV → BL 18
- GB → BL 19
- SP → BL 20
- ST → BL 21
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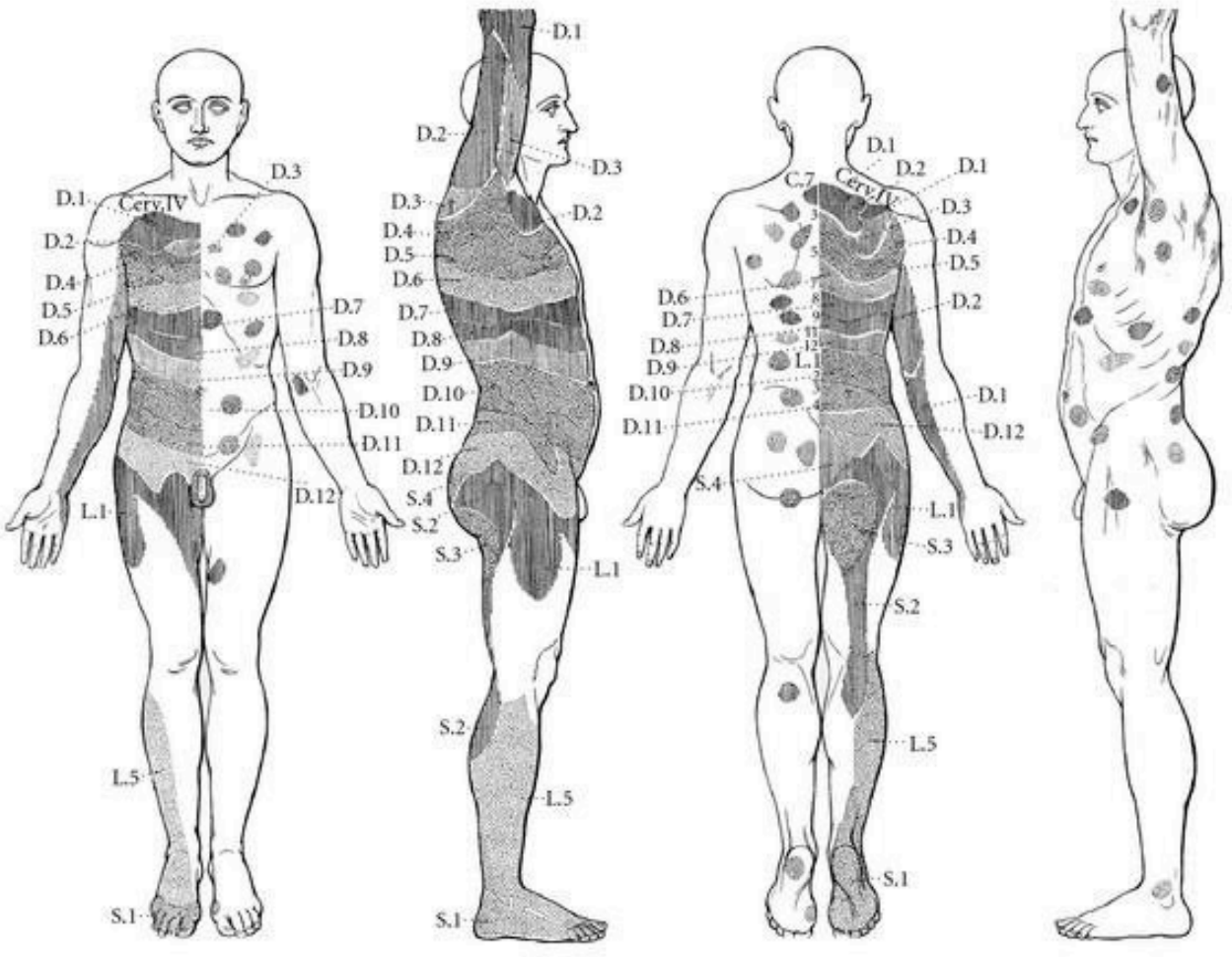
- SI → BL 27
- BL → BL 28

Head Zones: Dermatomes and Reflection of Organ Pathology



Beissner F, Henke C, Unschuld P, et al. Evidence-based Complementary and Alternative Medicine 2011(2):240653 · February 2009 with 309

Meridian Organ Connections
Mu Shu

- Additional Shu Points (Back Transporting Points)

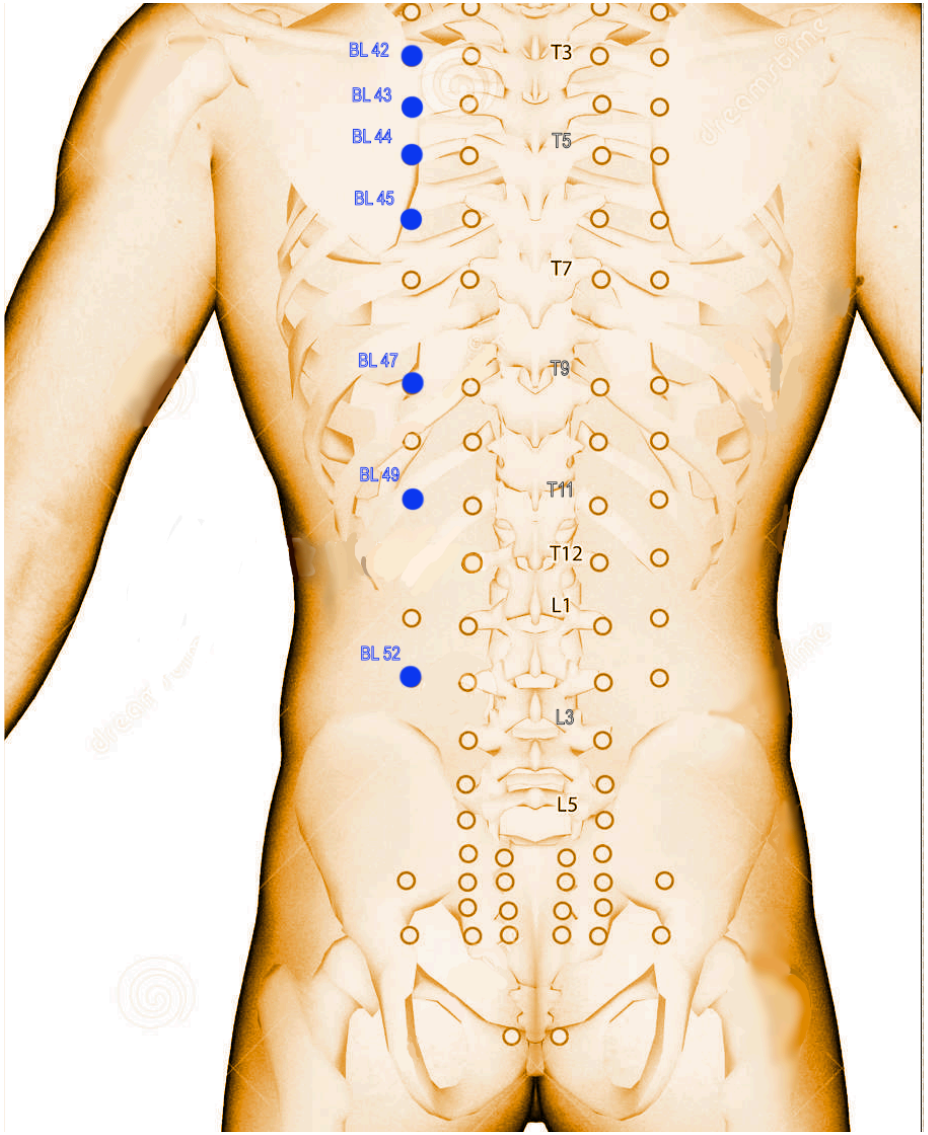
- Governing Vessel ➔ BL 16
- Diaphragm and Meeting pt of Blood ➔ BL 17
- Sea of Qi ➔ BL 24
- Uterus ➔ BL 26
- Sacrum ➔ BL 29
- Anus ➔ BL 30

Meridian Organ Connections
Mu Shu

- Additional Shu Points on Outer Bladder Meridian
  - Related to psychological or spiritual aspects of organ disease and disharmony

- Door of Corporeal Soul (Pohu)
  Level with BL 13 ➔ BL 42
- Gaohuang Shu (Relates to Fascia)
  Level with BL 14 ➔ BL 43
- Hall of the Shen (Shentang)
  Level with BL 15 ➔ BL 44
- Cry of Pain (Yixi)
  Level with BL 16 ➔ BL 45
- Door of the Ethereal Soul (Hunmen)
  Level with BL 18 ➔ BL 47
- House of the Mind (Yishe)
  Level of BL 20 ➔ BL 49
- Room of Willpower (Zhishi)
  Level of BL 23 ➔ BL 52

Meridian Organ Connections
Mu Shu



- Door of Corporeal Soul (Pohu)
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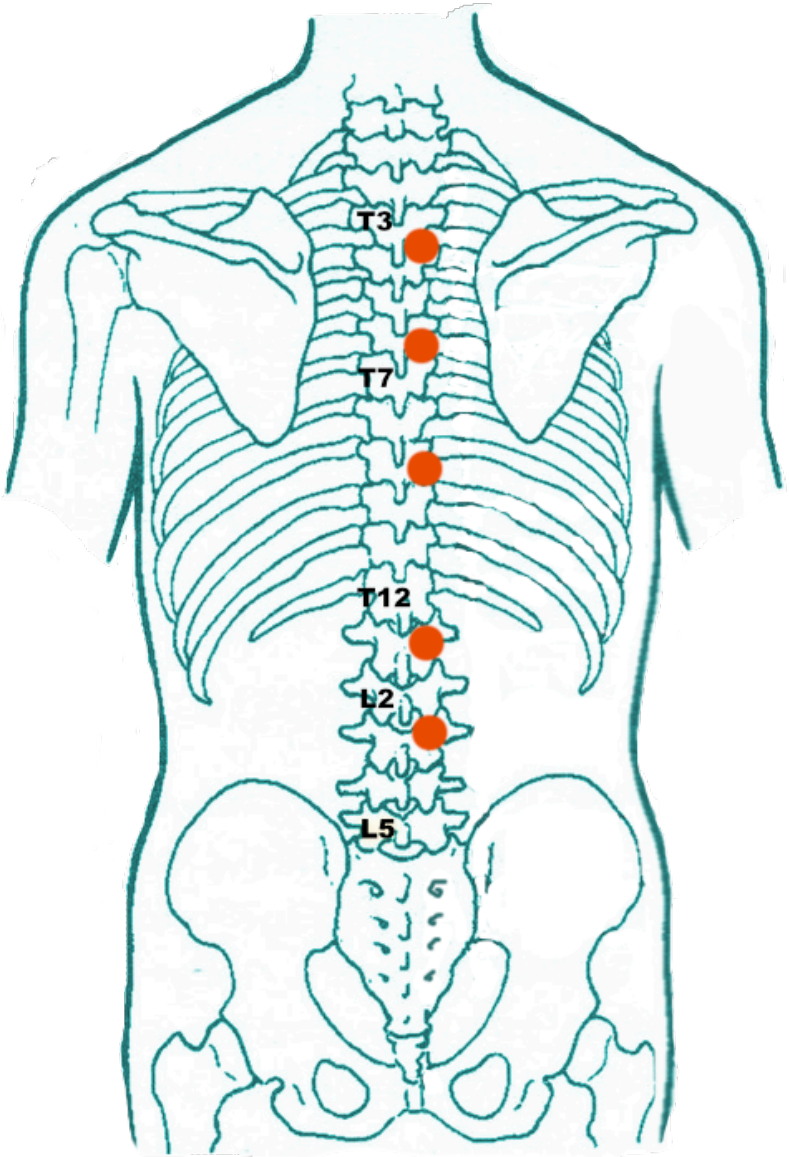
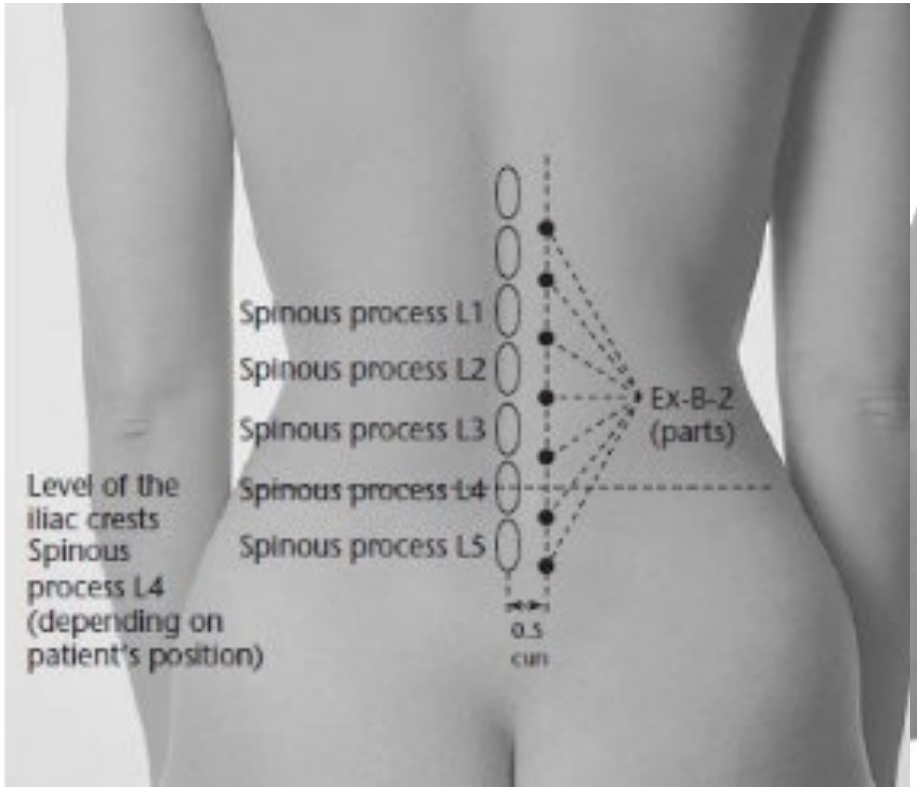
  Level with BL 16 ➔ BL 45
- Door of the Ethereal Soul (Hunmen)
  Level with BL 18 ➔ BL 47
- House of the Mind (Yishe)
  Level of BL 20 ➔ BL 49
- Room of Willpower (Zhishi)
  Level of BL 23 ➔ BL 52

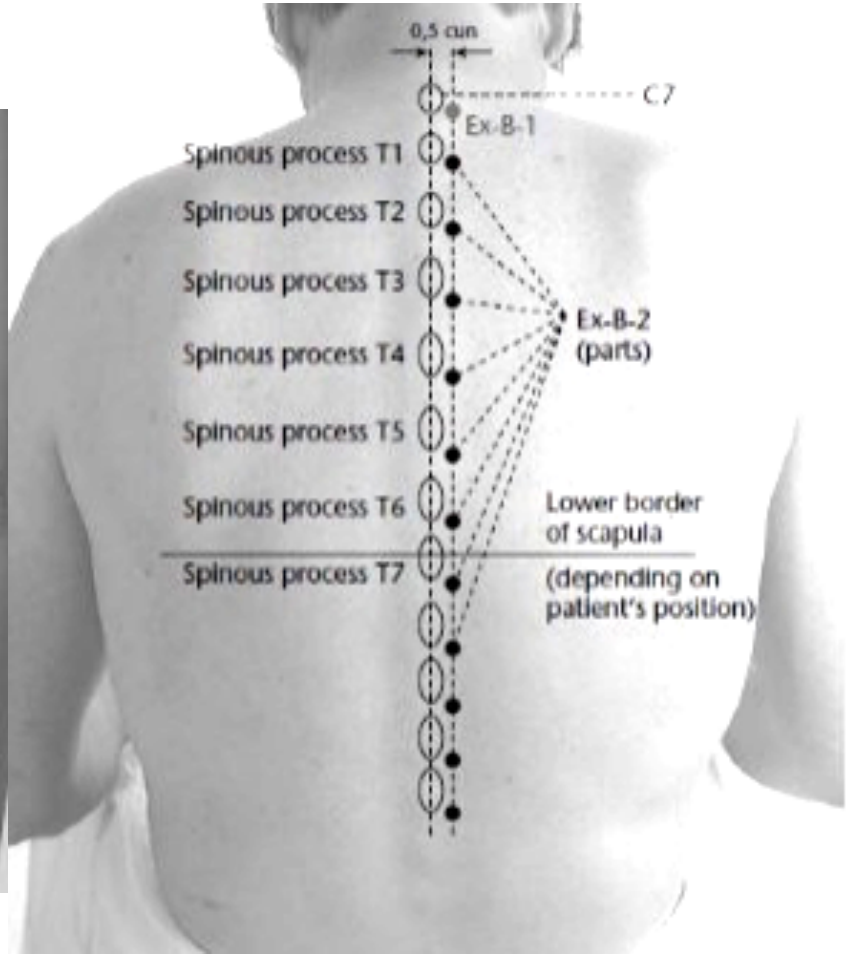
Huato Jiaji Points

- These classic points are located just ½ a cun from midline found between the Spinal processes bilateral to *Du Mai* (GV) from T1 through L5. Classically there are 17 pairs of points (34 points total) attributed to Hua Tuo.
  - Terms *jia* (lining) *ji* (spine)
- The points were discovered by the legendary physician Hua Tuo who was born in 110 A.D.
  - Used in a similar manner to the inner Bladder line Shu points
  - Strong neuroanatomical stimulation of Spinal Segments

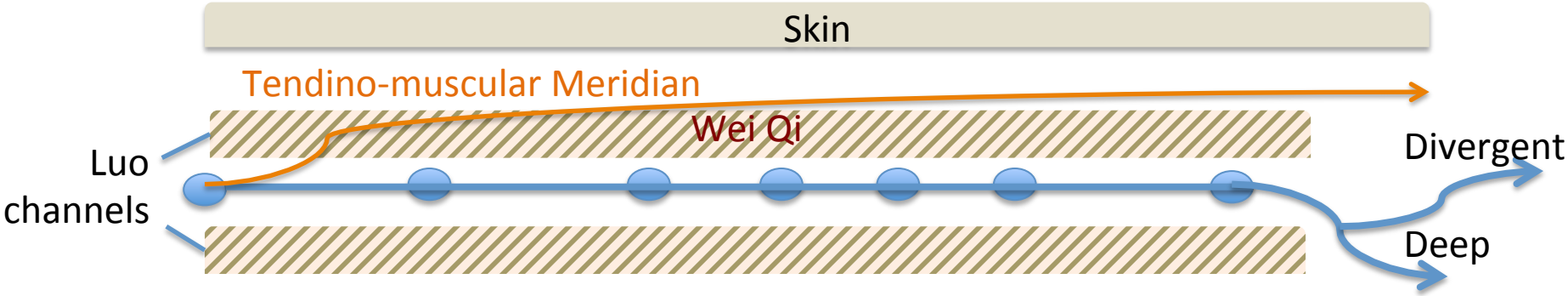


Huato Jiaji Points





5 Element Point Designation
Yang Meridians



Metal

Found at angle of nail at fingers and toes

Water

2nd point coming proximal from fingers and toes at either MCP or MTP joints

Wood

The 3rd point proximal from fingers and toes (exception GB where it is 4th point proximal)

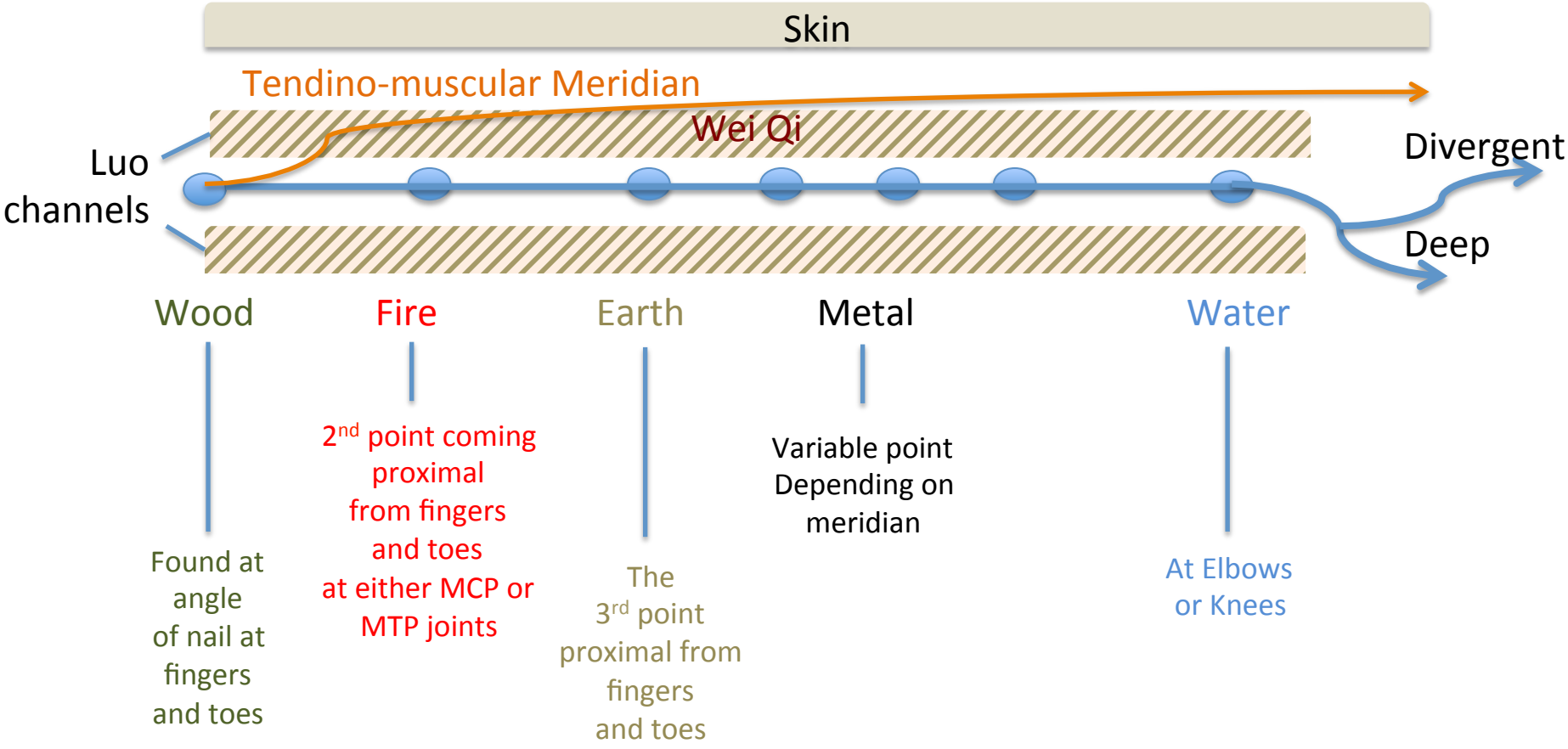
Fire

Variable point Depending on meridian

Earth

At Elbows or Knees

5 Element Point Designation
Yin Meridians



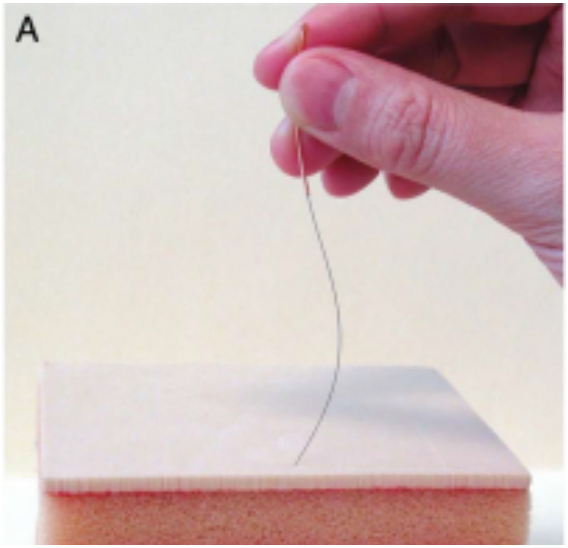
Meridian Organ Connections
Source Points

- Used to treat disease of the 12 organs
  - Connects to Yuan or Source Qi of organs
  - 5 Yin Source points most important and listed in Ling Shu as the points to treat both the Yin and Yang organs
    - Yang Source points not on points listed in Ling Shu
    - Only 5 Yin Organ Source points listed, Heart not given a Source point (use Pericardium)
    - 2 other "organs' listed felt to denote the "missing organ" that represents Fascia
    - SI associated with fascia related to Mesentery system

Yin	Source	Yang	Source
Lung	LU 9	Large Intestine	LI 4
Spleen	SP 3	Stomach	ST 42
Heart	HT 7	Small Intestine	SI 4
Kidney	KD 3	Bladder	BL 64
Pericardium	PC 7	Triple Warmer	TW 4
Liver	LV 3	Gall Bladder	GB 40
Gao	CV 15	Small Intestine?	
Huang	Umbilicus	Small Intestine?	

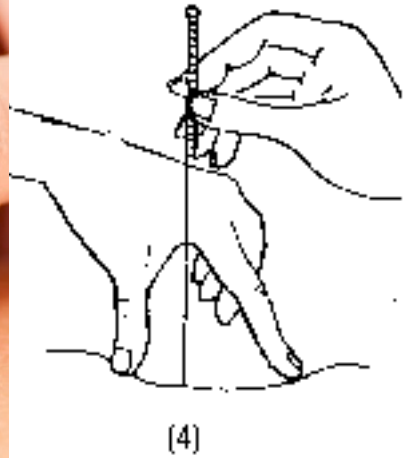
Japanese Needle Technique Basics

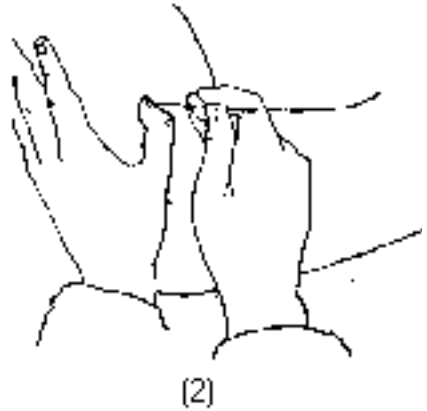
- Learn the Japanese variants of points found in Point Location Books
  - Points provide better results
  - Require less stimulation
- Insertion tubes
  - Needle diameters are small (0.16-0.25 mm) and so will tend to bend when they hit skin rather than penetrate
  - Insertion tube prevents this and helps reduce discomfort to patient



Needle Insertion

- Needle insertion methods
  - With insertion tube, keep needle from falling out by applying a light flex to handle
  - Place plastic insertion tube on desired point and apply pressure to compress cutaneous layer
  - Let go of needle to let rest on skin, then pop in with light tap on handle head
  - If not using insertion tube, to get need through skin, stretch skin with fingers of opposite hand and choke up on needle, holding junction between needle and handle





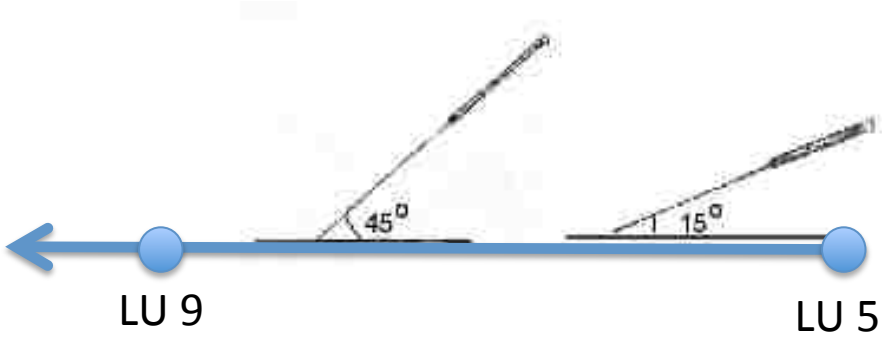
Needle lengths

- Needle should be the appropriate length and diameter for area of body
  - Face and fingers
    - 0.16 mm x 15-30 mm in length
  - Body
    - 0.18-0.20 x 15-30 mm
  - Abdomen and Gluteals
    - 0.25 x 40-50 mm
  - Typical hypodermic needle for trigger points
    - 0.40 mm = 27 Gauge

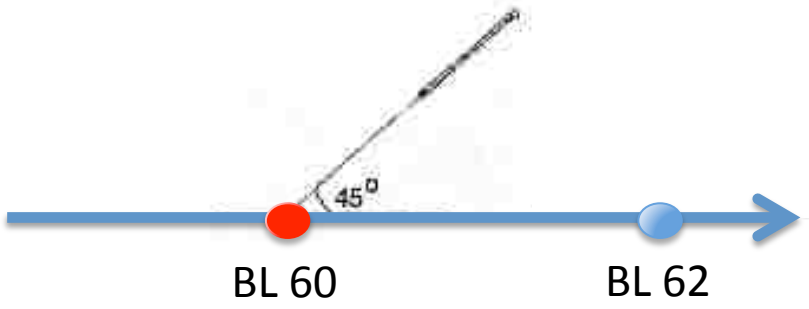
Diameter (mm)	Japanese Gauge	Gauge	Lengths (mm)	Comments
0.16	1	40	15 30	Face Fingers
0.18	2	38	15 30	Body, Ear
0.20	3	36	15 30	Body, Ear Trigger points
0.25	5	32	40 50	Abdomen Gluteal
0.30	8	30	75	Obese

Japanese Needle Technique Basics

- Most points are needled using a simple tonification method
  - Angle needle with flow of meridian to tonify
  - Depending on point 15-45° of angle relative to plane of skin is used
- Exception is when needling Fire Points which are to be dispersed
  - Angle needle against flow of meridian



Needle placed with flow of meridian



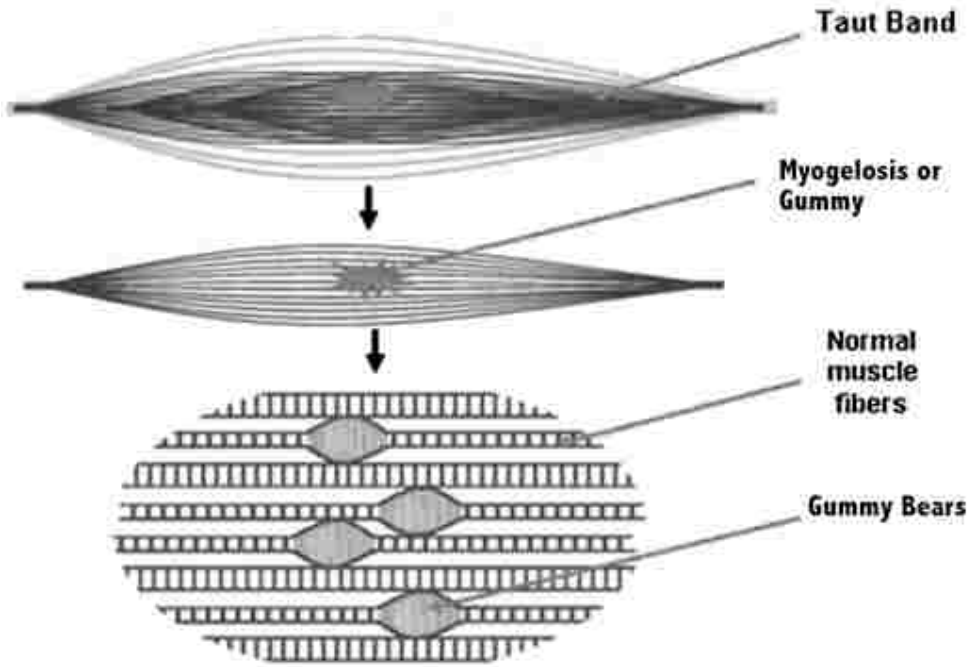
Needle placed against flow Of meridian to disperse

Japanese Needle Technique Basics

- Always test point using finger as an acupuncture needle against diagnostic reflex zone to ensure proper location
  - Point location can vary in practice from canonical or official location
  - Correct location is point that changes diagnostic reflex

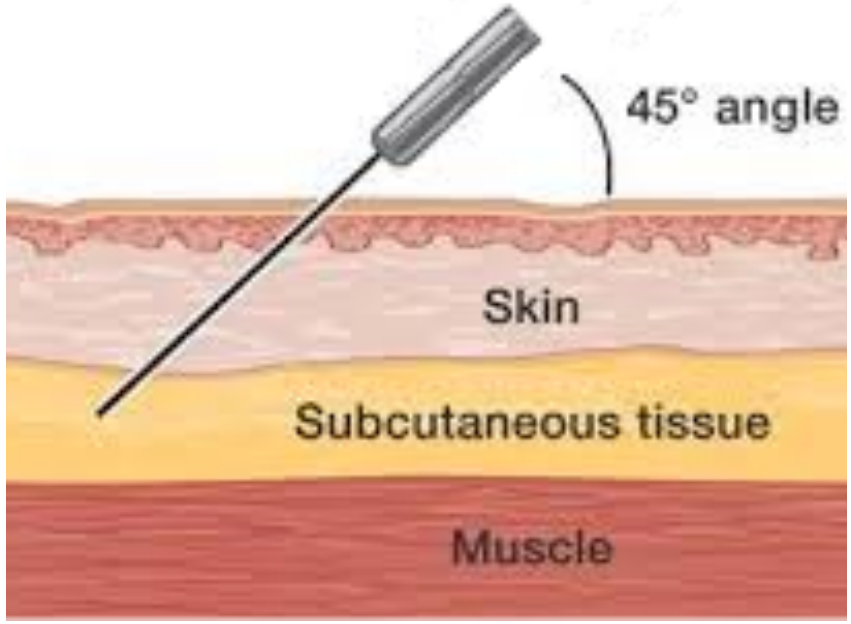
Japanese Needle Technique Basics

- Points in which the location is found by doing what we call a "gummy" hunt, i.e., looking for myogeloses in the fascia
  - needled perpendicular to the skin rather than with flow of meridian



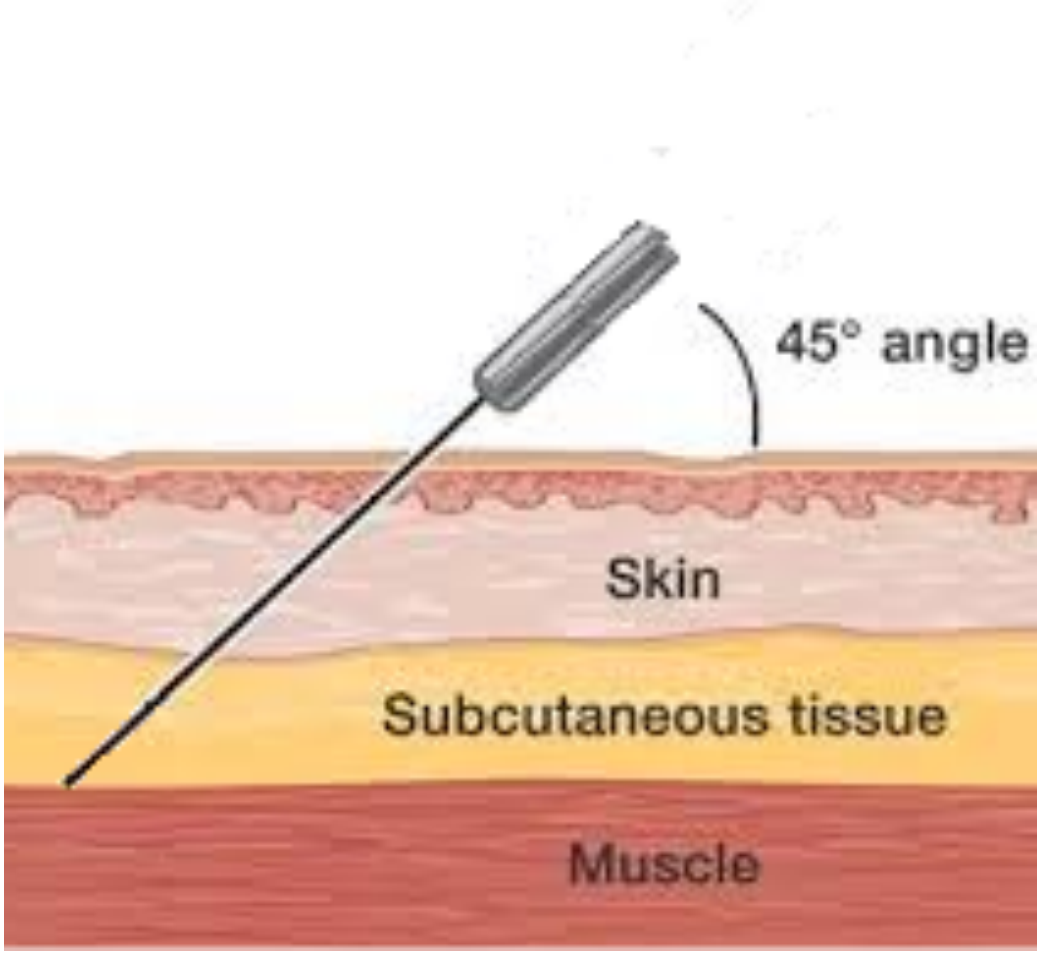
Needle Depth

- Depth is important
  - Don't want needle in
    - SKIN
    - Subcutaneous fat



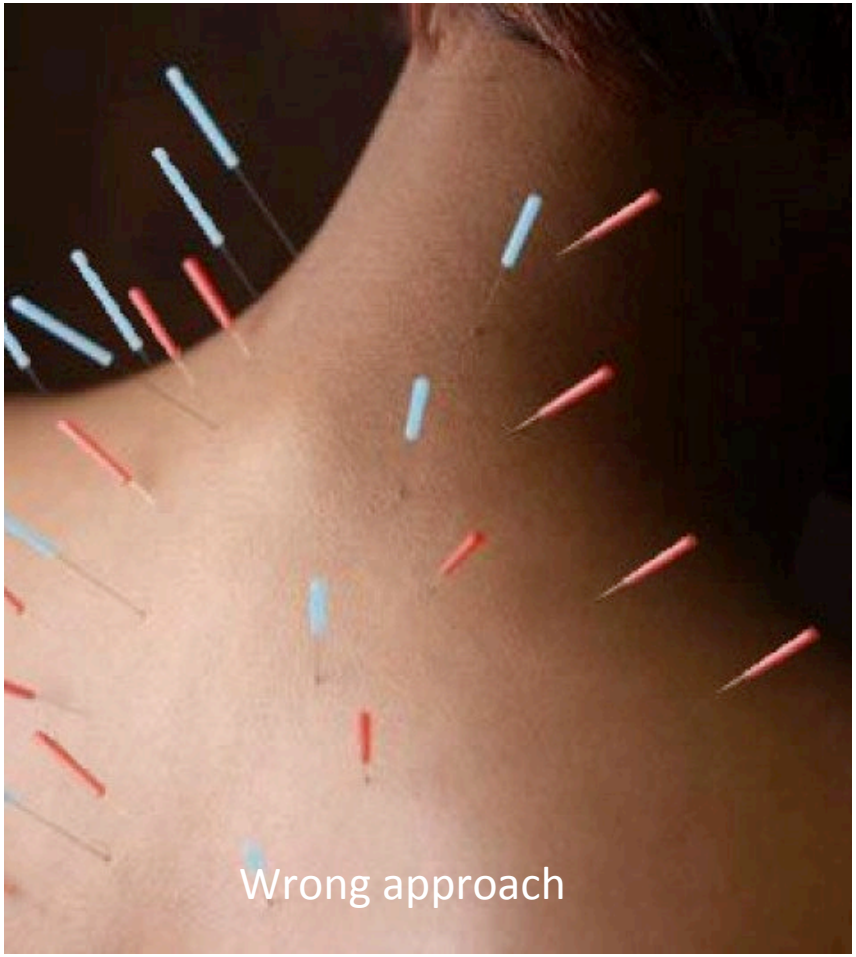
Needle Depth

- Depth is important
  - Goal is to get needle cleanly and quickly through skin into subcutaneous loose connective tissue
  - Then advance until resistance felt in superficial muscular fascia



Other Needling Methods

- Myofascial Dry Needling
  - Goal is to have you become expert at Dry Needling
  - Quick, efficient way to affect pain, alter muscle function, work on the Tendinomuscular channels and keep your patients happy

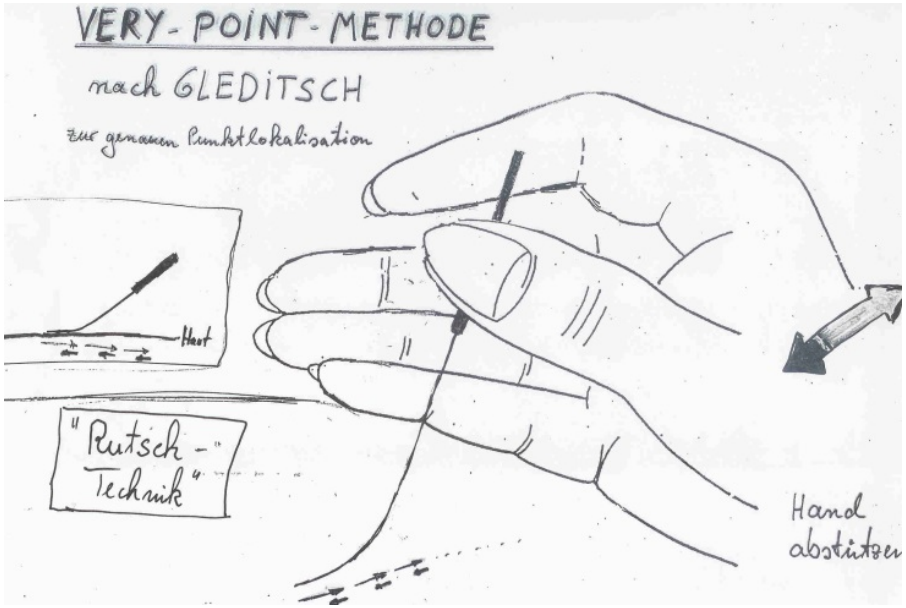


Other Needling Techniques

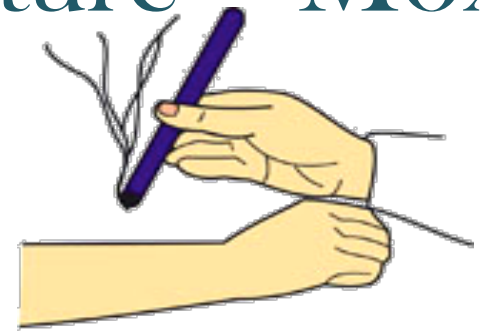
- Dry Needling
  - Should be superficial in the superficial muscular fascia
    - Goal is not to tenderize meat
  - Should be minimalistic
    - Successful treatment using Acupuncture concepts should leave the dry needling to 1-3 locations – Touch up
  - Requires practice

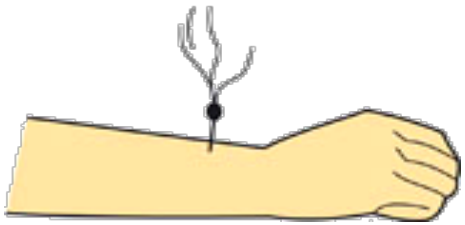
Other Needling Techniques

- The Very Point® technique
- Developed by Jochen Gleditsch, Dr.Med., D.D.S in Munich
- Dominik Irnich, Dr.Med. is chief disciple
  - The Very Point is the point that is most sensitive when sampling the region of interest
  - When Very Point touched by needle, patient invariably gives a verbal mimic "Yes" or visual mimic affirming the location
  - Needle also enters the point more easily at the Very Point, less resistance
- Effective approach to Microsystems and EOV Treatment



Acupuncture = Moxibustion





Zhen Jiu: Needling and Burning

Moxa strengthens Qi and Yang.

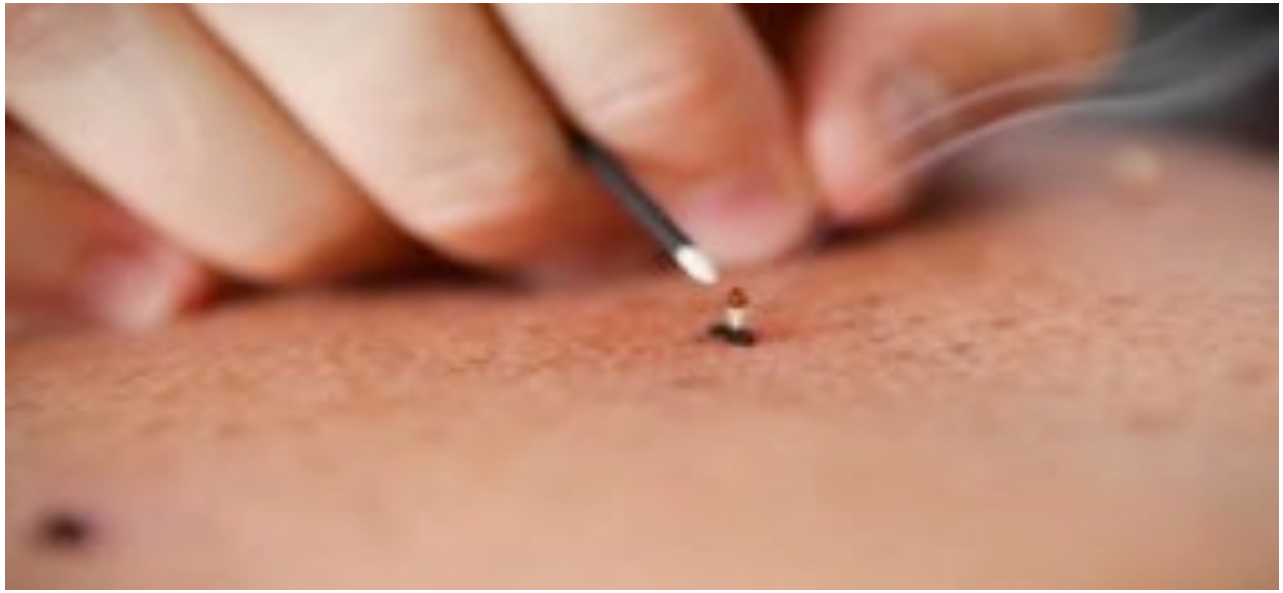
Stick Moxibustion

Moxa strengthens Qi and Yang.

Kyutoshin Moxibustion

Moxa strengthens Qi and Yang.

O'kyu (Direct) Moxibustion



Layer of Shiunko cream placed on skin to prevent burn

Moxa strengthens Qi and Yang.

Historical Cupping Methods

Cupping as a component of many traditional healing systems.

Modern Cupping

Cupping as a component of many traditional healing systems.

Suction Cupping

Cupping as a component of many traditional healing systems.

Take Home Message

- Meridians
  - Learn meridian energetic and Organ based names
  - Focus initially
    - 12 Main Meridians
    - Extraordinary Vessels (EOVs) especially CV and GV to start
  - Point Sequencing from hand and foot proximally important
    - Focus on 5 element sequencing Yin and Yang meridians
    - Yuan and Luo points
- Needling Methods
  - Japanese approach is in general tonifying
    - Angle needle with flow of meridian – Especially on Yin meridians
    - Exception is on Fire points – Needle against flow
    - Gummy hunt points (usually on Yang meridians) needle perpendicular to skin
  - Important to match needle to region of body
  - Important to test treatment point with finger to see if releases Diagnostic Reflex