Introduction to Meridians and Acupoints for Massage Therapists
### Table of Contents

Instructions.............................................................................................................................................. 3

Educational Objectives............................................................................................................................. 3

Chapter 1: Meridians and their Therapeutic Mechanisms................................................................. 4

Chapter 2: Review of Terms and Vocabulary.........................................................................................36

Chapter 3: The Meridian System...........................................................................................................55

Chapter 4: Manipulating the Meridians and Points ...........................................................................96

Chapter 5: Precautions and Contraindications ...............................................................................99

Chapter 6: Clinical trials and the Efficacy of Acupressure...............................................................101

Summary of Meridians and Acupoints for Massage Therapists.......................................................162

Course Completion: Certificate of Completion and Transcript.....................................................163

Course Evaluation and Errata..............................................................................................................164

Help and Technical Support Line......................................................................................................164

Bibliography (Sources).....................................................................................................................165
Introduction to Meridians and Acupoints

Instructions
Thanks for downloading this Somatic Arts and Sciences continuing education course. You are looking at the text version of the course, which can be printed out if you like.

Target Audience
This continuing education course has been designed to meet the educational needs of massage therapists.

Degree of Difficulty
Beginner/Entry Level

Course Description
This course is designed to offer a detailed introduction to the Meridians and Acupoints of the body in preparation for the incorporation of Shiatsu into a massage practice.

Educational Objectives
Upon completion of this home study continuing education course, the massage practitioner should be able to:

- Identify the Meridians of the body.
- Detail the functions of the Meridians.
- Correctly identify the major Acupoints to be manipulated for the treatment of specific maladies.
- Name and describe the “Four Pillars” of client assessment in Acupressure massage.
Chapter 1: Meridians and their Therapeutic Mechanisms

Acupressure, the most common form of Asian bodywork practiced by massage therapists and the focus of our Asian bodywork series is based on the ancient beliefs of traditional Chinese medicine and as such it should be practiced following traditional Chinese medical theories and principles of assessment and treatment of the client. Acupressure therapy is recognized as a useful compliment to western medicine and is receiving wider acceptance in the western medical community all the time, especially since more and more clinical studies are being documented of the results and despite the poetic names used in the practice much of Traditional Chinese Medicine can be explained by modern medical theories.

As mentioned in ABS001: Fundamentals of Traditional Chinese Medicine for Massage Therapists and the ancient medical book, The Medical Classic of the Yellow Emperor: "The qi, blood, essence and spirit in human body may circulate through meridians and spread all over the body to adjust yin and yang, nourish muscles, bones and joints and save the organism's life"; and "the 12 meridians in the body can adjust the functions of five Zang Organs (five internal organs: heart, liver, spleen, lungs and kidneys) and six Fu Organs (vital organs of the human body) to keep a harmonious coordination between the human body and surrounding environment."

In a healthy individual the meridians are a network of channels for qi and blood to circulate and spread all over the body and help to maintain homeostasis; but under pathological conditions, they may transmit pathogenic factors and pathological influence between organs and structures in the body to cause imbalance between yin and yang; disturbance and stagnation of ying (nutrients), wei (defensive energy), qi and blood and finally to cause sickness. As mentioned in ancient medical books: "If the closed 'door' or 'window' of meridians can be reopened and qi and blood may recover normal circulation, then the disease can be cured.

This “opening of the Meridians” is therefore the basis of all TCM, whether it is acupressure massage, Tai Chi exercise, herbal remedies or acupuncture-the goal is the opening of the Meridians and the regulation of qi energy in the body.

What I am going to attempt to do in this course (and it’s sequel, ABS003: Tenants of Zen Shiatsu) is to give you a road map of the basic application
of acupressure massage for the treatment of common conditions in accordance with the principle of Traditional Chinese Medicine. It is my hope that it will be both a blessing to your clients and a real and practical benefit to your massage practice.

The Basic Questions of Application
The first thing most massage students ask when learning acupressure is “How do I manipulate a Meridian? It’s not like skin you can rub or a muscle you can knead, so how do I work it?”

That is a really good question and it deserves to be answered right away. The first thing to remember is that the Meridians of the body are well established and are the natural paths of energy-so most of the work is already done for you. I find this a useful analogy:

You are not digging a canal to move water from one place to another-you are just removing the debris blocking the canal that is already there, which is of course much easier. The water wants to go through the canal; it just needs your help removing the blockage.

So you as the massage therapist do not have to worry about “moving the energy” through the body, it’s already moving on its own and it knows which way to go, the only thing you need to do is find the area that it is most likely blocked and apply some manipulations with your hands—which is really not difficult at all.

Knowing where to work
Generally speaking the next question that is asked by the massage therapist and aspiring Shiatsuician is “How do I know where to work to remove the blockage?”

That is another great question and that is really what this course is all about.

There are literally thousands of years of TCM manuals published on the subject of the individual Meridians. Over these millennia of study the TCM practitioners have developed a system of maps that show where there are points to work along each Meridian to remove blockages. The symptoms of the client tell you which Meridian is not flowing properly, and they have
even narrowed it down so much that they know which of these individual points to manipulate to relieve the symptoms of different conditions.

The way you work these individual points is by using your hand, thumb or fingers (or a tool) to apply pressure, vibrating, knocking, patting, grasping, kneading, push-rubbing and rolling maneuvers to stimulate the flow.

It works much the same way as blood flow in the body. As a massage therapist you know that if you press your finger down on a clients skin several things are happening: If the pressure is light it will draw blood to the area through the stimulation of the nerves and dilation of the capillaries, if the pressure is heavy it will block the flow of blood to the area until the pressure is released, and then the blood that was blocked will rush in to fill the capillaries you were smashing with your heavy pressure.

So does qi flow through the body with ebbs and waves, responding to the pressure a therapist applies to the body at specific points.

After the acupoints are stimulated by finger-pressing, the Meridianal qi can be activated, the blockage of meridian can be relieved, the circulation of qi and blood can be promoted, the balance between ying, wei, qi and blood can be restored and the functions of internal organs can be adjusted and integrated.

The actual manipulations, the finger pressure, vibrating, knocking, patting, grasping, kneading, push-rubbing and rolling maneuvers are the easy part—they are really no different from what you have learned in western massage school.

According to modern western medicine, acupressure is able to relieve pain, discomfort and muscular tension and induce relaxation because it adjusts the functioning of the central nervous system, improves blood circulation and focuses the restorative cellular material towards the area that is being worked on by means of the increased blood flow to the region, the same way a Swedish or Classical massage would do so. To the student of TCM we layer on top of that a belief that something else is happening as well, in addition to the physiological affects common to all massage, we believe that we are also relieving Meridian blockages, promoting circulation of qi, adjusting yin and yang imbalance, restoring vital
energy, expelling external evils, postponing the aging process and prolonging life span

Time and the Application of Acupressure Therapy
If you have already taken our course *ABS001: Fundamentals of Traditional Chinese Medicine for Massage Therapists* you have already been introduced to the Meridian Clock. If you haven’t than it is basically a belief that qi (energy) flows through the body in a pattern that correlates with the time of day.
Western Correlation to the Meridian Clock Concept
Many massage therapists trained in the western tradition have a difficult
time with the concept of the Meridian clock. After all, “When is it not a good
time for a massage, am I right?”

In TCM the Meridian clock suggests that energy (qi) moves through our
body at certain points at certain times of the day, and as such there are
certain times that are more conducive to the results you are trying to
achieve. If this sounds like unscientific hokum you might want to consider
that the Meridian Clock is a very close parallel to the
Circadian Rhythm, a well established and undisputed physiological
process of the body that is scientifically linked to the time of day.
If you are not familiar with the Circadian clock here is a brief overview:

The Circadian Rhythm is, for lack of a better term, our “biological clock”
which is not to be confused with the term that women use to refer to their
window of fertility closing. The circadian clock is a biochemical mechanism
that oscillates with a period of 24 hours and is coordinated with the day-
night cycle. The Circadian clock is the central mechanisms, which drive
circadian rhythms. They consist of three major components:

1. A central oscillator with a period of about 24 hours that keeps time

2. A series of input pathways to this central oscillator to allow
entrainment of the clock

3. A series of output pathways tied to distinct phases of the oscillator
that regulate overt rhythms in biochemistry, physiology, and behavior
throughout an organism.
As you can see from the diagram above, we humans have developed in a world that operates on a 24-hour cycle. The activities of all animals on the planet are tied to this cycle in some way, and we are no exception.

So if you think you can stay up all night reading this brilliantly written and engaging continuing education course and not feel the effects the next day, you are very much mistaken (about not feeling the effects, not about this course being brilliantly written—because it totally is).

The sleep-wake cycle consists of approximately 8 hours of sleep and 16 hours of wakefulness in healthy adults and is controlled by two internal factors: circadian rhythms and sleep homeostasis.

The circadian rhythms are triggered to respond primarily to light and darkness in our environment. Light acts on photosensitive ganglion cells in the retina that send signals directly to the suprachiasmatic nucleus (SCN).

---

1 This diagram “The Body Clock Guide to Better Health” by Michael Smolensky and Lynne Lamberg; Henry Holt and Company, Publishers (2000). Landscape was sampled from Open Clip Art Library (Ryan, Public domain). Vitruvian Man and the clock were sampled from Image:Human body.svg (GNU licence) and Image:Nuvola apps clock.png, respectively.

This is one of the reasons why we have such a hard time adjusting when we travel to distant time zones and why people in Alaska go bananas during periods of extended sunlight.\(^3\)

This is so important to our bodies natural rhythm that NASA is working on lights for the international space station that simulates natural day time and night time lighting to help the astronauts function.\(^4\)

So when you look at the diagram of the western model of the Circadian Rhythm on the preceding page you see that there are times of day when your body is naturally more alert, when it secrets melatonin (needed for sleep), and even what part of the morning you are most likely to have a bowel movement (and you thought it was the coffee, didn’t you?)

It’s not a coincidence that the time western medicine says you are most likely to have a bowel movement is just a little after the time in the Meridian clock when qi energy moves through the intestines. Remember, the concepts of TCM are based on the observation of nature-they didn’t just make this stuff up. They observed that everyone goes to the bathroom around the same time, and included that information in their view of the body and the Meridian system.

So for best possible results acupressure therapy is applied at the acupoints of the Meridians, at the best time for the Meridian to be active.

Does this mean that you can only massage people at certain times? No of course not, but it does mean that if you are treating a client for a certain condition you might get a better result if you massage them at a time that correlates to the appropriate Meridian.

**How to Learn and Practice Acupressure Therapy**
The most difficult part of learning and mastering acupressure therapy is learning the different points acupoints and which ones are specifically good for treating which conditions.

\(^3\) More daylight can mean less sleep for many Alaskans March 17, 2010by Lori Tipton http://articles.ktuu.com/2010-03-17/circadian-rhythm_24128484

\(^4\) Nasa to test space-sleep colour-changing lights http://www.bbc.co.uk/news/technology-20753888
Acupressure therapy practitioners do best if they are healthy themselves, have strong arms and hands (not usually a problem for us massage therapists).

If you plan on using the acupressure therapy contained in our Asian Bodywork series in your practice you will want to prepare yourself by committing the Meridians and acupoints to memory, which generally means going beyond what is required to pass this course (it is open book, after all).

Before an Acupressure Session
Before beginning an acupressure treatment make sure that you have conducted a careful and throughout assessment of the client using the standard procedures for any clinical massage.

Assessment and Intake Procedures
There are three important steps that should be taken prior to treating any new client and those are:

1. Informed consent must be obtained.
2. Intake forms/medical questionnaire must be completed.
3. Verbal summation of intake and informed consent.

1. Obtaining informed consent before starting the session
Informed consent is the process by which the treating health care provider discloses appropriate information to a competent patient so that the patient may make a voluntary choice to accept or refuse treatment. It originates from the legal and ethical right the patient has to direct what happens to her body and from the ethical duty of the physician to involve the patient in her health care.

An informed consent agreement for massage therapists provides an opportunity for you to convey in writing what the client should expect from a massage therapy session with you. It also states the limitations of what the client should expect. The information enables the client to choose whether or not to receive the services you provide, and acts as a safeguard in the event liability issues arise during or after the service is provided.

---

Elements of full informed consent
The most important goal of informed consent is that the client has an opportunity to make an informed decision about whether or not they wish to receive a massage treatment.

An informed consent should include:
- A description of your style of massage, modality and techniques. In this case you may have to explain how acupressure differs from other forms of massage they are used to.
- The benefits, limitations and contraindications of massage.
- Possible outcomes that can be expected (but not guaranteed).
- The process of disrobing and draping, and how their modesty is protected during the session.
- A short description of your credentials and areas of expertise.
- An overview of your scope of practice, detailing what you can and cannot do based on your credentials.
- A statement assuring the client that you will maintain confidentiality and privacy.
- A list of session duration and fees, unless they are posted elsewhere on the premises.
- Any special policies for cancellations and late arrivals.
- If you offer insurance reimbursement programs.
- Any collaborative relations with other health professionals.

2. Intake forms/medical questionnaire must be completed.
The informed consent form is often used in conjunction with the client intake form, and is only completed by the client on his or her first visit. In the client intake form, the client provides information regarding his or her health history. This is of course an important tool when it comes time to perform the client assessment.
Proper intake procedures are a vital and often overlooked element of a successful massage practice. We all have days where we are busy, and client appointments are stacked closely together, leaving us little to time to get to know a first time client.

A good intake and assessment is too important to let slip through the cracks. The use of a standardized intake form can help you keep safe from potentially dangerous clients by establishing clear boundaries before the session even starts.

A well crafted intake form will not only identify the areas of tension and/or pain the client is experiencing, but it can also serve to ease the anxieties of a nervous client by spelling out clearly and concisely why is going to take place.

An intake form that uses a body map and pain scale can give both the therapist and client a starting point for a dialogue about the clients needs and what they hope to accomplish in the upcoming treatment session. While indispensable for new clients, a good intake form can and should be used with existing clients at least quarterly. This will help you stay current with their medical condition as well as their contact information.

What to include in the intake form
At a minimum, your massage therapy intake form should include the following elements:

**Contact Information**
You need to collect the name, address, phone number, and e-mail address of your client so that you can follow up with them after the session.

Don’t neglect to ask them their date of birth. This is useful for more than just age verification, a clever massage therapist will keep track of their clients birthdays and will mail or email them a coupon for their birthday to show them that you value them as a customer.

Of course if you are in a medically oriented massage practice that bills insurance companies you would also need their date of birth for that as well.
A Brief Medical History And Questionnaire
This doesn’t need to be as long as those that are filled out in a doctor’s office, but as a minimum you should be asking your clients to disclose if they have any allergies (especially to nut-based products and oils), recent surgeries they may have undergone, cardiovascular conditions, especially those that involve blood clotting complications.

You will also want them to list any medical conditions for which they are currently receiving medical care, any infectious diseases they may have recently had and a catchall category of “any medical condition that you think may be impacted by massage therapy”.

Remember, your clients aren’t necessarily going to know if they have a condition that contraindicates massage, but if you leave it open they are more likely to volunteer information so that you can make a better decision about their care.

A Note regarding medical questionnaires
Have you ever noticed that many doctors office questionnaires have a “Yes” or “No” box listed next to questions like “Have you ever been diagnosed with varicose veins?” instead of a simple check box where the patient can put a check in the box next to the condition?

A friend of mine that is a doctor once share with me that many doctors prefer medical questionnaires that ask “Yes” or “No” for each condition because many clients will skip over check boxes, mostly because they are in a hurry and they don’t want to read carefully.

If the option is to just put an X in the box if you have the condition, how do you as a practitioner know that they didn’t just miss or skip the question?

If the questionnaire asks them to please mark “yes” or “no” there should be no blank boxes-and if there are you should need to ask them about each one during the intake assessment.

Additional TCM Questions
In addition to the standard medical questionnaire used by massage therapists in the western tradition, Acupressure practitioners use a parallel assessment system based on the concepts of TCM. The assessment interview in TCM includes discriminating patterns of disharmony, or what is
commonly referred to as the **syndrome complexes**. The goal here is to discriminate patterns of imbalance.

Traditionally, TCM examination is divided into four parts, commonly referred to as the “**Four Pillars**” these are questioning the client, observing the client, palpating the client, and auscultation & olfaction. Let’s look at these in more detail.

**Questioning the Client: The First Pillar**
It is not uncommon for practitioners of Asian bodywork to include questions about the person’s emotional state, eating habits, overall happiness, and other questions you don’t usually see on a classical massage questionnaire.

That is because the TCM view of the body is holistic, and many practitioners want to be able to find correlations between things like food cravings, anxieties or mood swings, etc. As you will see when we get into the specifics of the different Meridians, many things, such as taste and emotions, are affected by energy imbalances. In TCM this is called **pattern discrimination**. This is an important part of assessment and treatment. Like treatments in the western style of massage therapy it is **symptom based**. For example, in the western model of massage therapy, if a client tells you that they get frequent headaches and in your intake period you learn that they have a stressful office job where they sit behind a desk and type on a computer all day you make a deduction based on the symptoms, addressing the issues that you believe might be the cause of their headaches, for example, stress can be causing them tension in the muscles of the neck, scalp and jaw, and there may be some ergonomic factors involved as well with the way they are sitting at their desk and typing.

These allow you to make a symptom-based treatment plan by correlating the data you received in your intake assessment.

In TCM the process is the same, the only difference is that we are looking not just at the surface level symptoms, but also at deeper physiological characteristics and emotional states in order to divine what is going on with their energy paths.
Much of the questions we ask relate to the five-element system and the primary functions of the organs. Therefore proper understanding of the functions of the internal organs and the Five Element characteristics is crucial to assessment.

In TCM, there are ten basic questions that lead to one hundred more specific questions. Here are the main classic questions in TCM assessment:

**Energy Level**
Ask your client how they would describe their overall energy level. If they describe their overall energy level as low that indicates a deficiency of qi.

If their energy level is lower at the end of the day this would indicate a Yin deficiency. Of course this excludes just being tired after a day of work, we are talking about their overall energy level.

If they tell you that they feel their energy is low in the morning this would indicate a Yang deficiency. Keep in mind that people who work at night or stay up late/have trouble sleeping will naturally have a lower energy level in the morning, but again we are looking for a regular pattern of sluggishness or lethargy in the morning.

If the client is constantly tired throughout the day, this indicates overall qi deficiency.

If your client describes their overall energy level as being excessive, such as hyperactivity, this can be a result of an excess of Yang heat, excess interior heat, or excess Yang qi rising.

**Resting Body Temperature**
This refers to their body temperature as they are doing their assessment with you. We do not expect you to take out a thermometer and take their temperature, not only is that not necessary, but the use of such diagnostic measuring instruments is actually outside of the scope of practice of massage therapists. What we are referring to is simply asking your client “How would you describe your body temperature right now?”

If they report that they feel hot for no apparent reason (if it’s summer and hot outside and they just came in for you appointment they have a reason
for being hot-use common sense in collecting data) that could be a sign that they have an invasion of pathogenic heat.

If they report that they have chills or are cold and there is no apparent reason for it this could indicate an invasion of pathogenic cold.

Chills without a fever indicates an exterior syndrome of wind/cold or wind/heat. These will have divergent symptoms:

Wind/Cold symptoms would include severe chills with mild fever, no sweating, general body aches, headache, and a slow pulse.

Wind/Heat symptoms would include mild chills with severe fever, sweats, excess thirst, and a rapid pulse.

A fever that is without chills and having an aversion to heat is due to excess heat in the interior. The symptoms would include profuse sweating, a severe thirst, and a rapid pulse.

According to the theory of Yin and Yang a fever at night is generally caused by a Yin deficiency.

If your client reports that they have chills without a fever this indicates interior cold syndromes. Symptoms of this include looking cold (pale skin, bluish tinge to the lips or visible trembling), cold hands or feet, and a weak pulse.

If your client states that they have alternating chills and fever, this indicates what is called an intermediate syndrome. Other symptoms of an intermediate syndrome might include a bitter taste in the mouth, thirst, and a sensation of fullness in the chest.

**Perspiration**

The presence or absence of perspiration can be an indicator of a condition in TCM. Keep in mind that when we speak of absence of perspiration we do not mean that a normal healthy person should be sitting around sweating all of the time. Absence or presence of perspiration in this context refers to relation with other symptoms. Use the common sense rule, like we used in the example of general body temperature. If it’s hot outside when they come in it would be normal for them to be perspiring a
little. If it is hot outside and they are not perspiring when it would be natural for them to be, that might be a sign worth noting.

Absence of perspiration in exterior syndromes could indicate invasion of pathogenic cold.

The presence of perspiration in exterior syndromes indicate invasion of wind or heat or both wind/heat.

Night sweats that stop when the person wakes up indicates a Yin deficiency with hyperactivity of Yang heat.

Frequent perspiration in general that increases with any activity represents a deficiency of qi and Yang qi specifically.

If the client has profuse perspiration that is accompanied with high fever, mental restlessness, a thirst for cold drinks, and a rapid pulse indicates excess heat from excess Yang heat.

**Appetite**

One of the questions we ask is about their appetite; naturally this refers to generality, not specific to the moment. In other words, we wouldn’t ask them “Are you hungry right now?” but instead we would say something like “How would you describe your appetite in general? Are you hungry often or only once in a while?”

The reason why we ask about appetite is that a poor appetite is symptomatic of a weakness in Spleen and Stomach qi. This may accompany other signs, like a prolonged illness, loose stools, lassitude, a pale tongue, or a thin white coating on the tongue.

If a poor appetite is also accompanied with a feeling of fullness in the chest or abdominal, or a thick and sticky coated tongue indicates these signs indicate a stagnation of qi of the Spleen and Stomach caused by food retention or stagnation of dampness.

If your client tells you that they have a large appetite this could indicate an excess of Stomach heat or fire. If they report feeling “hungry all the time, but nothing sounds good to eat” this is a common sign of Yin deficiency causing internal heat.
**Tastes**

One of the questions we ask is about tastes, which are helpful in understanding the quality of the digestive system as well as whether a person has an underlying cold/deficiency syndrome or a heat/excess one. The relationship of tastes to certain conditions are drawn from the five-element theory.

An excess of heat in the Liver or the Heart will produce a bitter taste in the client’s mouth. In the case of Liver fire, the bitter taste is intermittent (it comes and goes). In the case of Heart fire the bitter taste is often present in the morning, especially after a sleepless night and Heart fire is almost always accompanied with insomnia or difficulty sleeping.

The presence of a sweet taste indicates Spleen Qi deficiency and / or damp / heat, and the presence of sour tastes indicates food retention in the Stomach or lack of harmony between the Liver and Stomach. The presence of sweet and sour pork means you are in a Chinese restaurant. That last one was just a joke to make sure you are still awake.

The presence of a salty taste is representative of a Kidney Yin deficiency.

A lack of taste sensation completely is caused by Spleen qi deficiency.

A pungent taste is caused by imbalances in the Lung, usually Lung heat.

**Vomit**

If your client reports that they have been recently sick with vomiting they could be suffering from a condition resulting from internal heat. In TCM even the quality of the vomit is important, if it was sour it was the result of Liver insulting the Stomach, if it was bitter it was the result of Liver and Gall Bladder heat.

Vomiting that occurs after eating is usually a result of heat pathogenic factor.

**Thirst**

Like appetite, questions about thirst are helpful in understanding the quality of the digestive system and are helpful in determining if your client has an underlying cold/deficiency syndrome or a heat/excess one.
If your client has no desire for fluids at all this is a sign of excess cold, while a desire for small amounts of hot liquids can indicate a yang deficiency. A craving for large amounts of water is a rather obvious sign of excess heat, and if they have a dry mouth and crave a little water this could be a sign of depleted yin.

If your client tells you that they are thirsty all the time but often feel nausea after drinking that is a clear indication of a dampness evil.

If they have a complete lack of thirst this could indicate a cold syndrome.

**Stools**
Yes no question is too gross for TCM, we ask about their bowel movements. If your client is constipated it is generally due to excess heat or excess usage of body fluids.

Loose stools generally indicate deficiency of Spleen or dampness invading the Spleen

Watery stools with undigested foods usually means a deficiency of Yang of the Spleen and the Kidney.

Bloody stools with mucous is usually a result of damp heat in the Intestines and stagnation of qi in the Intestines.

**Urination**
Asking questions about urine provides important indications about the functioning of the Kidneys and the digestive system. Weak kidneys, for example, are often related to lower back and knee pain in TCM.

Dark color urine usually indicates heat syndromes, and clear and abundant amounts of urine usually indicates cold or an absence of heat.

If the urine is cloudy or opaque it is an indication of damp heat. Large amounts of urine could indicate weak Kidney qi and a small volume of very yellow urine with accompanied urgency and painful urination usually indicated damp heat in the Bladder.
Sleep
TCM has long recognized the importance of sleep, and we at the Somatic Arts and Sciences Institute have a course dedicated to treating Sleep Disorders with Massage Therapy.

In TCM good sleep is dependent upon a healthy balance of yin and yang. If yin and blood are deficient, yang will be out of control. Yang is fire and activity and is kept within normal ranges by cool and calm yin. When yin is deficient, it can’t control yang, and too much heat and activity results, producing such symptoms as restlessness and insomnia.

If your client has a deficiency of qi or yang and experiences an overabundance of yin this can cause fatigue and excessive daytime sleepiness. If they have difficulty falling asleep but then sleeps soundly once they get to sleep it could be due to a deficiency of heart blood. Frequent waking during the night can be a sign of deficient heart yin.

Insomnia that is accompanied by a bitter taste in the mouth and angry dreams or fitful sleep is associated with liver fire, while sleeplessness due to irritability and erotic dreams can be the result of heat due to kidney yin deficiency.

Insomnia accompanied with dizziness and heart palpitations is usually caused by the inability of the blood to nourish the Heart and the Spleen.

A person who wakes up easily, is forgetful, and experiences heart palpitations can have a pattern of insufficient heart blood and spleen qi.

Dizziness
Dizziness is usually a symptom of deficiency of qi, blood deficiency, fire, wind or phlegm.

Headaches
In TCM the head is the convergence point of all the Yang pathways. The qi of all the Zang and Fu flow toward the head. If any of the external pathogenic evils attack the head or neck and damages the yang pathways, or if qi and blood stagnates as a result of internal diseases, the head and brain lack nourishment and a headache is the result.
A headache that is of recent onset and short duration is usually a result of wind cold, and those with gradual onset are usually of interior etiology.

Headaches in the daytime are often a result of qi deficiency or Yang deficiency, and naturally headaches in the evening are usually caused by blood deficiency or Yin deficiency.

Headaches originating at the nape of the neck are often caused by Kidney qi deficiency or invasion of wind / cold.

Headaches originating in the forehead are typically caused by Blood deficiency or Stomach heat.

Headaches originating in the temple region are often a result of invasion of wind / heat, wind / cold, or from interior Liver and Gall Bladder Fire rising.

Headaches originating on the top of the head (the crown) are usually a result of Liver blood deficiency.

If the headache encompasses the entire head it is usually a result of invasion of wind / cold.

A headache accompanied by a heavy feeling is often a result of either phlegm or dampness.

A headache that feels like the pain is inside the head is usually a result of Kidney qi deficiency.

And lastly headaches with a throbbing, pounding quality are usually a result of Liver Yang rising, as opposed to a dull, achy head which is a result of blood stagnation.

Pain in the back
If your client tells you that they are experiencing a continuous dull pain in the lower back it is usually a result of a Kidney qi deficiency.

Pain with stiffness of a sudden onset is typically a result of blood stagnation.
Pain that is aggravated by cold and damp weather and is comforted by heat is generally caused by a pathogenic cold and dampness invading the back.

A dull achy pain is usually a result of blood stagnation.

Pain in the shoulders and upper back is usually a result of exterior conditions – wind / cold, wind / heat, etc.

**Pain in the Joints**
Pain in the joints that radiates from joint to joint is usually a result of Wind, and pain that specific to one joint is usually caused by an invasion of Cold. Stationary joint pain that includes swelling and numbness is usually a result of invasion of dampness.

**Numbness**
In TCM arm and leg numbness, or hand and feet numbness is usually a result of blood deficiency. Numbness of fingers, elbows, and arm is generally believed to be a result of Wind and Phlegm.

Thorax and Abdomen Pain
Pain may arise in the thorax (chest) and abdomen from physical conditions involving the heart, lungs, digestive system and liver. In TCM pain can also arise in these areas due to psycho-emotional issues, which is why we ask questions about the persons emotional state.

The thorax is under the direct influence of the Lung and Heart Zang. The sides of the body are mainly influenced by the Liver Zang and the Gall Bladder Fu.

The abdomen is influenced by the Liver, Spleen, Intestines, Kidney, and Bladder.

Pain in the chest is generally a result of Blood stagnation in the Heart that is caused by Yang deficiency.

Chest pain along with a productive yellow cough is usually a result of Lung heat.

Abdominal distension (swelling) is usually a result of Liver qi stagnation.
Pain in the Epigastric region is often a result of either food retention in the Stomach or Stomach heat. If the Epigastric pain is described as a dull ache and is not severe it is usually a result of Stomach cold deficiency.

**Ears**
In TCM most ear conditions are a indicative of the condition of the Kidneys because the Kidney Meridian opens to the ear. All the Lesser Yang pathways flow to the ear and therefore external pathogenesis of these pathways such as Heat, Dampness, and Phlegm can affect the ear.

A sudden onset of Tinnitus (ringing in the ear) is usually a condition of Liver-Fire or Liver-Wind. A gradual onset of Tinnitus may indicate a deficiency of Kidneys.

If your client reports that they hear a loud high pitch noise it is usually a condition of Liver Yang rising, Liver Fire, or Liver Wind. Conversely a low pitch noise is usually a condition of Kidney qi deficiency

**Eyes**
Pain in the eyes is usually a condition of Liver because of the relationship to the opening of that Meridian path.

**General Aches or Pains of the entire body**
If your client reports a rapid, sudden onset of pain all over there body that is accompanied by chills and fever it is usually a result of Wind / Cold.

Pain that I felt all over and is accompanied by tiredness is usually a result of blood deficiency.

Pain that is in al the muscles and is accompanied by a hot sensation is usually a result of Stomach Heat.

Pain all over that occurs alongside a sensation of heaviness is usually a result of Invasion of dampness in the muscles.

**Observing the Client: The Second Pillar**
In western massage therapy we are taught to make objective observational notes (remember the “O” in SOAP notes?), in other words, to make a note
of what we observe when we are working on the client. The same is true in TCM, but it is a little more detailed.

In Acupressure the practitioner gathers information by the observation of changes in the client’s body, generally by observing the face, specifically, the eyes, the mouth and the face. Before you tell your client to “stick out their tongue and say “Ahhh” let me just say that a mindful practitioner can do this without them even noticing.

**Observation of the Face**

Unlike western medicine, TCM views the face as an important indicator of what is going on inside the person. Impairment of the organs or Meridians can often be seen in the face, by virtue of certain indicators like complexion, texture, or moisture or coloration.

The color of the facial region will be lustrous in a person with ample qi and blood flow. If their complexion is deep in color and withered, this indicates a serious disease condition with damage to the qi and essence, and a difficult treatment with poor prognosis.

Pallid complexion (pale) is the sign of a qi and blood deficiency. A pale complexion indicates a yin excess with yang deficiency. This can be further narrowed down if the paleness is also accompanied by swelling, which would indicate a qi deficiency.

If your client’s face is pale and appears emaciated (thin-sunken in) this indicates a blood deficiency. And the sudden onset of a pale complexion accompanied by a cold sweat is the sign of sudden prostration of yang qi due to febrile diseases caused by exogenous pathogenic wind-cold.

A jaundiced or yellowish complexion is an indicator of spleen deficiency and accumulation of damp. A facial complexion that is yellowish, withered and lusterless indicates a qi deficiency of the spleen and stomach. In traditional Chinese medicine a bright orange yellow is diagnosed as yang jaundice caused by pathogenic damp-heat; dark yellow in yin jaundice due to pathogenic cold-damp.

Redness of the face that is not related to physical exertion may indicate full blood vessels as a result of excessive heat. A red complexion is generally due to the fever of a common cold, or may be a heat syndrome due to
excessive yang in the zang-fu organs. Remember that fevers of all kinds contraindicate massage—so if your client looks unusually flushed without cause ask them if they are feeling warm. If you suspect a fever, reschedule their appointment.

A bluish tint to the skin indicates syndromes of cold, pain, and blood stagnation or convulsion, and is the manifestation of qi and blood obstruction in the channels. Pathogenic cold causes stagnation of qi and blood leading to pain.

An unusually dark complexion may indicate kidney deficiency, and stagnation of qi and blood. If the complexion is as really dark it is mostly due to an extreme weakness of kidney yang and cold accumulation manifesting as xu-cold syndromes. If it is accompanied by a dark gray color around the eyes this indicates phlegm-humor syndrome due to the kidney deficiency. A dark gray complexion indicates prolonged stagnation of blood such as a consumptive disease with blood deficiency accompanied by menoplasia or amenia.

**Observation of the Eyes**

As I stated earlier, the Liver opens and controls the eyes. In TCM it is believed that all the organs reflect in the eyes, much like the western belief that the eyes are the windows to the soul. This belief in the western tradition goes all the way back to the Bible:

> “The eye is the lamp of the body. If your eyes are healthy, your whole body will be full of light. But if your eyes are unhealthy, your whole body will be full of darkness. If then the light within you is darkness, how great is that darkness! Matthew 6:22-23

This ancient wisdom from both the east and the west is backed up by medical science. Western physicians are taught to look for things like Scleral Icterus, which is a jaundicing of the white of the eye. This yellowing of the eyes, sclera icterus, is frequently a sign of liver damage or liver disease.

They are also taught to look for Xanthelasma palpebra⁶, which are tiny yellow bumps on the eyelids. Believe it or not, these are a warning sign of

---

high cholesterol. Because high cholesterol frequently accompanies fat accumulation in the liver, xanthelasma palpebra could be a warning of the easily missed, very common, and potentially dangerous condition known as fatty liver disease.

While dry eyes can have many different etiologies, all have a common denominator in Traditional Chinese Medicine (TCM).

In TCM dry eyes, fatigue, blurry vision, floaters in the eye and poor night vision are all symptoms of liver blood deficiency, an imbalance that has the potential to hinder optimal liver function.

**Observation of the Tongue**
Now this is where it gets a little awkward for us massage therapists. Remember where I said your not going to tell your client to stick out their tongue and say “ah”? Well forget I said that. If your going to be serious about incorporating TCM into your massage practice you need to know that The tongue is a map of the internal organs.

In TCM the tongue can be divided into three sections:

The Upper Burner- Which consists of the Heart and Lung Meridians.

The Middle Burner- Which consists of the Liver, Spleen, Gall Bladder, and Stomach.

The Lower Burner- Which consists of the Kidneys, Bladder, and Intestines.

The reason why this is important is because changes in a section of the tongue link to a certain organs and Meridian systems. This is similar to the idea in reflexology that different areas of the feet and hand are linked to organs.

If the tip of the tongue is red it indicates Heart dysfunction, specifically heat in the Heart. If there is white coating present only in the back of the tongue this indicates a dysfunction in the Kidneys, possibly qi deficiency of the

_________________________
Kidneys. The Acupressure practitioner memorizes specific patterns of disease and the location of the organs in the tongue to use it as a viable assessment tool, that is if your client doesn’t think you are weird for wanting to see their tongue!

If it makes you feel any better, a client that is familiar at all with TCM, including acupuncture or Herbal treatment will be quite at ease showing their massage therapist their tongue, it’s an important factor in TCM pathology. The TCM practitioner evaluates the clients tongue color, shape, and coating regularly, and they do it for the same reason that western doctors do it.

What the tongue can tell you:

**Tongue Proper**

A pale tongue indicates deficient and cold syndromes or symptoms due to yang qi deficiency and insufficiency of qi and blood. In western medicine doctors are taught that a pale, smooth appearance, anemia is a frequent diagnosis. Pale appearance develops because anemic blood is deficient in iron and doesn’t carry enough oxygen to the mouth to keep the mouth tissues in the pink. As the anemia is treated, the tissues—including the tongue—will again take on their healthy color.

A red tongue indicates heat syndromes, mostly excess types of disease caused by interior heat, or symptoms of fire preponderance due to yin deficiency.

A deep red color may indicate excessive heat which could be caused by disease due to invasion of exogenous pathogenic heat which as been transmitted from the exterior to the interior of the body. It also can be seen in miscellaneous diseases due to an excess of fire caused by yin deficiency, or seen in diseases of accumulated fire in the liver channel.

A purplish tongue shows the syndrome of blood stagnation. A tongue with purplish spots or petechiae also indicates blood stagnation.

A flabby or swollen looking tongue body with teeth marks on the side and that is pale in color indicates a yang deficiency of the spleen and kidney leading to accumulation and obstruction of phlegm-dampness. A flabby
tongue that is a deep red color might possible indicate excessive pathogenic heat attacking the heart and spleen.

If the tongue looks disproportionately small or thin compared to the mouth it’s in TCM recognizes this as an indication of a consumption and deficiency of blood and yin. If the thin and small tongue is also pale in color this denotes a deficiency of both qi and blood. A thin dry tongue with a deep red color is an indicator of excessive fire and great exhaustion of body fluids.

A rigid tongue is seen in febrile diseases due to the invasion of exogenous pathogenic heat transmitted into the pericardium or due to an obstruction of pathogenic phlegm. It may also be seen in high fever leading to consumption of body fluids and preponderance of pathogenic heat. It is a prodrome of wind-stroke (cerebral stroke).

A deviated (crooked) tongue is a prodrome of wind-stroke.

A dry and cracked tongue with deep red color indicates excessive heat. A cracked pale tongue indicates insufficiency of yin and blood.

*If the tongue is coated there is generally a reason for it, possibly pathogenic factors such as damp, phlegm or food accumulation occur and cause obstruction, they further affect the spleen and stomach leading to the ascent of turbid qi and forming of a thick tongue coating.*

*A white thin tongue coating is caused by nonsubstantial pathogenic factors such as wind, heat, dryness, or cold attack the body. It can also be caused when the body is weak during the disease development.*

The normal tongue coating is moist, which indicates that the person has a healthy level of hydration. If the tongue coating is dry, it is due to body fluids failing to moisten the tongue, which itself can mean pathogenic heat is consuming the body fluid. A slippery or greasy tongue coating may be due to pathogenic damp-humor floating over the tongue surface.

A sticky tongue coating is due to hyperactivity of endogenous pathogenic phlegm and damp rising to the tongue. It is typically seen in diseases caused by pathogenic damp-heat or phlegm-humor.
In TCM changes in the tongue coating indicate fluctuation in the disease condition. If the practitioner notices no tongue coating, then one suddenly appears on the next visit a week later, this indicates a perverse flow of stomach qi, or excessive pathogenic heat. If the practitioner sees a tongue coating in one session, which then disappears abruptly, this indicates stomach yin fluid has decreased. If the texture changes noticeably between visits, like a thick coating turning into a thin white coating, this indicates that pathogenic qi is being gradually weakened, and the disease condition is becoming milder.

**Palpating the client: the Third Pillar**

This is an assessment method that should be familiar to you as a massage therapist. We are used to gathering information about Our clients by laying hands on them, we know that we can determine areas of tension and stress by tissue density and can feel heat and swelling in injured areas. Many massage therapists are highly intuitive, able to “read” a persons body by touching them and then zoning in on their areas of stress without being told where they are. While this might seem mystical it isn’t (sorry I know I am a buzz kill), it’s a tremendous testimony to the awesome power of our nervous system.

The palms of our hands, fingertips and the soles of our feet have more nerve endings per square inch than almost any other part of our body (the only parts with more are off limits in massage therapy). They are highly complex sensory input mechanisms designed to soak up information about what we touch-and that includes people. This is discussed in more detail in ABS003: Tenets of Zen Shiatsu, but in short let me just say that our hands can pick up information that isn’t always registering with our conscious minds.

In TCM bodywork the practitioner is trained to pay attention to everything they feel when they touch the person.

Generally, if the client feels warm to the touch it could be indicative of excessive pathogenic heat in the body. Yang qi deficiency is manifested by has a cold body surface on palpation. If the surface feels warm on first palpation becoming slightly hotter when you palpate longer, this indicates that the pathogenic heat has proceeded from the exterior to the interior of the body.
If the skin is moist and smooth it means that the body fluids are healthy and apportioned correctly. If the skin feels dry it indicated a consumption of the fluids of the body.

Coldness of the hands and feet is often due to yang deficiency and excessive pathogenic cold. An overheating of the four extremities (if their hands or feet feel hot or sweaty in the massage room) this indicates excessive heat. Coldness of these extremities with heat in the chest and abdomen is seen as a sign of the retention of internal heat preventing the flow of yang qi outward.

In TCM body workers will frequently begin a session with a palpation of the abdomen. They feel for things like skin temperature, tension, and pressure tolerance.

If the client’s abdomen feels full or distended it may be due to an accumulation of excessive pathogenic factors. In these instances it is not unusual for the TCM bodyworker to “thump” lightly on the abdomen and listen for the sound it makes (see auscultation, below). If the sound is

Palpation of the abdomen showing abdominal distention with a Tympanic (drum-like) sound indicates air filled structures, and in TCM this is usually a result of indicates qi tympanites.

If hand pressure relieves the abdominal pain, it is considered to be a xu type; if the pain is made worse by pressure, it is a shi type. Immovable hard masses in the abdomen with pain fixed in a certain area are due to blood stasis. However, if the client feels that lumps sometimes appear and disappear with unfixed pain, and palpation of the abdomen shows they do not exist, then this is due to qi stagnation.

**Auscultation & Olfaction: The Fourth Pillar**

Some information can be gathered from listening to the speech and respiration. If the speech is loud and robust, it indicates excess. If the voice is weak and timid, it indicates weakness and deficiencies. Weak breathing is indicative of deficient Qi. Forceful breathing indicates presence of excess heat.
Any foul odor usually indicated the presence of heat. This can be seen in the case of body odor. A foul and sour odor can be caused by food retention. Metal smells are commonly seen in Lung impairment.

**Session Goals**
This section of the form asks your client to clearly state what they expect to get out of the massage therapy appointment. This may be simple relaxation, but if could be relief from pain, increased mobility or any number of other purported benefits of massage they have heard about.

This is important for you because it gives you a better chance of making them a satisfied customer, by zeroing in on exactly what they hoped to get out of the session, and it also helps to prevent dissatisfied customers by alerting you to unrealistic expectations ahead of time.

If your client indicates their goal for the massage is something that you do not feel is realistically attainable from your practice (like weight loss, curing diabetes, realigning their zodiac, whatever). If this is the case, you have an ethical responsibility to explain the limitations of bodywork in regards to their expectations.

**Disclaimers and Other Policy Information**
The bottom of the intake form is usually reserved for a general disclaimer that informs the client that the practitioner is not a doctor and will not diagnose illness or prescribe medicine. This is also a good place for a disclaimer regarding inappropriate sexual conduct and cancellation policies, especially in regards to prepaid appointments.

**3. Verbal summation of informed consent and intake Information**
After your client has signed the informed consent and has completed the intake form and medical questionnaire the practitioner needs to take a moment to read over it briefly and ask the client some follow up questions.

This is a crucial step and is often missed by busy practitioners. Even when therapists take the time to have their clients fill out the intake form, some of them think they are so busy they don’t even bother to look at it, much less ask the client any follow up questions.

When reviewing the intake form please remember this should be done in private. Many day spas, resorts and even massage clinics have their
clients fill out their intake forms in a waiting area (which is fine) but the appropriate place to review the information with the client is in a treatment room, not in a waiting room. Any discussion or questions about the medical questionnaire or intake form are of a private nature and are inappropriate for a waiting room.

The first thing you should always ask your client when reviewing the intake documentation is “Do you have any questions?”

If they do not voice any questions or concerns you should address any medical condition that is indicated on the form.

Naturally if the client checked “yes” to any condition that could possibly contraindicate massage you should ask further questions to ascertain whether this is a medical contraindication (allowable if approved by a physician and appropriately monitored) or an absolute contraindication.

If they failed to mark either “Yes” or “No” for any medical condition you should ask them why, do not just assume they do not have the condition if they failed to mark anything.

**Clarifying their goals and intentions**

If your intake form includes a body map your client may indicate a particular area that they want you to focus on. You should take an opportunity to ask them to describe what they are feeling in this area, is it pain or tightness? If it’s pain, what type of pain (burning, aching, etc) and is it stationary or does the pain radiate.

If there is pain, be sure to ask them if they have any suspicions as to the cause. It might take a little extra time to go through the medical questionnaire with your client, but they will be grateful for the extra time you took to clarify their needs.

If the client is just there to get a relaxing massage to unwind from stress, as is often the case, this process will go even quicker.

**Don’t forget to verbalize the disclaimers and policies**

You can’t just assume that your client read and took the legal disclaimer seriously. Many clients will either skip over the legal disclaimers without
reading them or will simply assume that it’s something you are required to put on the form and that it doesn’t really apply to them.

The best way to deal with it is to simply summarize the disclaimers and policies in a conversational tone. You can point at the legal disclaimers and policies section on the form and say something like “Did you see this party down here where it says that I am not a doctor and will not give you any medical advice or diagnose any conditions and that any inappropriate behavior will result in the client being asked to leave?”

Usually they will just nod or say that they did read it and that’s enough to cover your bases. Once they hear you reiterate the policies out loud they will know that you mean business and it will help you keep everything on a professional level.

**Orientating the client to the Acupressure Massage**

There are two very big differences in an Acupressure Massage from the point of view of the client:

1) The Massage is typically done over the clothes with little or no lubricant product.
2) The Massage is typically done on a floor mat, as opposed to a massage table.

Both of these things vary depending on the individual practitioner. If you are more comfortable working on a massage table there is no reason why Acupressure cannot be done that way—it’s just easier on a floor mat and that is how it is traditionally taught.

If you are planning on “blending” eastern and western techniques, a very common approach, you may have your client prepare as they would for any Swedish massage, you would just have to make sure that when you incorporate the elements of Acupressure you are not losing any benefit of pressure due to lubricating products, and of course, that you do not slip.

Like other forms of massage, the rules for contraindications still apply, meaning Acupressure or Shiatsu is not recommended for certain people such as those with the following conditions:

- Infectious skin disease, rash, or open wounds
✓ Immediately after surgery
✓ Immediately after chemotherapy or radiation, unless specifically recommended by their doctor
✓ A medical condition that makes them prone to blood clots.

People with osteoporosis should consult their doctor before having Acupressure, although it is generally safer for them than other forms of massage.

Acupressure should not be done directly over bruises, inflamed skin, unhealed wounds, tumors, abdominal hernia, or areas of recent fractures.

Before the application of acupressure therapy, the fingernails of the massage practitioner should be cut short to avoid any injury to the clients skin. Even if you have somehow become accustomed to performing a Swedish massage with fingernails that extend beyond the point of the finger, the angle of pressure in Acupressure makes scratches and punctures more likely.
Chapter 2: Review of Terms and Vocabulary

A-shi Point
We massage therapists know that it is instinctive for people to rub or press on an area that hurts, we do it without even thinking about it. For example, when one has a headache, one usually puts their hand up to the forehead. Or if one has sinus problems, one usually puts two thumbs pressing up against the inside of the eyebrows to bring relief.

More than 5,000 years ago the Chinese observed this phenomenon and deduced a way to relieve some pain and discomfort through formalizing this instinctive touching. What was once man’s instinctive nature to relieve his own pain eventually developed into local acupressure “ashi” points.

Ashi points are the points of pain or tenderness on the body, they are not “magic spots” that make pain go away if you press on them or put a needle in them, they are just areas on the skin that are sensitive to bioelectrical impulses in the body.

Stimulating these sensitive points stimulates the release of endorphins or neurochemicals and inhibits pain signals sent to the brain. Acupuncture and acupressure both operate under this concept, that by stimulating these points you can reduce tension, enabling the body to relax deeply, and strengthen the body’s resistance to disease and promotes wellness. It is also believed to help circulation by enabling the muscle fibers to elongate and relax which helps the blood flow freely and the toxins to be released and eliminated. This brings more oxygen and other nutrients to the affected areas.

This is an area that is not necessarily based on the meridians of the qi but is instead the location or site of the symptom, in other words, where it actually hurts.

Acupoint Injection
Or “water needling”, this is a procedure that involves introduction of a herbal solution directly into an acupuncture point. This is injected with the use of the needle. Obviously this is outside of the scope of practice for massage therapists, I have included the definition only so you can be familiar with it, should you find yourself working in a facility that practice the full spectrum of TCM.
Acupoint
According to traditional Chinese medicine there are about 361 important pressure points or acupoints along the meridians. These are the sites through which the vital energy of organs and meridians normally flow through the body. Stimulating these points, as is done in a Acupressure massage, is believed to have therapeutic effects.

Acupressure
Acupressure is a type of somatic therapy where the practitioner applies pressure with the fingers to specific acupoints on the body. It is generally believed to provide therapeutic benefits and used for relaxation and wellness. This is the basic form of massage therapy in TCM and we will be exploring the basic concepts in this course. It is explored in much more detail in my course Tenets of Zen Shiatsu.

Acupuncture
I’m sure you already know that Acupuncture is the practice of inserting extremely thin needles into strategic locations in the body to balance of flow of qi or life force. Acupuncture is believed to stimulate nerves, muscles and connective tissues hence boosting the body’s immune system. Obviously this is outside of the scope of practice for massage therapists, I have included the definition only so you can be familiar with it, should you find yourself working in a facility that practice the full spectrum of TCM.

Aromatic stomachic
These are herbs that are aromatic and promote digestion by moving dampness.

Assistant Herbs
In the traditional practice of Chinese herbology, assistant herbs are used in different herbal combinations to help the primary herb (called the monarch) and to mitigate it’s toxicity. This course doesn’t focus much on the role of herbology since it is, other than Aromatherapy applications, beyond our scope of practice, but it is important for you to know the process of how they work.

Bi Syndrome
In acupuncture this is a term used to refer to a blockage or obstruction in the meridians, organs or extremities. The result of these blockages are
usually manifested as pain, swelling of the tendons and joints, numbness and heaviness of muscles or limitation of movements of the joints.

**Bladder**
In TCM the bladder is not just an organ, it is also an important meridian, or energy channel. It is responsible for storing and excreting urine. It is said that an imbalance in the bladder can lead to urinary problems.

**Blood**
In TCM, blood is a broadly used term. Blood nourishes the body: complements the nourishing action of Ying qi. As a denser form of qi, it flows with the (Ying) qi in the vessels and channels all over the body. It moistens the muscles, tissues, skin and hair, as well as nourishing the cells and organs and it is also seen as the fluid inside the blood vessels that provide nutrition for the cells and organs and keeping the body moist.

**Blood deficiency**
In TCM this a lack of blood with signs of anemia, dizziness, dry skin or hair, scant or absent menstruation, fatigue, pale skin and poor memory.

**Calmative**
Has a sedative or calming effect on the mind and the nerves

**Chinese Medicinal Diet**
One of the elements of TCM is diet; and this in particular refers to a specially prepared meal plan made from Chinese herbs, food and condiments for the symptoms of the disease that was diagnosed. A Chinese medicinal diet is a functional diet that is used to prevent and treat diseases, improve fitness, and can also slow down the aging process.

**Cold**
In TCM this is a descriptive term that refers to a decreased functioning of an organ system and is usually manifested in symptoms like: body aches, chills, poor circulation, fatigue, lack of appetite, loose stools or diarrhea, poor digestion, pain in the joints, slow movements and speech, aversion to cold and craving for heat. In western medicine you would assign all "hypo" conditions such as hypoadrenalism, hypoglycemia and hypothyroidism to this category.
**Cupping**
This is a practice of applying a series of bell or cup-shaped vessels upside down over strategic points on the skin to create a vacuum and create a stimulating effect. They can also be “dragged” once the vacuum has been established to create a lifting stretch of the tissues.

**Damp, dampness**
In TCM this is a descriptive term for conditions that create a build up of excessive fluids in the body with symptoms like abdominal bloating, loss of appetite, nausea, vomiting, lack of thirst, feeling of heaviness or being sluggish, and stiff, aching or sore joints.

**Dampness Evil**
When you see the word “Evil” in TCM it is usually referring to a pathogen. In this case, it is a pathogen affecting the yin. Symptoms of having the dampness evil in the body include sluggishness, tiredness, heavy limbs, sticky and turbid bodily discharges and a sticky coat on the tongue.

**Damp Heat**
This refers to a condition of dampness and heat combined with symptoms of thick yellow secretions and phlegm such as jaundice, hepatitis, urinary problems, or eczema.

**Decoction**
This is the act of combining and cooking medicinal herbs to create a brew or a soup for a specific illness or condition. It also refers to the combination of herbs, which is cooked or brewed to make a soup or medicinal tea. While this is very interesting I am not going to be covering it in this course because it is not massage related, but it is part of TCM so you should know what it is.

**Deficiency**
This is a generic term for any weakness or insufficiency of qi, blood, yin, yang or essence.

**Deficiency heat**
This is heat due to yin deficiency. It results in weakness and emaciation because of the lack of moistening fluids (yin) in the body.
Diuretic
This is a substance that rids the body of excess fluid

Dry / Dryness
This is a descriptive term in TCM used to refer to symptoms like dry hair, lips, mouth, nose, skin and throat, extreme thirst and constipation.

Eight Principles
These are four sets of factors used by TCM practitioners to assess a person's health. Represented by internal/external, cold/heat, excess/deficiency, and yin/yang (they should all be in balance with their counterpart). We will be discussing those in more detail later.

Eight Therapies
These are the common therapeutic methods performed by trained TCM practitioners. The methods are: diaphoretic (dispersion of pathogens from the body's surface); Emetic (expelling toxic substances via the mouth); Purgative (relieving the bowels); Regulating (building the body's resistance to pathogens by controlling body functions); Warming (eliminating cold and boosting yang); Heat-Removing (diminishing fever and quenching bodily thirst); Tonifying (nourishing and boosting qi or life energy); and Resolving (elimination of accumulated and stagnated qi, blood, phlegm, retained food and fluids that have hardened into lumps).

Empty Heat
This is a deficiency of yin energy resulting in symptoms such as hot flashes, mood swings, night sweats and other changes in hormonal levels. Also known as empty fire

Essence
This is a fluid substance that provides the basis of reproduction, growth, sexual power, conception and pregnancy. It is the material foundation of qi and is stored in the kidney. Also referred to as Jing

Excess
In TCM this generally refers to too much heat, cold, damp, yin or yang

Excess yang
This is similar to excess heat with symptoms of rapid pulse, hypertension, aggressive actions, loud voice, high fever, red complexion or restlessness
Excess yin
This is an imbalance of excessive fluids in the body with symptoms of fluid retention, a plump or swollen appearance, lethargy and overall signs of dampness - although those with excess yin may still have adequate energy levels.

External
This refers to the location of illnesses such as fevers and skin lesions or sores on the surface of the body.

Energy Tonic
Or known as “qi tonic,” they influence the spleen functions and help the body increase its vitality for the body to function optimally. Not to be confused with stimulants, the energy tonic is believed to enhance the absorption of nutrients in the gastrointestinal system so that energy and blood circulates freely within the body.

Enuresis
Commonly referred to as “bed wetting,” in Chinese medicine, this is attributed to kidney-qi failure, or a primordial energy deficiency.

Epimedium
This is a common herb used in Chinese medicine to relieve stress and fatigue. It has been used by Chinese folk healers to strengthen the yang element in the body and boost qi. The leaves are believed to be potent aphrodisiac and are also used for the alcoholic beverage “Spring Wine.” The western scientific name for it is Epimedium brevicornum Maxim;

Exogenous Evils
Called “Lao Shang” in Chinese, this refers to the six natural weather factors that are not harmful under normal conditions but become toxic to the human body when in excess or there is an imbalance in the yin and yang elements inside the body. The six climates involved are: wind, cold, summer-heat, dampness, dryness and fire.

Fire and Heat Evils
These refer to the pathogenic effect to the yang element in the body, producing heat-related symptoms such as fevers, inflammation, skin eruptions, dry skin, brittle hair and constipation.
Fire
Fire is one of the five elements, and we will be discussing it in detail later. It results from malfunction of the internal organs or from extreme mood swings. Symptoms include fever, red or bloodshot eyes, swelling, sore throat and flushed face. May also include dry mouth, bleeding or inflammed gums, and a desire for cold drinks

Five Elements
The five energies of wood, earth, metal, water and fire which exist in nature. Each transforms and controls one another to maintain a harmonious balance. Five Elements theory is integral part of TCM-see below.

Five Elements Theory
A fundamental principle used by Chinese medicine practitioners to explain the relationship between the natural world and the body. The basis of Traditional Chinese medicine as known in the modern world, this theory asserts that all substance and matter in the universe are correlated and interact naturally to one another. The five essential elements of Wood, Fire, Earth, Metal and Water have corresponding effects on climatic seasons of Spring, Summer, Late Summer, Autumn and Winter, as well as body parts and organs such as the Liver, Heart, Lungs, Kidney, Stomach, Intestines, Bladder and so on. There is an organized relationship in all the elements in nature and the body, and the practice of TCM is to restore and maintain the harmony among all the five elements.

We will be discussing it in more detail later in this course.

Five Zang Organs
Also referred to as the “yin” organs, these are the liver, heart, spleen, lung and kidneys. Their primary roles are to produce, regulate and store essential qi, blood and other bodily fluids.

Flush Channel
Or the “thoroughfare vessel,” this is an acupuncture point that is where the 12 normal meridians in the body converge.
**Gall Bladder Meridian**
The Leg Shao Yang Gall Bladder Meridian starts out from the outer corner of the eye. Afterwards it splits into two paths – one runs at the exterior, weaving back and forth at the back of the head and then curves by the ear to trail down the top of the shoulder, the lateral side of the rib cage and abdomen and ends at the side of the hip. Another path goes into the cheek and trails down internally – down to the neck, chest, gall bladder – and then comes out to the lower abdomen to connect with the other trail at the hip before it snakes down to the lateral side of the thigh, the lower leg, crossing over the ankle and lands on the tip of the fourth toe. This meridian is used in acupuncture for conditions of the eyes, ear, throat, as well as mental illnesses.

**Gecko**
Used in Chinese herbology, the Gecko lizard is widely found in southern China. It is believed that the tail and the backbone of the Gecko are good ingredients for a warming Yang tonic. It is also said to boost the strength and endurance among athletes and is said to provide sexual energy. Don’t worry, I won’t be recommending you do anything with lizard parts in this course, it just makes a nice bit of cultural flavor.

**Ginseng**
Also known as the “king of herbs” it is one of the most valued and most commonly used Chinese herbs. It is believed to help strengthen the immune system, regulate metabolism and help combat stress and fatigue.

**Glossy Pivet Fruit**
A sweet and bitter fruit found in several provinces in China that is believed to have therapeutic actions on the liver and kidney meridians. The western scientific name is Fructus Ligustri Lucidi.

**Governor Vessel Meridian**
Running along the end of the spinal column up until the head, this is referred to as the “Sea of the Yang Meridians” because this is where all the Yang meridians meet and it controls the qi flow in all the Yang meridian points in the body. We discuss Meridians in exhaustive detail in Introduction to Meridians and Acupoints, the second course in the Asian bodywork series.
Guide Herbs
In an herbal combination, the guide herbs act to direct the herb’s active ingredient to reach the target meridian. It also provides a buffer effect on the other herbs in the mixture.

Healthy Energy
Also referred to as “genuine qi”, “vital energy,” “vital essence” or “vitality qi”. This refers to the proper and natural functioning of all the elements of the body according to the climate and seasons.

Heart Energy
In TCM, the heart organ is not only related to cardiovascular functions but also to mental and “spirit” activities. Deficiency in heart energy leads to palpitations, shortness of breath, pale face, fatigue and general weakness.

Heart Meridian
Also known as the Arm Shao Yin Heart Meridian and is one of the twelve major meridians of the body. The Heart Meridian actually starts from the heart and then splits of into three branches. The first goes down to the small intestine. The second one travels up along the throat to the eyes. And the third goes under the arm and runs along the inner side of the forearm, elbow and upper arm, crossing to the inner side of the wrist and palm. It ends at the inside tip of the little finger where it connects with the Small Intestine Meridian. The acupoints in this meridian are used for heart, chest and nervous system disorders.

Inspection
Part of the diagnosis process in TCM, inspection entails the practitioner or physician to make use of his visual senses to ascertain the condition of the patient. By observing the changes in the patient’s appearance, secretions, excretions and vitality, he or she can determine which body part is affected. Generally the following parts are inspected: Tongue, Movement and Posture, Body Shape, Skin Colour and Spirit (or outward manifestation of vital qi).

Of course as massage therapists we do not diagnose our clients, but we can and should be doing an assessment where they tell us how they feel—it accomplishes the same purpose for us.
Internal
When this word is used in TCM it refers to the location of illnesses such as those that affect qi, blood, and organs inside the body.

Jing
In TCM, Jing is considered an essential fluid-like substance for life. It is needed for reproduction, growth, development and maturation. As one grows older, Jing normally decreases. The Jing can be found in the kidneys.

Kidney Meridian
This Meridian starts from the bottom of the small toe then crosses the middle part of the sole and the arch of the foot, goes behind the inner ankle upwards along the inner lower leg and thigh and enters the body to connect with the kidney. The path continues over the abdomen running externally until the upper chest. Another branch begins from the kidney and moves internally upward through the liver, diaphragm, lungs, throat to land at the root of the tongue. Still yet another branch connects with the heart and the pericardium. This meridian is used from gynecological, genital, kidney, lung and throat conditions.

Kidney Qi
An important body organ, the kidneys regulate the urinary and excretory system and also has influence over the reproductive, endocrine and nervous systems. TCM teaches that if there is some kind of imbalance in the kidney qi, it shows as spiritual fatigue, frequent urination, soreness and weakness in the lower back and knees, menstrual problems for women, prostate disorders in men and sexual dysfunction in both genders.

Large Intestine Meridian
The Large Intestine Meridian starts from the tip of the index finger then runs between the thumb and the index finger. It travels along the back of the forearm and the front side of the upper arm until the highest point at the shoulder. From this tip it branches off into two paths: an internal one travels to the lungs, diaphragm and large intestine, the other trails externally upwards to the neck, cheek, entering through the gums and lower teeth then curves around the upper lip and to the opposite side of the nose. Imbalance in the Large Intestine Meridian can cause diarrhea, constipation dysentery or oral problems such as toothache.
Liver Meridian
The Liver Meridian, it starts from the top of the big toe and across the top of the foot then crosses around to the inner ankle to trail upward along the inner side of the lower leg and thigh. The path then goes around the external genitalia to the lower abdomen, up to the lower chest, the liver, the gall bladder then further upwards to the throat, eyes and then emerges from the top of the head. Imbalance in the Liver Meridian presents itself as pain in the groin area, incontinence, hernia, difficulty in urinating and chest fullness.

Lung Meridian
The Lung Meridian begins in the middle area of the body and runs down to the large intestine. From there it passes through the diaphragm to connect with the lungs. As with the other meridians, it branches out: one travels from the armpit and runs down the upper arms to the elbow crease. It then continues until the tip of the thumb, passing along the major artery of the wrist. The other branch appears from the back of the wrist and ends at the inner tip of the index finger connecting with the Large Intestine Meridian. This meridian is used for conditions of the throat, chest and lungs.

Lung Qi
The lungs connect with the throat and nose and they regulate respiration as well as water flow in the body. An imbalance in the lung energy results to feeble cough, asthma, shortness of breath fatigue and lusterless complexion.

Meridian
In TCM there are 12 major pathways through which the qi flows. These are called Meridians and they correspond to the yin and yang organs and the pericardium. We will be discussing these a little in this course, but in greater detail in our introductions to Meridians and Acupoints course. These are also interrelated and which are used for treating ailments and correcting imbalances in the qi.

The Chinese word for meridian is “Jing Luo.” “Jing” refers to the vertical channels, while “Luo” refers to the networks that branch off from the vertical channels.
Minister Herbs
TCM practitioners use herbal combinations in healing, much like the way aromatherapists do today. In an herbal combination a minister herb is an herb that supports the monarch herb in performing its major action on the body. It also helps treat the accompanying symptoms of the ailment.

Monarch Herbs
This is the principle herb in a combination, the major “active ingredient” if you prefer to think of it that way. A potent herbal combination may have more than one monarch herb.

Moxibustion
A method of TCM therapy whereby a burning moxa wool (made of mugwort leaves), or moxa wool occasionally mixed with herbs, is applied on a patient’s acupoints to facilitate healing. The heat from the moxa wool is said to penetrate deep into the affected location without damaging the skin. This technique is used to warm the meridians, boost the flow of qi and blood and eliminate the pathogens from the body.

Nutrient Essence
In TCM a health diet can be designed to treat certain conditions with select foods, a “food therapy” if you want to think of it that way. The nutrient essence is acquired from the food and is considered a necessity for the body to maintain its health and optimum performance. When a nutrient essence is absorbed by the body it can be converted into Jing, which is stored in the kidneys.

Organs
In TCM there are five major organs that cover a wide range of systems and functions in the body: the heart, the liver, the spleen, the lung and the kidney. Each of these organs possesses their own qi or energy and an imbalance leads to chronic ailments.

Orifices
In TCM the term orifices refers to the openings of the five major organs on the body’s surface: the eyes for the liver; the tongue for the heart; the spleen opens into the mouth; the nose to the lungs; and the kidneys open into the ears. It is said that when an orifice is closed, there is blockage, or worse, unconsciousness.
**Overstrain**
In TCM, overstrain refers to the external factors result lead to chronic conditions. Examples would be stress, toil, improper diet or emotional troubles. Overstrain is believed to damage the spleen and kidney energies such that the patient can suffer from restlessness, palpitations and vexing heat.

**Palpation**
Just like in western massage therapy, palpation in TCM is an inquisitive skill that feels the clients body to identify factors in treatment. In TCM the practitioner takes the patient’s pulse and feels the skin, hands, feet, chest, abdomen and other areas of the body for abnormalities and changes. In TCM, pulse-taking is an important method to determine the location and the nature of the patient’s condition.

**Pericardium**
In TCM the pericardium is viewed as an attachment to the heart – of course we know it as the membrane that surrounds the heart. When exogenous pathogens invade the heart, the pericardium is the first to be attacked.

**Pericardium Meridian**
The Pericardium Meridian starts from the chest from the pericardium and runs down along the diaphragm to connect with the Triple Burner Meridian. It has two branches: one from the chest travels to the armpit and along the middle part of the upper arm, down between the lung and heart channels to the elbow crease. It continues down the forearm and enters the palm where it ends at the tip of the middle finger. A second branch emerges from the palm and connects with the Triple Burner Meridian at the end of the ring finger. Imbalance in the Pericardium Meridian presents itself as symptoms of heart pain, palpitations, chest discomfort and “shen” disorders such as manias.

**Pestilential Evil**
This poetically biblical sounding name refers to droughts, floods, extreme heat, pollution and unsanitary environmental conditions. This pathogenic factor affects not only one, but a significant number of people with epidemics and highly contagious diseases.
**Phlegm**
A good indicator of a pathogenic substance or a disorder in the body. Phlegm can either be external and visible, or internal and invisible.

**Qi**
Commonly translated as “energy flow”, or the “breath of life”, qi is an essential and fundamental concept in TCM that pertains to the vital energy that flows throughout and around the body. It is believed to be found in all living things and is formed from the harmonious interaction of yin and yang energies. Qi flows through the body’s meridians and the practice of TCM is hinged on regulating and maintaining the proper flow of Qi throughout the body.

**Qi deficiency**
As the name implies, this is a lack of qi which manifests as symptoms of lethargy, weakness, shortness of breath, slow metabolism, frequent colds and flu with slow recovery, low or soft voice, palpitations and/or frequent urination.

**Qi-Gong**
A system of physical and mental training exercises for physical, emotional and spiritual health. There are four types of training in Qi-Gong: dynamic, static, meditative and training activities requiring external aids. Also considered as part of TCM, the practice of Qi-Gong is meant to control the flow of qi. We will be discussing it in more detail later.

**Questioning**
TCM practitioners perform an assessment with their clients the same way we massage therapists do, by asking questions. Usually they ask about the client’s immediate complaint, symptoms, medical history and background and more.

**Reverse Flow of Qi**
This usually refers to an adverse or negative state of qi in the body, resulting to dysfunctions in certain internal organs. Signs of a reverse flow of qi present itself in shortness of breath, vomiting or hiccups.

**Scraping Therapy**
This is a variation of acupressure or TCM massage, it is a therapeutic method practiced by old Chinese healers whereby rim tools that have been
lubricated with oil or warm water is scraped down the patient’s shoulder, back or neck. This is believed to promote blood and qi circulation in the body, activate meridians and regulate functions of the organs. It has been used for treatment or relief of motion sickness, stomach distention and flu. We will be discussing it in more detail later.

**Seven Emotions**
These refer to the human emotional responses to environmental conditions and changes. They are believed to be potential causes of illnesses. The Seven emotions are: sadness, fright, fear, grief, anger, extreme joy, and restlessness or pensiveness.

**Shen**
The spirit and mental faculties of a person which include the zest for life, charisma, the ability to exhibit self control, be responsible, speak coherently, think and form ideas and live a happy, spiritually fulfilled life.

**Six External Evils**
The six external evils, like the seven emotions, are causes of illness and disease. Also known as the six climatic factors, the six excesses and the six evil qi. The six external evils are terms from nature that are used to describe the condition. These include wind, cold, summer heat, dampness, dryness and fire. Terms are also used metaphorically to indicate the behaviour of a particular ailment or condition.

**Stagnation**
An important concept in TCM, stagnation refers to blockage or buildup of qi or blood that prevents it from flowing freely. Is a precursor of illness and disease and is frequently accompanied by pain or tingling.

**Stomach heat**
In TCM too much heat in the stomach is represented by bad breath, bleeding or swollen gums, burning sensation in the stomach, extreme thirst, frontal headaches and/or mouth ulcers.

**Summer Heat**
Overactive functioning of an organ system resulting in symptoms of thirst, aversion to heat and craving for cold, infection, inflammation, dryness, red face, sweating, irritability, dark yellow urine, restlessness, constipation and "hyper" conditions such as hypertension.
Shen
This is a TCM word for life force, or vitality, it represents the spiritual abilities of a person such as his passion and enthusiasm for life, to think and form ideas and speak coherently and to live a happy life.

Shanghan
The term refers to severe diseases caused by exogenous cold evils. Manifestations of shanghan vary from chills, aching of muscles and bones, belching, and may present itself with or without fever.

Small Intestine Meridian
This is a major meridian that connects with the Bladder Meridian through a short branch in the cheek that travels upward to the inner corner of the eye. It connects to the small intestine along a branch that moves internally through the heart and stomach. Imbalances in the Small Intestine Meridian are said to result to stiff neck, sore throat, hearing problems, and pain along the shoulder, upper arm, elbow and forearm.

Spleen Meridian
The Spleen Meridian starts at the big toe, running along the inside of the foot and crosses to the inner ankle. It then travels upward along the inner lower leg and thigh, entering into the abdominal cavity to connect with the spleen and upwards to the Heart Meridian. Disharmony in the Spleen Meridian can cause loose bowel movement, flatulence, indigestion or gastric pains.

Stagnation of Qi
In contrast to reverse flow of qi, this condition depicts the impairment of the normal flow of qi in the body. Stagnant qi in the meridians may result in pain and aches in the body.

Stomach Meridian
The Stomach Meridian begins from the end of the Large Intestine Meridian (side of the nose), and travels along the inner corner of the eye then emerging from the lower part of the eye. It then travels downwards entering the upper gum, lips and lower jaw. When it reaches the corner of the forehead through the front of the ear, it splits into an internal and external branch. The Stomach Meridian connects with the Spleen Meridian at the
end of the bid toe. This meridian is used for several gastro enteric diseases as well as toothaches and mental illnesses.

**Tai Chi**
Also known as Tai Chi Chuan, this is a form of health benefits exercise and is similar in many respects Qigong. It is a system of routines with therapeutic benefits as well as recognized as a martial art. The objective of Tai Chi is to promote a balance between the yin and yang energies in the body and the smooth flow of qi along the meridians. It is a set of smooth, flowing exercises used to improve or maintain health, create a sense of relaxation and keep qi flowing.

**Tao**
The ancient philosophy of oneness in all creation.

**TCM**
The acronym for Traditional Chinese Medicine, an alternative medical system and practice originating from ancient China.

**Tonification**
This is a term in TCM that refers to the nourishment and replenishment of the qi and the blood when they are deficient in the body, as well as the balance of yin and yang is restored. There are different methods of tonifying: through diet; tonifying by herbs; by acupuncture and moxibustion; or by massage therapy.

**Toxicity**
Applies to any inflammation, infection or severe heat disease.

**Triple Burner Meridian**
In TCM the Triple Burner is a Meridian that is an essential element in digestion. It consists of three parts: the Upper Burner (Mouth to Stomach); the Middle Burner (Stomach to Large Intestine) and the Lower Burner (Small Intestine to Rectum). The Triple Burner Meridian connects with the Gall Bladder Meridian through an external branch that runs up the side of the neck, the ear and ends at the outer end of the eyebrow. An internal branch connects with the Triple Burner sections. This meridian is used for ailments involving the ears, eyes, chest and throat.
**Tui Na**  
Also known as Naprapathy, it is a form of Traditional Chinese massage that focuses on meridians and acupoints to bring balance to the body’s energies. We will be discussing it in more detail later.

**Wei Qi**  
This is the TCM equivalent of the body’s immune system as known in mainstream medicine.

**Weifen (or Wei) Syndrome**  
If a patient is diagnosed with the Wei Syndrome, there is weakness and eventual wasting of the muscles particularly in the lower extremities of the body.

**Wind**  
Causes the sudden movement of a condition. Examples are a rash that is spreading, onset of colds, fever, chills, vertigo, spasms or twitches.

**Wind Evil**  
An influential pathogen that causes cold ailments such as chills, vertigo, spasms or twitches.

**Yang**  
Represents heat and the body's ability to generate and maintain warmth and circulation.

**Yang Deficiency**  
Inadequate yang energy in the body manifests itself in general swelling, pale complexion, lethargy, lower back pain, a deep and slow pulse and bland taste in the mouth. This denotes that the body cannot sustain functions of warmth and motivation. It is a cold condition due to lack of the heating quality of yang. Symptoms include lethargy, poor digestion, cold, lower back pain and decreased sexual drive.

**Yin**  
Represents cool and the substance of the body, including blood and bodily fluids that nurture and moisten the organs and tissues.
**Yin Deficiency**
Lack of yin energy in the body results to symptoms of night sweats, fever, dizziness, insomnia, blurry vision, dry mouth, scanty and yellow urine and afternoon fevers. This denotes that there is excess heat in the body. It is a heat condition that results in symptoms of night sweats, fever, nervous exhaustion, dry eyes and throat, dizziness, blurred vision, insomnia and a burning sensation in the palms of the hands, soles of the feet and the chest.

**Yin-Yang**
In Chinese philosophy, Yin and Yang are mutually interdependent properties or elements that represent the duality of everything. The two polar factors constantly interact in either a complementary or opposing way, and the result of their interaction produces Qi. In TCM, Yin stands for coolness and bodily fluid that moisten and nourish the organs and tissues, while Yang represents heat and the body’s ability to generate and maintain warmth and circulation in the body.

**Zang Fu**
In TCM, it denotes the functions of the major organs of the body and their interaction to each other. There are twelve zang fu organs: the yin organs of the heart, liver, spleen, lung, kidney, pericardium; and the yang organs of small intestine, large intestine, gall bladder, urinary bladder, stomach and the triple burner.

The easy way to remember it is that it describes the solid organs (zang) that store vital substances and the hollow organs (fu) which are responsible for transportation.
Chapter 3: The Meridian System

The Meridian System
Traditional Chinese medicine states that there is a distribution network for the fundamental substances of Qi (pronounced chee), blood and other body fluids throughout the body.

This network is called the Meridian System and it resembles a giant web, linking different areas of our body together. Its pathways make up a comprehensive body map that supplies vital energy to every part of the body. Philosophically, the Meridian System explains how we live, and why we become sick.

Jing luo, The Chinese word for Meridian
"Jing luo", the Chinese word for meridian has two interesting ideas which compose the basic structural components of the Meridian System. These ancient ideas, reach back thousands of years and are described in the ancient Chinese book of medicine, Huang Di Nei Jing (The Yellow Emperor's Classic of Internal Medicine).

It says:

Jing meridians act as the interior. Those which branch off horizontally are luo meridians. Jing means to pass through or pathway and refers to the vertical channels. Luo means network and refers to the networks that branch off from the vertical channels (Jing). Both Jing and Luo mean link or connection, and they are bound closely together to form channels.

Meridians are not blood vessels
Although meridians work as a channel system that carries and distributes qi and blood, they are not blood vessels and have no anatomical channel structure.

This causes many western practitioners difficulty; especially massage therapists who are used to palpating (feeling) structures through the tissues.

Many meridian research projects have been carried out over the years testing different hypotheses of how this system works. Physiological hypotheses such as nervous reflex models have been put forward, but
researchers have not yet come up with a definitive model that can give a complete anatomical description of the Meridian System.

**Development of the Meridian Concept**
Ancient literature of Traditional Chinese Medicine (TCM) provides us with a history of the development of Meridian theory. It evolved along the following ways:

1. **Observation of a tingly "needle" feeling.** When early TCM practitioners would pierce a specific area of the body with a fine needle the patient reported feeling sensations on different parts of their bodies. Through experimentation, trial and error this led to the cataloging of various Tsubo points. Ancient Chinese medicine practitioners worked out the patterns of the needle points (acupuncture points) in the body, which later formed the basis of the entire meridian theory.

2. **Observation of the effects of acupuncture points**
The experiments listed above not only provided remote sensation from needle piercing but also seemed to have distinct effects on specific symptoms and ailments. As they practiced these acupuncture trials, they found an organized pattern to the points that produced specific affects.

3. **Correlation of certain illnesses with acupuncture points**
From everyday experiences, the Chinese gradually became aware of the fact that when a particular disease occurred they would feel pain in a particular area on their skin, which was often associated with a rash or skin color changes. These patterns were studied according to the ancient philosophies such as the yin-yang and the five elements theories and further developed into an integrated model for maintaining health in TCM.

**Meridians are a network of acupuncture points**
When you look at the acupoints on the Meridian map you could discern a pattern, even if there were no Meridians drawn on the map. By “linking the dots” you can form a line through which points that effect similar body systems and that effect similar symptoms can be connected. This represents the flow of qi in the Meridian System.

**The Classification of Meridians**
There are 12 primary meridians in the System and they are related to the yin and yang organs and the pericardium. (Yin organs are usually those
that are “solid”, and include the liver, heart, spleen, lungs, and kidneys. Yang organs are organs with a cavity such as the gall bladder, small intestine, stomach, large intestine and bladder. In TCM, yin and yang organs are physiological functional units that incorporate a much broader meaning than common western thinking.)

Meridians that are linked with the yin organs are known as the yin meridians. If they are linked to a yang organ they are known as yang meridians. In addition to the 12 primary meridians, there are eight additional meridians and smaller network-like luo meridians. Included among the eight extra meridians are the Governing Vessel and the Conception Vessel which are considered the most important channels because they contain acupuncture points, which are unique because they are independent of the twelve principal meridians.

**The Water analogy**

Since qi and blood are mobile, it is very easy to visualize meridians as a fluid, like water, flowing through a series of pipes (although there are no “pipes” or veins in the Meridian system, this is just imagery, do not be confused).

When water flows downhill, the flow goes from high ground to low ground. It will also conform to the shape of the terrain and collect in the most stable. A rivers maintains the natural flow of the energy in the water. When avoiding turbulent flow it provides a very efficient way of transporting water downstream. As a natural result, the land near the river is lush with vegetation and life because of the regular supply of fresh water.

Qi works in a similar fashion. When flowing from a high to a low concentration it follows the contours and geography of the body and gathers in a meridian. In this way meridians provide a natural pathway for the flow of energy and supplies a constant source of qi to different parts of the body much like the way a river supplies water to the land near it.

If a river becomes blocked, all areas relying on the water downstream will be affected by the lack of water, just as the area near the blockage will be affected by the surplus.

The blockage causes the ecosystem's balance and harmony to be disturbed, and plants and animals cannot survive. In a similar fashion if the
meridian is blocked the supply of qi to different parts of the body can be impeded, leading to disharmony and disease even if the affected area is far away from the original blockage.

In order to restore a harmonious balance it is necessary to resume the even flow of qi. In the example of the river we can imagine that debris causing the blockage is removed and the flow if the river is restored. The balance of the meridian system is restored in our bodies by stimulating particular acupuncture points. This is how the flow of qi is regulated throughout the body.

This stimulation is usually accomplished by acupuncture or traditional massage that focuses on the acupoints.

**Application of the Meridian Theory in Bodywork**

The Huang Di Nei Jing (The Yellow Emperor’s Classic of internal Medicine) illustrates the importance of the meridian theory in human physiology, pathology, diagnosis and therapeutics in TCM by stating:

"The twelve Meridian System is: the process through which our body grows; the explanation how disease continues and develops; the methods by which our body is treated; the place where disease occurs; the concept where philosophy begins, the target where successful outcome should be achieved."

"The Meridians move the Qi and Blood. As a result, Yin and Yang get regulated. Tendons and bones get nourished. Joints get facilitated."

The meridians network transports and distributes qi and blood. They connect all of the organs and extremities, providing energy to the joints, tendons and tissues of the body. In a healthy meridian system qi and blood warm and nourish the different organs and sustain the bodies metabolic activities. The meridians are essential to the flow of qi in the body. In addition to supplying energy they bolster immunity and protect against the pernicious influences (anything evil that causes disease) and assist in regulating yin and yang.
The Pathological application

In ABS001: Fundamentals of Traditional Chinese Medicine we discussed the "evils" (pathogenic influences) that transform and progress along the meridians to attack the body and cause disease or illness.

In TCM they are classified as wind, fire, dampness, dryness, cold and summer heat. Sometimes, the evil travels from one organ to other, but it can also move from the exterior to the interior of the body.

A good example is the progression of influenza.

TCM believes it is initially caused by external influences. In the beginning the person with influenza has a fever, dislike of cold, headaches, and body pains. The evil may then progress along the closest Lung Meridian and launch an attack on the lungs. When this happens, the person may suffer from symptoms of influenza such as a cough, wheezing and chest pain.

Disharmony of one organ can also affect other organs because of their interconnections through the Meridian System.

Liver disharmony, for example, can influence the stomach, and stomach disharmony can influence the spleen.

Even more interesting, organ disharmony inside the body will show pathological changes along the Meridian channel with which it is associated. Liver imbalance, for example, can cause lower chest pain due to the fact that the liver meridian passes through lower chest region.

Kidney imbalance can cause pain in the groin, because the kidney meridian passes through the groin region. Ulcers on the tongue can indicate heart imbalance since the heart meridian has branches at the tip of tongue.

The Diagnostic Applications of Meridian Theory

You can diagnose an imbalance in the qi of the body based on the disharmony expressed in the corresponding meridian and organ. One example would be headaches. They are classified by the painful areas and their distribution along the meridians of that area. If the pain is in the forehead region it indicates that it is a yang meridian type headache. If the pain is in both sides of the head it indicates a Shao Yang Meridian type headache. Pain in the back of the neck is a Tai Yang meridian, while pain
located on the top of the head indicates a Jue Yin meridian type headache. Such specific diagnoses help custom individual treatment plans allowing for the best outcome for relief of the headache.

We can see another example with liver disharmony. The liver meridian passes through the region of the chest and lower abdomen and pain in those areas can be a symptom of a problem with the liver, and not other organs. When this kind of organ imbalance happens the corresponding meridian and acupuncture tsubo express morphological changes and they can feel painful when pressed.

All these Meridian-related presentations and symptoms assist in TCM diagnosis. This amazing system is the foundational basis of the well-known **Six Meridian differential diagnostic method**, which was conceived by a famous and highly distinguished Chinese Medicine physician in the Han dynasty named Zhang Zhongjing (2nd to 3rd century AD). His diagnostic method had a significant impact on the future development of TCM.

The goal of Traditional Chinese Medicine is always to restore the harmony of yin and yang and maintain the flow of qi and blood. Acupuncture and Shiatsu massage works because stimulating the specific points along the Meridians encourage the flow of qi throughout the body so normal organ functions and harmony can be resumed.

The meridian differential diagnosis is an essential part of practicing TCM. Herbal medicines, for example, are chosen specifically for treating certain meridians and their corresponding organs. Some herbs have meridian guiding properties, which help direct the therapeutic effects of specific organs and meridians. In this way the meridians allow for an individually tailored herbal treatment plan according to a patient's disharmony pattern.

In order to have a successful treatment outcome it is vitally important that you are working on the right meridian. A headache in the forehead, for example, is diagnosed as Yang Ming Meridian disharmony. Knowing this we would work acupressure points in Arm Yang Ming Meridian such as Hegu (the depression on the dorsum of the hand between the first and second metacarpal bones, at the level of the middle of the second metacarpal bone) can be selected to treat this type of headache. Another good example is a painful stomach ache (such as indigestion or dyspepsia). The stomach belongs to the Leg Yang Ming meridian, the
corresponding acupuncture point of Zusanli (located: one finger-breadth lateral to the anterior crest of tibia) can be chosen to relieve this pain.

**Meridian General Review**
The Meridians are a series of channels, or energy pathways, that traverse the human body. TCM seeks to identify patterns of disharmony (such as illness or emotional distress). It is believed that disharmony (and therefore, disease) are caused by a disruption in the body’s energy flow along one or more of the meridians.

To correct these disruptions specific points on the meridians are stimulated. These points are called tsubo, or acupoints. They can be stimulated by a variety of means, including Acupuncture and Massage.

The meridian network can be compared to a system of highways, roads and streets that link major cities. The highways (meridians) and the cities (organs) make up an entire map (the body). It is through this system of energy highways that Qi runs. For example, if a city's internal streets are congested with traffic, eventually this situation will cause a traffic jam with the freeway leading into the city. If the traffic condition gets even worse the cities linked by the major highways will begin to experience a problem as well.

If the traffic to these cities is blocked, one or more of the cities will suffer. This analogy offers a powerful visual tool for understanding how energy blockages in meridians can cause problems in organs, manifested as disease.

In addition to moving Qi, meridians also transmit information in manner similar to nerves. It is through the meridians and the flow of Qi that the various parts of the body communicate with each other and coordinate the needs of the body with its resources.

"As long as Qi flows freely through the meridians and the Organs work in harmony, the body can avoid disease."

An Acupoint is manipulated through pressing, rubbing in massage, use of a needle in Acupuncture or even cupping.
Understanding and Visualizing Meridians
The individual meridians themselves are often described as ‘channels’ or even ‘vessels’ which reflects the notion of carrying, holding, or transporting qi, blood and body fluids around the body.

It is tempting to think of the meridians of the human body the same way as we think of the circulatory system. There are similarities, in that the meridians are responsible for the distribution of the basic substances throughout the body, much like the circulatory system. This is where the similarities end however. Conventional (western) anatomy and physiology would not be able to identify these pathways in a physical sense in the way that blood vessels can be identified. You could not put a clamp on one during a surgery, and they do not show up on X-rays.

It is more useful to consider the meridian system as an energetic distribution network than a structure.

Think of them as a riverbed, over which water flows and irrigates the land; feeding, nourishing and sustaining the substance through which it flows. If a dam were placed at any point along the river, the nourishing effect that the water had on the whole river would stop at the point the dam was placed.

TCM practitioners must know as much about these meridian channels as a western physician knows about the anatomy of the cardiovascular system. Without the proper knowledge of the meridian acupressure treatments would be impossible. The TCM must know where the tsubo are in order to successful treat the meridian and facilitate the flow of qi, thereby bolstering the healing process.

There are a dozen primary meridians. These invisible energy channels allow the movement of qi energy throughout the body. Each limb of the body is traversed by six channels, three of them are considered Yin and are on the inside, and three are considered Yang because they are on the outside. Each of these twelve channels are assigned to five of the Yin organs, six of the Yang organs and the Pericardium and San Jiao. These organs are related to processes in the body in the way we commonly think of in western medicine, but in TCM they have additional functions related to the meridians they are affiliated with.
Each meridian is a **Yin Yang pair**, meaning each Yin organ is paired with its corresponding Yang Organ: the Yin Lung organ, for example, corresponds with the Yang large intestine.

Qi flows in a predictable pattern through the 12 primary meridians. The travel of qi begins in the chest area and runs to the hands. From the hands they connect to the three Yang arm channels and flow upwards toward the head. Once they reach the head they flow downward through the Yang leg channels towards the feet. Once they reach the feet they connect with the Yin leg channels and flow back upwards again to the chest, thus completing a full circuit through the body.

**Arm Tai Yin channel corresponds to the Lung**
**Leg Tai Yin channel corresponds to the Spleen**
**Arm Shao Yin channel corresponds to the Heart**
**Leg Shao Yin corresponds to the Kidney**
**Arm Jue Yin corresponds to the Pericardium**
**Leg Jue Yin corresponds to the Liver**
**Arm Yang Ming corresponds to the Large Intestine**
**Leg Yang Ming corresponds to the Stomach**
**Arm Tai Yang corresponds to the Small Intestine**
**Leg Tai Yang corresponds to the Bladder**
**Arm Shao Yang Channel corresponds to the San Jiao**
**Leg Shao Yang Channel corresponds to the Gall Bladder**

In TCM the arm and leg channels that share the same name are believed to communicate with each other. This allows for a type of reciprocity, allowing you to treat an area by working the corresponding meridian or its partner. A good example of this would be seen in your ability to treat a problem in the lungs by working the points on the spleen meridian. Since they are both Tai Yin channels they communicate with each other, making the treatment possible.

In addition to the twelve regular meridians there are ‘Secondary Meridians’ that are not directly linked to the major organ system but have various specific functions:

1) They act as reservoirs of Qi and blood for the twelve regular channels, filling and emptying as required
2) They circulate jing or ‘essence’ around the body because they have a strong connection with the Kidneys

3) They help circulate the defensive Wei Qi over the trunk of the body and, as such, play an important role in maintaining of good health (the *Yang Wei*, or yang tie on page 27 below)

4) They provide further connections between the twelve regular channels by binding them together (Dai Mai the *Girdle Vessel* on page 26 below)

The meridian system of the human body is a delicate, yet intricate web of interconnecting energy lines. If a person masters an understanding of this meridian system they will know the secrets of the flow of Qi energy in the body.
The Primary Meridians and Acupoints
The specific areas on the Meridians that can be stimulated to correct the flow of energy in these meridians are referred to as Acupoints. These are the places that are targeted during an acupuncture or acupressure massage session.

Primary meridians are those that pass through internal organs, while the secondary meridians do not.

There are twelve pairs of primary meridians flowing in a never-ending circle. These twelve primary meridians are symmetrical on the right and left sides of the body, and they all interconnected with each other:

Lung Meridian
Colon Meridian
Stomach Meridian
Spleen Meridian
Heart Meridian
Small Intestine Meridian
Urinary Bladder Meridian
Kidney Meridian
Pericardium Meridian
Triple Burner Meridian
Gall Bladder Meridian
Liver Meridian

Our qi begins its flow in the lungs, then travels to the large intestine. From there it goes to the stomach, then to the spleen. Next it travels to the heart, then to the small intestine. Next it goes to the urinary bladder and the kidneys. After this it heads toward the pericardium and the sanjiau (also known as the triple burner). Finally it goes to the gall bladder, then the liver, then back to the lungs where it starts its circular journey again.
For a healthy person, the qi travels smoothly through each of the organs at a specific time of the day:

- **Lungs**: 3 A.M. - 5 A.M.
- **Large Intestine**: 5 A.M. - 7 A.M.
- **Stomach**: 7 A.M. - 9 A.M.
- **Spleen**: 9 A.M. - 11 A.M.
- **Heart**: 11 A.M. - 1 P.M.
- **Small Intestine**: 1 P.M. - 3 P.M.
- **Urinary Bladder**: 3 P.M. - 5 P.M.
- **Kidneys**: 5 P.M. - 7 P.M.
- **Pericardium**: 7 P.M. - 9 P.M.
- **Triple Burner**: 9 P.M. - 11 P.M.
- **Gall Bladder**: 11 P.M. - 1 A.M.
- **Liver**: 1 A.M. - 3 A.M.

An ancient Taoist scroll depicting the flow of qi energy through a meridian.

Similar charts are still in common use in acupuncture and shiatsu practices around the world.
Meridian: Lung
Yin or Yang: Yin
Element: Metal
Starts: On chest near deltoid
Ends: Tip of thumb
Physical Association: blood vessels, skin, body hair, nose
Mental Association: intake of new ideas and mental clarity

Pathway:
The Lung Meridian originates in the middle portion of the body, and runs downwards connecting with the large intestine. It then turns and passes through the diaphragm to connect with the lungs. This meridian branches out from the axilla (armpit) and runs down the medial aspect of the upper arm where it crosses the elbow crease. It continues until it passes above the major artery of the wrist, and emerges at the tip of the thumb. Another
branch emerges from the back of the wrist and ends at the radial side of the tip of the index finger to connect with the Large Intestine Meridian.

**Symptoms:**
Disorders of the Lung Meridian lead to diseases related to TCM lung dysfunction. According to TCM, the lung rules and regulates qi throughout the body and administers respiration (breathing). In addition, the lung moves and adjusts the water channels, so disorders of this meridian may be related to disharmony of lung fluid or "water" and respiratory disorders. Symptoms like chest discomfort with a fullness sensation, dyspnea (shortness of breath), cough, and wheezing indicate Lung Meridian disharmony. This disharmony can also lead to pain along the meridian position. For example, a person may feel pain in the shoulder and back or along the anterior border of the medial aspect of the arm.

**Main indications:**
Acupuncture points in the Lung Meridian are indicated for throat, chest and lung ailments and for other symptoms that are presented along the meridian's pathway.

**Points for Specific Conditions**

**Yun Men: LU-2**
Also known as the “Cloud Gate” working this Acupoint is useful for treating Cough, wheezing, asthma, shortness of breath, shoulder joint inflammation.

**Zhungfu: LU-1**
Is used to treat pneumonia, lung abscess, asthma, bronchitis, wheezing, dyspnea, edema, throat obstruction, chest fullness and pain, neck, back and shoulder pain, excessive perspiration, dry cough, stuttering, urine has bad smell.

**Chize: LU-5**
Is used to treat Cough, asthma, bronchitis, chest fullness, hemoptysis, throat blockage, throat swelling, throat pain, dry mouth, thirst, fever, diabetes, Wei syndrome due to lung heat consumption, erysipelas, psoriasis, dry cough, renal pain, rigidity of vertebral column, sneezing, madness

**Lieux: LU-7**
The Acupoint Lieqie is used to treat, stiff neck, facial paralysis, trigeminal neuralgia, urticaria,, wind rash, hemorrhoids, dry and scaly skin, limbs edema, nasal problems, asthma, cough, sore throat, frontal and lateral headache, rhinitis, influenza, burning urination, and numbness of the limbs.

**Jingque: LU-8**
The Acupoint Jingque is used to treat Asthma, cough, chest pain, esophageal spasm, sore throat, dyspnea, and intermittent fever or fever without perspiration.

**Taiyuan: LU-9**
Useful for treating cough, asthma, bronchitis, TB, lung abscess, pertussis, heat in the palms, heatstroke, coma, irritability, chest pain, palpitations, emphysema, hemoptysis, brachial neuralgia, toothache, and eye pain.
Shaoshang: LU-11
Used in treating diseases of the throat, heat and febrile diseases, mumps, tonsillitis, fainting, diabetes with excessive thirst, asthma, pneumonia, chest pain with excessive perspiration, epilepsy, hysteria, psychosis, wind stroke, collapse syndrome, coma, delirium, meningitis, dry lips and mouth, night sweats, epistaxis, and swollen tongue.
**Meridian:** Large intestine  
**Yin or Yang:** Yang  
**Element:** Metal  
**Starts:** The tip of each index finger  
**Ends:** Underneath the nose  
**Physical Association:** Digestive system  
**Mental Association:** Letting go of things no longer needed

**Pathway:**
The Large Intestine Meridian starts from the tip of the index finger and runs between the thumb and the index finger. It then proceeds along the lateral side of the forearm and the anterior side of the upper arm, until it reaches the highest point of the shoulder. From there, it has two branches. One goes internally towards the lungs, diaphragm and large intestine. The other travels externally upwards where it passes the neck and cheek, and enters the lower teeth and gums. It then curves around the upper lip and crosses to the opposite side of the nose.
Symptoms:
Disharmony of the Large Intestine Meridian can lead to symptoms of abdominal pain, intestinal cramping, diarrhea, constipation and dysentery. Since it passes through the oral cavity and the nose, symptoms like toothache, a runny nose, nosebleeds, and pain or heat along the meridian pathway can also indicate a disorder in this meridian.

Main indications:
Acupuncture points in this meridian are indicated for diseases affecting the head, face, pharynx (throat), febrile conditions and other symptoms along the meridian pathway.

Points for Specific Conditions

Shang Yang: LI-1
This Acupoint is used to treat Toothaches, tonsillitis, cough, sudden fever, tinnitus, stomatitis, fever without perspiration, mumps, submandibular swelling, tinnitus, deafness, coma, finger numbness, color blindness.

Hegu: LI-4
An Acupoint used for treating eczema, erysipelas, trigeminal neuralgia, flu, common cold, mumps, amenorrhea, otitis media, urticaria, hemiplegia, chills, toothache, sneezing, headache, migraine, asthma, pruritis, bronchitis, diarrhea, appendicitis, constipation, abdominal pain, Lymphangitis, furuncles, tetany, hysteria, tonsillitis, throat and tongue pain, voice loss, coma, fever, heatstroke, eye disorders, glaucoma, conjunctivitis, myopia, sudden blindness, difficult labor, nasal disorders.

Yang xi: LI-5
Yang Xi is manipulated to treat Headaches, wrist pain, skin diseases with itching, eczema, hearing loss, red and swollen eyes, back spasms, sore throat, root of tongue pain, seizures, mania, mad laughter.

Qui Chi: LI-12
An Acupoint for Fever, skin diseases, painful urination, the common cold, convulsions, hemiplegia, hypertension, urticaria, eczema, hot flashes, lassitude, depression, intestinal abscess, appendicitis, acute diarrhea, constipation, abdominal pain, bronchitis, chest pain, goiter, scrofula, boils, carbuncles, shoulder, arm and elbow pain., toothache, erythema, pruritis.

Tianding: LI-17
An Acupoint for Cough, asthma, stridor, phlegm in throat, laryngeal spasm, goiter, scrofula, pain in opposite hip, sudden loss of voice.

Ying Xang: LI-20
An Acupoint for all nasal afflictions, nose diseases, smell diseases, anosmia, rhinorrhea, sinusitis, nasal polyp, flu, wind heat and cold, dyspnea, facial paralysis, acne and other skin facial problems.
**Meridian:** Stomach  
**Yin or Yang:** Yang  
**Element:** Earth  
**Starts:** Near the bottom outside edges of the nose  
**Ends:** Tips of the second toes  
**Physical Association:** Digestive system  
**Mental Association:** Good relations w/ friends and family

**Pathway:**  
The Stomach Meridian starts from the end of the Large Intestine Meridian at the side of the nose, and passes through the inner corner of the eye to emerge from the lower part of the eye. Going downwards, it enters the upper gum and curves around the lips and lower jaw. It then turns upwards, passing in front of the ear, until it reaches the corner of the forehead where it splits into an internal and external branch. The internal branch emerges from the lower jaw, running downwards until it reaches its pertaining organ, the stomach. The external branch crosses the neck, chest, abdomen and
groin where it goes further downward along the front of the thigh and the lower leg, until it reaches the top of the foot. Finally, it terminates at the lateral side of the tip of second toe. Another branch emerges from the top of the foot and ends at the big toe to connect with the Spleen Meridian.

**Symptoms:**
Stomach Meridian disorders have symptoms of stomachache, rapid digestion, hunger, nausea and vomiting, or thirst. Other symptoms that relate to disorders along the meridian pathway include abdominal distension, ascites (a fluid build up in the abdomen), sore throat, nosebleeds, or pain in the chest or knee.

**Main indications:**
Acupuncture points in this meridian are indicated for certain gastro enteric diseases, toothaches and mental illnesses. Conditions that affect areas through which the meridian passes such as the head, face, eyes, nose and mouth can also benefit from stimulation of the acupuncture points along this meridian.

**Points for Specific Conditions**

**Chengyi: ST-1**
This Acupoint addresses all eye diseases, excessive tearing, myopia, conjunctivitis, eye twitching, night blindness, and facial spasms.

**Touwei: ST-8**
An Acupoint for headaches, especially frontal headaches and migraines, vertigo, dizziness, photofobia, blurred vision, excessive lacrimation, eyelid spasm, and psychosis.

**Daying: ST-5**
This Acupoint is useful for treating Tempomandibular joint disorder (TMJD), trigeminal neuralgia, facial paralysis, lockjaw, gingivitis, toothache, deafness, tinnitus, otitis media, yawning, and blurred vision.

**Zusanii: ST-35**
Useful for treating a variety of stomach and spleen diseases, anorexia, intestinal abscess, abdominal masses, digestive ulcers, colitis, appendicitis, enteritis, pancreatitis, nausea, diarrhea, constipation, insomnia, general weakness, asthma, nephritis, restless fetus, skin diseases, urticaria, eczema, breast abscess, allergies, anemia, dizziness, vertigo, headache, sinusitis, tinnitus, weakness and wei, hypertension, hemiplegia, and insufficient lactation.

**Jilexi: ST-41**
This Acupoint is good for treating dizziness, edema of face, mouth pain, eye disease, abdominal distention, constipation, delirium, seizures, mania, incoherent speech, ankle pain and sprains.

**Lidui: ST-45**
The Acupoint used in caring for Hepatitis, indigestion, tonsillitis, sore throat, toothache, epistaxis, sinusitis, hysteria, depression, disorientation, dream disturbed sleep, and fainting.
**Meridian:** Spleen  
**Yin or Yang:** Yin  
**Element:** Earth  
**Starts:** At each big toe  
**Ends:** Ends at the base of the tongue  
**Physical Association:** Lips, appetite, fat cells, menstrual cycle  
**Mental Association:** Healthy, good appetite

**Pathway:**  
The Spleen Meridian begins at the big toe and runs along the inside of the foot crossing the inner ankle. It then travels along the inner side of the lower leg and thigh. Once it enters the abdominal cavity, it internally connects with the spleen and continues upward to reach the Heart Meridian. Externally, the Spleen Meridian continues moving toward the chest and branches out to reach the throat and the root of the tongue.
Symptoms:
Disharmony of the Spleen Meridian is related to spleen dysfunction. According to TCM, the spleen is responsible for the transformation and transportation of different substances, and is the foundation of our after-birth existence. Spleen function is essential in maintaining the digestive power of the body and transforming food into qi and blood. If the Spleen Meridian does not function properly, qi cannot be efficiently transported to the spleen. As a result, symptoms like abdominal distention, loose stools, diarrhea, epigastric pain, flatulence and a heavy sensation in the body occur. In addition, symptoms such as pain at the root of the tongue, swelling of the inner side of the lower limb may also indicate disharmony of the Spleen Meridian.

Main indications:
Acupuncture points in this meridian are indicated for peptic, gynecological and genital diseases. They are also indicated for symptoms along the meridian.

Points for Specific Conditions:

Yin bai: SP-1
This point is used to treat all bleeding disorders, epistaxis, hematemesis, blood in the urine, bloody stools, prolonged menstruation, manic depression, excessive dreaming, startled sleep, anorexia, abdominal distention, nausea, sudden diarrhea, clears thinking, and is believed to elp people who are wrestling with intellectual problems.

Gongsun: SP-4
Acute epigastric and abdominal pain, resolves stagnant blood conditions in the stomach, bleeding of upper digestive tract, indigestion, abdominal distention, chronic diarrhea, irregular menstruation, lower abdominal pain, cardiac pain, stabbing pain in intestines, leprosy, mania-depression, insomnia, and restlessness.

Shangqiu: SP-5
This Acupoint is stimulated for treatment of abdominal distention, diarrhea, enteritis, lassitude, stomachache, excessive flatulence, pain and stiffness of the ankle joint, jaundice, pain along the medial aspect of thighs, hemorrhoids, and sterility.

Sanyinjiao: SP-9
An Acupoint that is manipulated for all diseases of lower abdomen, abdominal distention, diarrhea, leucorrhea, cloudy urination, eczema, urinary retention, dizziness, neurasthenia, irregular menstruation, amenorrhea, dysmenorrhea, infertility, prolapse of uterus, hypertension, nephritis, prostatitis, impotence, hernia, enlarged spleen, liver cirrhosis, abdominal masses and tumors.

Jimen: SP-11
This Acupoint is used for treating excessive menstrual bleeding, all blood disorders, blood in urine, restless fetus, vaginal pruritis, herpes zoster, anemia, eczema, boils and carbuncles, orchitis, perineal eczema, and allergies.
**Meridian:** Heart  
**Yin or Yang:** Yin  
**Element:** Fire  
**Starts:** Under arm  
**Ends:** Little finger  
**Physical Association:** Circulatory System  
**Mental Association:**

### Pathway:
The Heart Meridian starts from the heart, and divides into three branches. One goes towards the small intestine. The second runs upwards along the throat towards the eyes, and the third branch emerges under the arm and runs along the inner side of the forearm, elbow and upper arm. It then crosses the inner side of the wrist and palm and ends at the inside tip of the little finger, where it connects with the Small Intestine Meridian.

### Symptoms:
Disharmony of the Heart Meridian leads to pain at the heart position (precordial pain or pain at the sternum). In TCM, the heart rules the blood and the pulse. Without sufficient nourishment, an individual may feel thirsty and have a dry throat. Pain in the inner side of the forearm and heat in the palm may also indicate problems in this meridian.
Main indications:
Acupuncture points in this meridian are indicated for heart, chest and mental problems. They are also indicated for symptoms along the meridian.

Points for Specific Conditions

**Jiquan: HT-1**
This Acupoint is essential for treating chest pain, nausea, jaundice, hysteria, depression, hypotension, and paralysis of all limbs.

**Shaohai: HT-3**
This Acupoint is utilized in treating Ulnar nerve neuralgia, hand tremors, parkinson disease, intercostal neuralgia, cardiac, axilla or hypochondriac pain, neurasthenia, psychosis, anxiety, lymphoadenitis of axilla, epilepsy, and premature ejaculation.

**Lingdao: HT-4**
Useful for treating arm pain and spasms, arm neuralgia, anxiety, sudden muteness, sensation of cold in the bones, hysteria, incoherent speech, fear, and cardiac pain.

**Tongli: HT-5**
This Acupoint is manipulated for treating Bradycardia, cardiac arrhythmia, aphasia, tongue stiffness, speech difficulties, hysteria, fatigue, dizziness, blurred vision or eye pain, chest pain, palpitations associated with fear, heart pounding, headache, anxiety and fear, fear of people, yawning, face warm without perspiration, hypertension, uterine bleeding, somnolence, and general insomnia.

**Yinxi: HT-6**
An Acupoint for treating hysteria, stiffness and pain along the heart meridian, general chest pain, aphasia, palpitations, pulmonary tuberculosis with night perspiration, hemoptysis, epistaxis, anxiety, fear, and sudden rage.

**Shenmen: HT-7**
This Acupoint is for all heart syndromes and diseases, arrhythmia, palpitations, fibrillation and angina pectoris, insomnia, excessive dreaming, hysteria, irritability, anxiety and fear, poor memory, dizziness, headache, tongue diseases, neurasthenia, hypertension, hyperthyroidism, hemoptysis, bloody stool, eczema, itching, mania, depression, urinary incontinence, nocturnal emission, desire for cold drinks, likes to laugh, ceaseless chattering, cold feet with warm hands, frequent sighing, and forgetfulness.

**Shaochong: HT-9**
This Acupoint is used to treat manic depression syndrome, febrile diseases, sore throat, hemoptysis, bloody stool, and tightness of chest.
**Meridian:** Small Intestine  
**Yin or Yang:** Yang  
**Element:** Fire  
**Starts:** Tip of each little finger  
**Ends:** Face  
**Physical Association:** Digestive System  
**Mental Association:** Clarity in Judgment

### Pathway:
The Small Intestine Meridian starts from the tip of the little finger and crosses the palm and wrist. It runs upwards along the posterior side of the forearm until it reaches the back of shoulder where it ends at the uppermost part of the back (the bottom of the neck). At this position, it first branches off and moves internally through the heart and stomach to reach the small intestine. The second branch travels externally across the neck and cheek until it reaches the outer corner of the eye and then enters the ear. A short branch in the cheek moves upward to the inner corner of the eye where it connects with the Bladder Meridian.

### Symptoms:
Disharmony of the Small Intestine Meridian presents mainly as symptoms along its pathway such as a swollen chin, stiff neck, sore throat, hearing problems, yellow eyes, and pain along the shoulder, upper arm, elbow and forearm.
Main indications:
Acupuncture points in this meridian are indicated for diseases of the head, neck, ear, eyes and pharynx (throat), as well as certain febrile conditions and mental illnesses. These acupuncture points are also recommended for symptoms associated with the meridian's pathway.

Points for Specific Condition:

Shaoze: SI-1
This Acupoint is used to treat insufficient lactation, mastitis, breast abscess and other breast diseases, neck pain, headache, tonsillitis, torticollis, and polyuria.

Yanggu: SI-6
This Acupoint is manipulated to treat Swelling of submandibular region, parotitis, mumps, toothache, dizziness, tinnitus, deafness, fright, depression, mania, stomatitis, gingivitis, and hemorrhoids.

Xiaohai: SI-8
An Acupoint for treating vertigo, headache, neck and arm and shoulder pain, neuralgia and stiffness, coronary heart disease, chest pain, palpitations, insomnia, deafness, trembling, and general insanity.

Naoshu: SI-10
This Acupoint is useful for treating pain and stiffness of the scapula, shoulder and arm.

Tianzong: SI-11
Another Acupoint for treating pain and stiffness of the scapula, shoulder and arm.

Tinggong: SI-19
This Acupoint is used to treat sore throat, tonsillitis, pharyngitis, neck swelling, difficulty swallowing, neck lumps, abscess, scrofula and goiter, general chest pains, asthma, spitting foam, swelling of chest or cheek, tinnitus, and deafness.
**Meridian:** Urinary Bladder  
**Ying or Yang:** Yang  
**Element:** Water  
**Starts:** Inside edge of each eye  
**Ends:** Outside edge of the foot  
**Physical Association:** Urinary Tract  
**Mental Association:** Abundance in courage

**Pathway:**
The Bladder Meridian starts at the inner side of the eye and goes across the forehead to reach the top of the head where it branches into the brain. The main channel then goes across the back of the head and divides into two branches. One branch crosses the center of the base of the neck and extends downwards parallel to the spine. Once in the lumbar region
(bottom of the spine), it branches out to reach the bladder. The other branch crosses the back of the shoulder and runs downward on the outside, which is adjacent and parallel to the inner branch. It continues down until it reaches the buttocks where two branches run across the back of thigh along different pathways that join at the back of the knee. The joint meridian then continues along the back of the lower leg, circles behind the outer ankle, runs along the outside of the foot and terminates on the lateral side of the tip of the small toe, where it connects with the Kidney Meridian.

**Symptoms:**
Dis harmony of the Bladder Meridian can lead to problems of TCM bladder dysfunction. It is often related to symptoms caused by external pernicious influences (outside influences that cause disease such as cold, wind, fire, dampness, dryness and summer heat). Because the Tai Yang Meridian is considered the most exterior, it is the first meridian to be invaded if there is any external attack. Therefore, its disharmony can cause symptoms such as difficult urination, incontinence, painful eyes, runny nose, nose bleeding and nasal congestion. Pain in the head, neck, back, groin and buttock areas indicate disharmony in the Bladder Meridian pathway.

**Main indications:**
Acupuncture points in this meridian are indicated for diseases in the head, neck, eyes, back, groin and lower limbs as well as certain mental illnesses. They are also recommended for symptoms along the meridian pathway.

**Points for Specific Conditions:**

**Jingming: BL-1**
This Acupoint is used in treating all eye diseases, conjunctivitis, myopia, glaucoma, blurred vision, internal hemorrhage in the eye fundus, optic nerve atrophy, night and color blindness, excessive tearing, itching, cataract, retinitis, dizziness, pituitary and pineal gland diseases.

**Cuanzhu: BL-2**
An Acupoint for Frontal headache, facial paralysis, blurred vision, weak eyesight, glaucoma, tearing, dizziness, conjunctivitis, sinusitis, rhinitis, allergies affecting the eyes and nose, itching, sneezing, eyes red and painful, acute lower back pain or sprain, myopia, and cataract.

**Meichong: BL-3**
This Acupoint is used for treating headache, dizziness, hemiplegia, rhinites, loss of smell, epistaxis, vertigo, and facial swelling.

**Yuzhen: BL-9**
This Acupoint is used to treat severe pain in the eyes, supraorbital pain, excessive tearing, blurred vision, myopia, vertigo, neck and occipital pain, blocked nose, fatigue and depression.
Tainzhu: BL-10
This Acupoint is used to treat occipital headache, neck pain and stiffness and lower back pain, dizziness, convulsions in children, epilepsy, eye diseases, lacrimation, laryngitis, nasal obstruction, head heavy, throat swollen, torticollis, limbs weak and not coordinated, and neurasthenia.

Chengfu: BL-49
A useful Acupoint for treating prostatitis, pain and inflammation of the anal, genital or coccygeal regions, lower back pain and sciatica, hemorrhoids, pain in the penis, gynecological diseases, and spermatorrhea.

Weizhong: BL-52
This Acupoint is used to treat lower back pain, stiffness and sciatica, lumbar sprain, herniated disc, heat or sunstroke, skin diseases, eczema, psoriasis, furuncle, boils and carbuncles, herpes zoster, erysipelas, fever, spontaneous perspiration, acute abdominal pain, cystitis, dysuria, incontinence, diarrhea, convulsions, muscular spasm, knee pain and stiffness, epistaxis, bleeding hemorrhoids, alopecia and loss of eyebrow hair.

Chengsan: BL-53
This Acupoint is manipulated to treat bleeding and/or painful hemorrhoids, anal prolapse, diarrhea, constipation, gastrocnemius muscle pain and spasm, sciatica, hernia, urethritis, abdominal pain, tremors, convulsions, and lockjaw.

Feiyang: BL-55
This Acupoint is for treating blurred vision, nasal obstructions and rhinitis, lower back pain and sciatica, epistaxis, epilepsy, legs weakness, cystitis, irritable bladder, and nocturia.

Kunlun: BL-61
An Acupoint for treatment of pain and stiffness in the neck, upper and lower back and leg, occipital headache, dizziness, epilepsy, convulsions, promotes delivery, retained placenta, ankle and heel pain and numbness, difficult labor, and glandular diseases.

Zhiyin: BL-67
This Acupoint is used to treat fetal malposition, difficult labor, retained placenta, nasal obstruction, rhinitis, epistaxis, allergic itching and pain of medial eye canthus, fever without perspiration, melancholia, allergic itching in the whole body, chest and flanks pain, hot soles, and difficult urination.
Meridian: Kidney
Ying or Yang: Yin
Element: Water
Starts: Bottom of the foot
Ends: Upper chest
Physical Association: Reproductive Organs
Mental Association: Provides energy, and motivation to perform

Pathway:
The Kidney Meridian starts from the inferior side of the small toe. Crossing the middle of the sole and the arch of the foot, it circles behind the inner ankle and travels along the innermost side of the lower leg and thigh, until it
enters the body near the base of the backbone. After connecting with the kidney, it comes out at the pubic bone. Over the abdomen, it runs externally upwards until it reaches the upper part of the chest (the inner side of clavicle). A second branch emerges from the kidney and moves internally upwards and passes through the liver, diaphragm, lungs and throat, finally terminating at the root of the tongue. Another small branch divides from the lung to connect with the heart and the pericardium.

**Symptoms:**
Disharmony of Kidney Meridian can manifest as wheezing or coughing because the kidneys "grasp the qi". They also are the "mansion of fire and water," and the "residence of yin and yang". If there is insufficient nourishment and warming of the kidney, symptoms like edema (swelling), constipation, and diarrhea can indicate an imbalance in this meridian. Pain in the groin and pharynx (throat), which are located along the meridian's pathway, also can indicate a problem with the Kidney Meridian.

**Main indications:**
Acupuncture points in this meridian are used for gynecological, genital, kidney, lung, and pharynx (throat) diseases. They are also indicated for symptoms

**Points for Specific Conditions:**

**Yongquan: KI-2**
This Acupoint is used to treat insomnia, hypertension, convulsions, high fever, heat exhaustion, shock, seizures, hysteria with fainting, asphyxia (drowning), excessive sleepiness, dizziness, blurred vision, sore and swollen throat, dry mouth and tongue, aphonia, infertility, heat in the soles, edema, anorexia, kidney pain, scrotal inflammation, very red face, and pain in the toes.

**Dazhong: KI-5**
This Acupoint is used to treat asthma, chronic fatigue, chest fullness, dyspnea, hemoptysis, throat blocked, esophageal constriction, dry mouth, abdominal distention, lower back pain and stiffness, constipation, difficult defecation, uterine spasm, mouth and tongue dry, mania, depression, disorientation, inferiority complex, agoraphobia, fear, stage fright, unhappiness, and antisocial behavior.

**Yingu: KI-10**
An Acupoint for treating painful knees and thighs, abdominal pain and distention, pain in genitalia, hernia, scrotal eczema, damp and itching perineal area, frequent and painful urination, cystitis, hypersalivation, hematuria, impotence, pruritis vulva, leucorrhea, diarrhea, and uterine bleeding.
**Meridian:** Pericardium  
**Yin or Yang:** Yin  
**Element:** Fire  
**Starts:** Near Heart, splits in two  
**Ends:** Tip of middle finger, Tip of ring  
**Physical Association:** Circulatory System,  
**Mental Association:** Good relationship with others

**Pathway:**  
The Pericardium Meridian starts from the chest, leaves the pericardium organ and runs downwards through the diaphragm to connect with the triple burner. A branch rising from the chest emerges from the lower chest region and travels upwards to the axilla (armpit). From the medial aspect of the upper arm, it makes its way down between the lung and heart channels, until it reaches the elbow crease. It then runs down the forearm and enters the palm ending at the tip of the middle finger. Another short branch splits off from the palm to connect with the Triple Burner Meridian at the end of the ring finger.
Symptoms:
Disharmony of the Pericardium Meridian is related to the imbalance of the TCM heart and blood functions. The manifestation includes heart pain (precardial pain), chest discomfort, palpitations and an oppressed feeling in the chest. Since the Heart stores the "shen" or mental activities, Pericardium Meridian disorders are related to mania. In addition, swelling of the axilla and spasms of the elbow and arm can indicate a problem in this meridian, since it passes through these areas.

Main indications:
Acupuncture points in this meridian are used for heart, chest, and peptic diseases as well as mental illness. They are also indicated for symptoms manifested along the meridian's pathway

Points for Specific Conditions:

Tianchi: PC-1
This Acupoint is useful for treating fever without perspiration, headache, stiffling sensation in the chest, cough with phlegm, dyspnea, axillary adenitis, insufficient lactation, mamary pain, and foggy vision.

Quze: PC-3
This Acupoint is worked when treating irritability, myocarditis, cough, dyspnea, hand tremors, Parkinson disease, heatstroke, gastroenteritis, vomiting, stomachache, diarrhea with blood, erysipelas, urticaria, measles, sterility, and chorea.

Jianshi: PC-5
This Acupoint is used to treat epilepsy, hysteria, weeping and laughing, depression, hallucinations, heart pain, palpitations, carditis, rheumatic heart disease, vomiting, gastritis, malaria, hyperthyroidism, tonsillitis, pharyngitis, jaundice, hemorrhoids, irregular menstruation, and sudden aphasia.

Neiguan: PC-6
This Acupoint is used to treat cardiac and chest pain, rheumatic heart disease, hyperthyroidism, anxiety, asthma, bronchitis, pertussis, dyspnea, nausea, morning sickness, abdominal and gastric pain, hiccups, spasm of the diaphragm, malaria, dysentery, restless fetus, jaundice, gallstones, pancreatitis, appendicitis, migraine, epigastric and hypochondriac pain and distention, irregular menstruation, fainting, coma and shock, seizures, hysteria, forgetfulness, insomnia.

Daling: PC-7
This Acupoint is used to treat intercostal neuralgia, fever without perspiration, stomatitis, tongue root pain, axillary swelling, sadness, weariness, ulcerative colitis, appendicitis, gastritis, eczema, acne, conjunctivitis, mania, hysteria, insomnia, seizures, panic, and fear.

Laogong: PC-8
This Acupoint is used to treat epistaxis, gingivitis, halitosis, stomatitis, inability to swallow, chest and hypochondriac pain and fullness, excessive perspiration of palms, fungal infections of hands and feet, headache, thirst, blood in urine or stools, hemorrhoids, indigestion, heatstroke, and incoherent speech.

Zhongchong: PC-9
This Acupoint is used to treat coma, drowning, fainting, sunstroke, delirium, poor memory, severe fright, fever without perspiration, hot palms, cerebral congestion, hyper or hypotension, aphasia, and gastric pain.
**Meridian:** Triple Burner  
**Yin or Yang:** Yang  
**Element:** Fire  
**Starts:** Tips of ring fingers  
**Ends:** Circles the face  
**Physical Association:** Respiratory System  
**Mental Association:** Open to emotional interaction

**Pathway:**  
The Triple Burner Meridian begins at the outer tip of the ring finger and goes along the back of the hand, wrist, forearm and upper arm, until it reaches the shoulder region where it branches off. One branch travels internally into the chest and passes through the pericardium and diaphragm uniting the upper, middle and lower burner (triple burner). The other branch runs externally up the side of the neck, circles the ear and face, and finally ends at the outer end of the eyebrow where it connects with the Gall Bladder Meridian.
Symptoms:
Disharmony of the Triple Burner Meridian leads to symptoms like abdominal distention, edema (swelling), urinary incontinence, difficulty urinating, loss of hearing, and ringing in the ears (tinnitus). Pain in the pharynx (throat), eyes, cheek, back of the ear, shoulder and the upper arm can occur as these structures are located along this meridian's pathway.

Main indications:
Acupuncture points in this meridian are recommended for ailments of the ears, eyes, chest, pharynx (throat), and the side of the head as well as certain febrile conditions. They are also indicated for symptoms along this meridian's pathway.

Points for Specific Conditions:

**Guanzhong: TW-1**
This Acupoint is used to treat Malaria, febrile diseases, fainting, heatstroke, conjunctivitis, dim vision, deafness and tinnitus, tonsillitis, dry mouth and lips, tongue curled up, and general headaches.

**Yangchi: TW-4**
An Acupoint useful for wrist pain and weakness, malaria, tonsillitis, conjunctivitis, fatigue, dry mouth and throat, diabetes, melancholy, and general fatigue.

**Jianliao: TW-14**
This Acupoint is used to treat shoulder pain, immobility, inflammation and atrophy, bursitis, frozen shoulder, excessive perspiration, urticaria, and hypertension.

**Tianliao: TW-16**
This Acupoint is used to treat shoulder and upper back pain and stiffness, stiff neck, and clavicular pain.

**Yifeng: TW-17**
This Acupoint is used to treat Facial paralysis, lockjaw, trigeminal neuralgia, convulsions, deafness, tinnitus, all ear diseases, otitis media, parotitis, blurred vision, vertigo, aural hallucinations, scrofula, lymphangitis, and toothache.

**Ermen: TW-21**
This Acupoint is used to treat Deafness, tinnitus, all ear diseases, otitis media, ear abscess, excessive cerumen production, and temporomandibular joint pain.

**Sizhukong: TW-23**
This Acupoint is used to treat All eye diseases, optic nerve atrophy, blurred vision, color blindness, supraorbital pain, temporal headaches, seizures, insanity, sudden blindness relating to hysteria, dizziness, conjunctivitis, and facial paralysis.
Meridian: Gall Bladder  
Yin or Yang: Yang  
Element: Wood  
Starts: 2 Branches near eyes  
Ends: Top of feet  
Physical Association: Digestive System  
Mental Association: flexible, better time management

Pathway:
The Gall Bladder Meridian starts from the outer corner of the eye and divides into two branches. One branch runs externally and weaves back and forth at the lateral side of the head. After curving behind the ear, it reaches the top of the shoulder and crosses the lateral side of rib cage and abdomen, until it ends up at the side of the hip. The other branch enters the cheek and runs internally downward, through the neck and chest to
connect with the gall bladder. It continues moving downwards and comes out in the lower abdomen, where it connects with the other branch at the hip. The hip branch then runs toward the lateral side of the thigh and lower leg. After crossing the ankle, it goes over the foot to reach to the tip of the fourth toe. Another small branch leaves the meridian and terminates at the big toe to connect with the Liver Meridian.

**Symptoms:**
In TCM, the gall bladder is closely related to the liver. Hence, the disharmony of the Gall Bladder Meridian causes symptoms such as a bitter taste in the mouth, dizziness, headache, and pain at the outer angle of the eyelids. Pain along the meridian pathway such as in the axilla (armpit), chest, lower chest, buttocks and the lateral side of the lower limbs can also indicate a disorder of the Gall Bladder Meridian.

**Main indications:**
Acupuncture points in this meridian are indicated for ailments of the eyes, ears, pharynx (throat), and lateral side of the head in addition to mental illness and fever. They are also recommended for symptoms along the meridian's pathway.

**Points for Specific Conditions:**

**Tongziliao: GB-1**
This Acupoint is used to treat conjunctivitis, keratitis, myopia, excessive lacrimation, photophobia, optic nerve atrophy, night or color blindness, facial paralysis, headache, trigeminal and neuralgia.

**Tinghui: GB-3**
An Acupoint useful in treating all ear diseases, deafness, tinnitus, deaf mutism, otitis media, facial paralysis or pain, otorrhea, headache, mumps, toothache, tempomandibular joint arthritis, convulsions, seizures, and sadness.

**Jianjing: GB-21**
This Acupoint is used to treat stiffness and pain of the neck, shoulder and upper back, mastitis, agalactia, difficult labor, scrofula, vertigo, vertical headache, chest pain, dyspnea, boils, carbuncles, breast abscess, alternate hot and cold, fever, blurred vision, lacrimation, optic nerve atrophy, tinnitus, poor hearing, stiff spine, nausea, morning sickness (cautiously).

**Yuanye: GB-22**
This Acupoint is used to treat diabetes, nephritis, nephrolythiasis, painful urinary dysfunction, hypochondriac, abdominal or lower back pain, kidney colic, borborygmus, diarrhea, can not stand for a long period, can not bend, restless fetus, and kidney stones.

**Riyne: GB-25**
This Acupoint is used to treat jaundice, cholecystitis, cholelithiasis, hepatitis, gastric and duodenal ulcer, hypochondriac, intercostal, axillary and shoulder pain and distention, hyperacidity, hiccups, vomiting, and colic.

**Huantiao: GB-30**
This Acupoint is used to treat hip joint inflammation, sprain and pain, sciatica, thigh muscular spasm, lower abdominal and lower back pain, leg paralysis, hemiplegia, urticaria, neurasthenia, and edema.
**Yangguan: GB-32**
This Acupoint is used to treat thigh and knee weakness, Bi and Wei syndrome, leg Qi, lower back pain and sciatica, unilateral itching of whole body, urticaria, herpes zoster, hemiplegia, red and swollen eyes.

**Yanglingquan: GB-36**
This Acupoint is used to treat hepatitis, muscular tetany, infantile kyphosis, jaundice, chest and hypochondriac pain and fullness, abdominal pain, headache, neck pain and stiffness, and seizures.

**Yangjiao: GB-40**
This Acupoint is used to treat sciatica, weakness of legs, cold feet, asthma, chest and hypochondriac pain and fullness, knee pain, and gastrocnemius pain.

**Zugiaoyin: GB-44**
This Acupoint is used to treat deafness, tinnitus, blurred vision, conjunctivitis, sore throat, tongue stiff, numb throat, unilateral headache, vertigo, febrile diseases, hypertension, dream disturbed sleep, insomnia or somnolence, intercostal neuralgia, dyspnea, pleurisy, conjunctivitis, weak willpower, and irrational fear (generalized anxiety).
Meridian: Liver  
Yin or Yang: Yin  
Element: Wood  
Starts: Top of big toes  
Ends: Middle of chest  
Physical Association: Tendons/ Ligaments  
Mental Association: Adaptable to more situations, flexible

Pathway:  
The Liver Meridian starts from the top of the big toe and goes across the top of the foot. After crossing the inner ankle, it continues to go upwards along the inner side of the lower leg and the thigh, until it reaches the pubic region. It then circulates around the external genitalia and enters the lower abdomen. Afterwards, it goes up the abdomen and reaches the lower chest to connect with the liver and gall bladder. The meridian further travels upwards along the throat and connects with the eyes. Finally it emerges
from the forehead to reach the vertex of the head. One of its internal branches originates internally from the eye and moves downwards to the cheek where it curves around the inner surface of the lips. Another branch starts from the liver and passes through the diaphragm to reach the lung where it connects with the Lung Meridian and completes the cycle of the twelve meridians.

**Symptoms:**
Disharmony of the Liver Meridian leads to groin pain, chest fullness, urinary incontinence, difficulty urinating, swelling of the lower abdomen and hernias.

**Main indications:**
Acupuncture points in this meridian are indicated for liver, gynecological and genital diseases. They are also recommended for symptoms along the meridian's pathway.

**Points for Specific Conditions:**

**Dadun: LV-1**
This Acupoint is used to treat pain and inflammation of the genitalia, testicular mumps or contracture, cystitis, urinary incontinence, enuresis, hematuria, irregular menstruation, hernia, constipation, excessive perspiration, blood in the urine or stools, abnormal uterine bleeding, pruritis vulva, fainting, and somnolence.

**Zhongfeng: LV-4**
This Acupoint is used to treat abdominal pain and distention, malaria, jaundice, hernia, colic, cold feet, conjunctivitis, anorexia, genital pain, spermatorrhea, impotence, urethritis, vaginal pain, and muscular weakness.

**Xiguan: LV-7**
This Acupoint is used to treat arthritic pain or minimiscus of medial knee.

**Zhangmen: LV-13**
This Acupoint is used to treat hepatitis, pancreatitis, vomiting, indigestion, borborygmus, flatulence, jaundice, epigastric pain, diarrhea and constipation, ascites, abdominal pain and distention, intercostal neuralgia, body tremors, fatigued extremities, lassitude, enlarged spleen and or liver, and abdominal tumors.

**Qimen: LV-14**
This Acupoint is used to treat cholecystitis, malaria, pancreatitis, cirrhosis, hypertension, hunger without desire to eat, hyperacidity, chest and epigastric pain, hypochondriac distention and pain and peritonitis.
There are eight additional meridians that are not directly linked to the major organ systems. The eight extra channels are:

- **Ren Mai** - Conception vessel,
- **Du Mai** - Governing vessel,
- **Chong Mai** - Penetrating vessel,
- **Dai Mai** - Girdle vessel,
- **Yin Wei Mai** - Yin linking vessel,
- **Yang Wei Mai** - Yang linking vessel,
- **Yin Qiao Mai** - Yin heel vessel,
- **Yang Qiao Mai** - Yang heel vessel,

**Du Mai (Governing Vessel)**
The Du Mai governs all the yang channels. Weakness here is associated with symptoms such as stiffness, back pain, and headaches. It runs from the anus, up the spine and across the crown of the head to finish inside the upper lip.

**Ren Mai (Conception Vessel)**
Ren also means "responsibility," and so the Conception Vessel is seen as being responsible for, or accountable to, all the other yin channels. It starts in the uterus and is particularly associated with pregnancy and childbirth. Miscarriage, for example, can be associated with weakness in the Ren Mai. General debility and physical weakness can also be linked to this channel.

**Chong Mai (Penetrating Vessel)**
The Chong Mai or "Penetrating Vessel" is also called the "Sea of the twelve channels", since it communicates with the main channels. Like the Ren Mai, it starts from the uterus and can be associated with problems in pregnancy. Problems with this channel can also manifest as abdominal pains and muscle spasms.

**The Dai Mai (Girdle Vessel)**
The Dai Mai (Girdle Vessel) runs around the waist like a belt and is usually described as "binding" all the channels together; problems here can be linked with back and abdominal pains.
The Yin Qiao (Yin Heel Channel)
The Yin Qiao, or yin heel channel, runs along the inside of the heel, up the front of the body and ends near the eye. Excessive sleeping is regarded in terms of Chinese medicine as a symptom of disharmony in this channel.

The Yang Qiao (Yang Heel Channel)
The Yang Qiao, or yang heel channel, starts on the outside of the heel and runs along the outer side of the leg and back to end at the back of the skull. Symptoms of disharmony here include insomnia and epilepsy.

The Yin Wei (Yin Tie Channel)
The Yin Wei, or yin tie channel, is so called, as it ties together the yin channels, connecting and regulating all of them. It starts at the front of the leg and ends in the neck. Heart pains can be a symptom of problems in this channel.

The Yang Wei (Yang Tie Channel)
The Yang Wei, or yang tie channel, fulfills a similar function to the Yin Wei, but only for the yang channels. It starts from the side of the foot and, like the Yang Qiao, ends at the back of the skull. Disharmony here may lead to such symptoms as chills and fevers.

Besides providing important links and connections for the twelve regular channels, these extra channels also help to circulate Qi around the body and act as reservoirs for Qi and Blood, helping to keep the regular channels in balance.

The extra channels also play a part in circulating the Wei Qi (defense energy) around the body. Consequently, they are considered to be important in combating external evils and preventing disease.
Chapter 4: Manipulating the Meridians and Points
Acupressure massage may be applied with the fingertips, hands, arms, elbows, or even knees and feet during a session, although it is generally unwise to use the feet to massage a client unless you have been specifically trained in Ashiatsu and have the appropriate support bars for controlling your weight and balance.

After you have performed your assessment on the client and have identified which Meridians need to be manipulated you can devise a treatment plan. Most Asian bodywork practitioners do not limit themselves to just working on the one Meridian and points, they give the client the benefit of the entire massage; they just focus more time and energy on certain areas.

In general, the correct points are located first by means of correlating the data collected in the assessment process and conferring on the charts and diagrams of the Meridians. During the massage when you come to an area where one of the relevant points is located you can “work the point” by applying firm fingertip pressure to it and maintaining that pressure for several seconds before releasing.

After you have located the point and your fingers are comfortably positioned you can gradually lean your weight toward the point to apply the pressure. Naturally this will vary in exact execution depending on what point you are working on, but generally you will want to bend your leg and apply pressure by slowly leaning forward, or in some cases, downward.

Use the weight of your upper body and not just your hands in order to prevent injury. Direct the pressure perpendicularly to the surface of the skin as you take several long, slow, deep breaths. Hold for a few minutes until you feel a regular pulse or until the soreness at the point decreases. Then gradually release the pressure, finishing with a soothing touch.

What happens when are holding your finger on the point is much the same as when an Acupuncturist places a needle in the area, the body will restore blood flow (and qi) to that point. In fact the effect is so similar that the National Center for Complementary and Alternative Medicine (NCCAM) defines Acupressure as “acupuncture without needles.” This is why in Chapter 6 you will see some clinical trials relating to the efficacy of acupuncture-what is being studied in the trials is not whether or not the
needles work, it is studying whether or not the manipulation of the points on the Meridans work.

Your client may feel slight discomfort when you are applying the pressure, but it should not be painful. Keep in mind that a severely impeded Meridian will cause more discomfort.

Hold the finger pressure directly on the point; gradual, steady, penetrating pressure for approximately three to four minutes. The client may experience different sensations when you press on different points. They may feel nothing but pressure, other times it may be painful.

Keep in mind that you do not have to use the finger tip or thumb, if you are having trouble locating the specific point exactly or if your fingers or thumb are tired you can use the heel of your palm. This not only provides a wider area of coverage, it allows you to apply a heavier pressure without injuring the client.

The middle finger is the strongest finger in your hand and does most of the work in your massage strokes that use pressure of the hand. It is well suited for acupressure point manipulation, as is the thumb. If you are using the thumb be mindful of the fact that it is less sensitive to pressure than your fingers are, which may cause you to apply more pressure than needed.

Generally speaking, you want to apply a slow, firm pressure on the point at a 90-degree angle from the surface of the skin. You should not be pulling on the skin, remember that acupressure massage does not use lubricating products and if executed properly none are needed. You are pressing—not rubbing.

Be mindful of the direction of your pressure, it should be aimed into the center of the part of the body you are working on. Gently and slowly release the finger pressure, as this will allow the tissues time to respond, promoting healing. Specifically, once the pressure is removed the capillaries will be reopend and blood (and qi) will rush into the area.

You may begin to notice that you can feel a pulse through the skin as you hold the pressure in. This is good, and TCM teaches us to pay attention to what you feel when it comes to your clients pulse. If it's very faint or throbbing, hold the point longer until the pulse balances.
Remember to take care of your hands. Acupressure can be more tiring on the muscles of the hand and wrist than the gentle gliding strokes of a Swedish massage. If you feel your hand beginning to tire you can switch hands by gradually withdrawing the pressure and then replacing it with the opposite hand, giving you a chance to flex your tired hand and keep the circulation flowing into it.

It is not unusual for a client to experience pain in another part of their body while you are applying pressure to a specific acupoint. In western medicine this is a phenomenon called **Referred pain**. It is pain perceived at a location other than the site of the painful stimulus. An example is the case of ischemia brought on by a myocardial infarction (heart attack), where pain is often felt in the neck, shoulders, and back rather than in the chest, the site of the injury. In TCM this is explained by the path of energy through the Meridian system.
Chapter 5: Precautions and Contraindications

Be mindful of your breathing while performing your Acupressure techniques. Breathing isn’t just a physiological function, it is the most profoundly effective tool known for clearing the mind and revitalizing the body.

When your breathing is shallow your body’s vital systems are functioning at their lowest level. If your breath is long and deep the respiratory system functions properly, and the body cells become fully oxygenated.

Tell your clients that they should be breathing slowly and deeply during their session as well. Some practitioners intentionally tell their clients to mimic their own breathing during the session in order to help them keep a decent cadence. If you do not feel comfortable doing this, then just remember as you work on your client to occasionally remind them to focus on breathing deeply into their abdomen. Deep breathing encourages healing energy to flow throughout the body.

On Scope of Practice

Always remember that the system of TCM was, for thousands of years, the only system of medicine practiced in China, so it makes some fairly grandiose claims about what it can treat. This is due to the fact that it is all they had to treat with!

TCM is still used in China, but they use also antibiotics, x-rays, and antiviral pharmaceuticals. Be realistic and remember your scope of practice as a massage therapist.

Do not confuse the assessment portion of your treatment with a medical diagnosis. While TCM doctors do diagnose their clients with qi deficiencies and excesses, that is far outside of your scope of practice.

Precautions to Acupressure massage

Always apply finger pressure in a slow, rhythmic manner to enable the layers of tissue time to adapt and the internal organs time to respond. Never press any area in an abrupt, forceful, or jarring way.

Use the abdominal points cautiously, especially if your client has had symptoms of nausea or difficulty or pain going to the bathroom. Avoid the abdominal area entirely if your client is not comfortable having the area
worked, and always make sure they are properly draped (if you are blending eastern and western methods, if you are strictly using Acupressure they should be dressed in loose fitting comfortable clothes).

Acupressure should not be used on certain areas of the Lymphatic system, specifically the groin, the area of the throat just below the ears, and the outer breast near the armpits.

Like in all other forms of massage, do not work directly on a serious burn, an ulcerous condition, or an infection for these conditions, medical care alone is indicated.

Direct pressure on a newly formed scar must be avoided, however, gentle continuous holding a few inches away from the periphery of the injury will stimulate the area and help it heal.

After an acupressure session, your clients body heat is lowered; thus their resistance to cold is also lower along with it. According to TCM this is because the body's vital energies are concentrating inward to maximize healing. Since the body will be more vulnerable, you should tell your client to wear extra clothing and keep warm when they finish an acupressure routine.

**Acupressure Contraindications**

Obviously clients with life-threatening diseases and serious medical problems should always consult their doctor before using acupressure or other types of massage therapy. It is important for the novice to use caution in any medical emergency situation, such as a stroke or heart attack, or for any serious medical condition, such as arteriosclerosis or an illness caused by bacteria. Acupressure is a complimentary treatment at best and is not appropriate as the sole treatment for any disease or condition other than simple stress.
Chapter 6: Clinical trials and the Efficacy of Acupressure

We here at the Somatic Arts and Sciences Institute are big believers in efficacy studies, it’s part of our commitment to ethics in massage therapy, but also as educators.

Whenever possible we try to present clinical trials and research on whatever subject we are teaching about, and in the case of TCM it sometimes doesn’t support the claims being made. It doesn’t matter to us, we present it anyway.

I have included three copies of clinical studies on acupuncture and acupressure. As I said earlier, the studies on acupuncture are relevant for our subject matter, since the same Meridians and acupoints are involved.

All of the articles are in the collective commons, which means you can find them in various public databases and digitilized journals. This means that this Chapter of the course is not copyrighted, so feel free to use these studies however you want.

Of course the rest of the course is subject to standard copyright laws.

The articles begin on the following page.
Acupuncture and moxibustion for stress-related disorders
Tetsuya Kondo* and Masazumi Kawamoto


The electronic version of this article is the complete one and can be found online at: http://www.bpsmedicine.com/content/8/1/7

This is an open access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract
Acupuncture and moxibustion, which medical doctors are licensed by the government of Japan to perform, can improve the psychological relationship between doctors and patients, especially when it is disturbed by a “game”, a dysfunctional interpersonal interaction that is repeated unintentionally. This advantage is due to the essential properties of acupuncture and moxibustion. Acupuncture and moxibustion are helpful in treating somatoform disorders, especially musculoskeletal symptoms. In Japan, a holistic acupuncture and moxibustion therapy called Sawada-style has been developed. This is based on fundamental meridian points that are considered to have effects on central, autonomic nervous, immune, metabolic, and endocrine systems to regulate the whole body balance. In addition, some of the fundamental points have effects on Qi, blood, and water patterns associated with major depression, generalized anxiety disorder, eating disorders, and somatoform disorders. The fixed protocol of Sawada-style would be suitable for large-scale, randomized, controlled studies in the future. Recent systematic reviews indicate that electroacupuncture would be a useful addition to antidepressant therapy for some symptoms accompanying fibromyalgia. Acupuncture and moxibustion are also recommended for irritable bowel syndrome, instead of Western drug therapy. Surprisingly, the dorsal prefrontal cerebral cortex, which is associated with a method of scalp acupuncture applied for gastrointestinal disorders, has been found to be activated in patients with irritable bowel syndrome. It is quite possible that regulation of this cortical area is related to the effect of scalp acupuncture. This acupuncture method can be effective not only for irritable bowel syndrome but also for other stress-related gastrointestinal disorders.
Keywords: Acupuncture; Moxibustion; Stress; Fibromyalgia; Functional gastrointestinal disorder; Irritable bowel syndrome; Autonomic nervous system; Hypothalamo-pituitary adrenal axis; Sawada-style holistic therapy

**Introduction**

If a general practice doctor rules out typical disorders and fails to make a clinical decision in the case of a patient with a chronic complaint, the patient tends to be labeled as having an indefinite complaint and is advised to consult a psychiatrist on the grounds that the symptoms are just imaginary. The Japanese word meaning “imagination” is “Qi-no-sei”, which can also be translated as “because of Qi”. In order to treat such a patient, supplying or regulating Qi by acupuncture would be effective.

Table 1 shows the causes of each of five visceral dysfunctions according to traditional Chinese theory. As shown, as many as three of five viscera are vulnerable to psychological stress. Therefore, oriental medicine has an affinity to psychosomatic medicine.
This review discusses (1) the advantages of the use of acupuncture and moxibustion by psychosomatic medical doctors, (2) The specific effects of acupuncture and moxibustion on musculoskeletal symptoms, (3) Japanese-style holistic acupuncture and moxibustion, to harmonize the whole body with regard to the mechanism of action, and (4) The effectiveness of acupuncture for fibromyalgia [1], chronic pain [1], and psychosomatic gastrointestinal disorders [2].

Improvement of the psychological relationship between the patient and the therapist under the Japanese Medical Administration System for acupuncture and moxibustion

In China and Korea, the medical license for oriental medicine is completely independent of that for occidental medicine. In the same way, a license for acupuncturists and moxa-cauterizers is issued to those who pass a national examination in Japan. However, acupuncture and moxibustion are also permitted to all Japanese medical doctors, without the need for the specialist license. This Japanese system has many advantages. It is an advantage of the Japanese medical service system that medical doctors can choose between nerve block and acupuncture according to the condition of the patient [3]. In addition, physical contact through acupuncture or moxibustion can establish rapport if the psychological interview is difficult due to alexithymia or negativism. In Japan, a needle is inserted with a fine tube as a guide for the needle. A Japanese acupuncturist, Sugiyama, developed this technique. Since a tube surrounds the point of insertion, there is little insertion pain. This can soften the resistance to acupuncture, even by patients with excessive anxiety, and it helps establish and maintain confidence in the relationship between the patient and the therapist.

Nakamura et al. reported in a factor analysis of 197 patients that the attentive attitude of the therapist and proper touching by the therapist were significantly associated with a decrease in the subjective symptoms by acupuncture and moxibustion therapy, while the physical factors of the therapeutic stimulation were not [4]. These results indicate that acupuncture and moxibustion therapy is a kind of psychotherapy, which

Table 1. The causes of dysfunctions of the five viscera according to traditional Chinese theory
may be of assistance in establishing the psychological therapist-patient relationship, rather than a physical therapy.

According to transactional analysis theory, the therapeutic structure of acupuncture and moxibustion itself is sometimes helpful to escape from a “game” between the patient and the therapist. This is an acupuncture-specific effect and not the case with Kampo medicine. I previously reported that acupuncture broke down a “game” in the treatment of a patient with fibromyalgia who had been treated for 10 years and who had been unable to work for more than 12 hours per week [5]. The therapy had been disturbed by a hyperreactive action of the patient against the minimal touch by the acupuncturist, due to systemic hyperalgesia. A “yes, but” game was found between the patient and therapists. Searching for tender points, which is necessary and essential for acupuncture therapy, was of assistance in escaping from this “game” and enabled therapy for symptoms such as general fatigue. As a result, the patient acquired the ability to work for 23 hours per week, in addition to relief of pressure pain. This suggests that acupuncture therapy is suited to the treatment of patients with chronic, marked pain.

**Musculoskeletal symptoms**

Knowledge of acupuncture and moxibustion is especially helpful for treating musculoskeletal symptoms, which are often complained of by patients with somatoform disorders, as mentioned below. The principle of acupuncture therapy depends on the three dimensional location of the complaint, since meridian points are selected from among the points that belong to the meridian that passes through the location of the symptom. This is also an essential difference between acupuncture and Kampo medicine, which is administered to the whole body, although a few Kampo formulas, such as formulas tonifying the kidney, tend to have an effect on lower energizer. The correspondence between the location of the symptoms and meridian points is much more complicated, since as many as twelve main meridians and six extra meridians run longitudinally, except for the belt vessel, and cross each other at crossing points.

The case of a patient who was admitted with characteristic chronic lower dorsalgia, along with a feeling of tightness around the nipples, is shown in Figure 1. This patient had been diagnosed as having a chronic pain disorder and was under nonspecific treatment for chronic pain disorder, such as cognitive behavioral therapy including reading on Morita therapy.
and autogenic training, for four months. However, acupuncture therapy, which is specific for these symptoms, would have been more effective, since the symptoms closely resembled the symptoms due to dysfunction of the gallbladder ching muscle. There are twelve ching muscle systems in the human body. All of these are superficial lines, which run longitudinally between the head and extremities and are mainly associated with relatively superficial musculoskeletal symptoms, unlike the normal meridians that run deeply and are related to the viscera and bowels. Although each ching muscle runs along the corresponding main meridian, it merely indicates that multiple kinks tend to appear along the line, like a fictional, long, single muscle that has kinks. As shown in Figure 2, the gallbladder ching muscle runs from the third crural finger and ascends along the lateral side of the whole body. On the way, its branch lines adhere to bones or skin structures such as the nipples [6]. The symptoms due to dysfunction of this route closely resemble the complaints shown in Figure 1, and the kinks of the alternative lines across the nipples in Figure 2 may explain what the patient complained of as tightness around the nipples.

Figure 1. Chronic dorsalgia in a patient admitted with chronic pain disorder.
Figure 2. Gallbladder ching muscle. A modification of Irie’s illustration [6].

Acupuncture and moxibustion for systemic regulation of the autonomic nervous, central nervous, immune, and endocrine systems
The history of holistic therapy
Holistic therapy means treating the root by harmonizing the five viscera and six bowels. At the beginning of the 20th century, a Japanese acupuncturist, Sawada, developed the first holistic therapy, which is called “Sawada-style holistic therapy”. This therapy consists of moxibustion on the eleven fundamental meridian points that regulate the whole body and that are essential for every patient and additional points for the individual patient's status [7].

The disorders susceptible to this therapy include nervous exhaustion and disorders for which occidental medicine is not sufficiently effective, such as daytime somnolence, tinnitus, and nocturnal perspiration. In China, acupuncture was virtually abolished in 1822 and remained disregarded until 1954. During this period, the Sawada-style was introduced to China and helped Chinese acupuncture continue its existence [8]. The essence of Sawada-style was published by Sawada’s disciple, Shirota [9,10]. This book functions as a bible for Japanese acupuncturists and moxa-cauterizers [11]. It is possible that this therapy involves the central nervous system. Unfortunately, no direct evidence for Sawada-style holistic therapy has been published.

Apart from Sawada-style holistic therapy, Kurono developed his own holistic therapy. He selected the fundamental meridian points according to the statistics on the previous frequency of his own usage, which are partially the same with those of the Sawada-style [12].

The effects of fundamental meridian points for holistic therapies according to modern medicine

According to traditional Chinese theory, the 20 fundamental points for the Sawada-style or Kurono-style mentioned above have various physiological actions that are regarded according to modern medicine as actions on the central nervous, immune, endocrine, and metabolic systems, as shown in Table 2[13]. Shirota considered the principle of his holistic therapy, which was seven times of moxibustion per meridian point over the long term as a supplementary stimulation [9]. Kurono et al. employed acupuncture with relatively slight pressure, 20 g, which appeared to hardly raise habituation in a pilot study, while acupuncture with pressure of 60 g tended to raise habituation. Therefore, it would be useful to refer to reports on the physiological effects of supplementary acupuncture or moxibustion in
understanding the mechanism of the action of holistic therapies. In the reports cited below, supplementary stimulations are mainly used such as electroacupuncture of 2 Hz [14,15], or 2–10 Hz [16].

Table 2. The effects of fundamental meridian points for the Sawada-style and Kurono-style holistic therapies on the central nervous, immune, endocrine, and metabolic systems

| Table 2. The effects of fundamental meridian points for the Sawada-style and Kurono-style holistic therapies on the central nervous, immune, endocrine, and metabolic systems |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sawada-style fundamental meridian points** | 10 | 11 | 13 | 14 | 18 | 20 | 23 | 25 | 32 | 12 | 16 |
| **Kurono-style fundamental meridian points** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Effects on the autonomic nervous system** | | | | | | | | | | | |
| Vagal nerve activity | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sympathetic nerve activity | | | | | | | | | | | |
| Heart rate | | | | | | | | | | | |
| **Effects on the immune, endocrine and metabolic system** | | | | | | | | | | | |
| Anti-inflammatory effect | + | + | + | + | + | + | + | + | + | + | + |
| Reinforcing immunological resistance | + | + | + | + | + | + | + | + | + | + | + |
| Promoting oxygen intake and nutrition, and regulating body temperature | + | + | + | + | + | + | + | + | + | + | + |
| Antioxidant effect | + | + | + | + | + | + | + | + | + | + | + |
| Antidepressive effect | + | + | + | + | + | + | + | + | + | + | + |
| Analgesia | + | + | + | + | + | + | + | + | + | + | + |

*Without effect on heart rate variability.

**On viscera.

***On cephalic and jugular area.

Kondo and Kawamato

<table>
<thead>
<tr>
<th>GII</th>
<th>GII</th>
<th>CV</th>
<th>BL</th>
<th>BL</th>
<th>BL</th>
<th>BL</th>
<th>BL</th>
<th>BL</th>
<th>CV</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>21</td>
<td>12</td>
<td>8</td>
<td>11</td>
<td>14</td>
<td>25</td>
<td>35</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sawada-style fundamental meridian points</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kurono-style fundamental meridian points</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Effects on the autonomic nervous system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vagal nerve activity</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sympathetic nerve activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on the immune, endocrine and metabolic system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-inflammatory effect</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Reinforcing immunological resistance</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Promoting oxygen intake and nutrition, and regulating body temperature</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Antioxidant effect</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Antidepressive effect</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Analgesia</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

*Without effect on heart rate variability.

109
The effects of fundamental meridian points for holistic therapies on the autonomic nervous system

It was recently reported that some of these meridian points have effects on the autonomic nervous system. For example, CV12 [17] and ST36 [18] increase parasympathetic nerve activity. In addition, some of the meridian points have opposite effects, which are contrary to other points. LI11 [14] and GB21 [19] increase sympathetic nerve activity, while BL13 decreases it [20]. Since the point combinations in the holistic therapies include meridian points with bi-directional regulation of the autonomic balance, they can be applied to various pathological conditions in a balanced manner. Therefore, the holistic therapies can also be applied to chronic anxiety disorders [21] or severe depression [22,23], in which both sympathetic and parasympathetic nerve activities are reduced. BL32 reduces heart rate without an effect on heart rate variability [17], which might be effective for patients with palpitations without heart rate variability abnormalities.

The effects of fundamental meridian points for holistic therapies on the immune, endocrine, and metabolic systems

BL18, BL20, CV12, KL6, LI11, ST36, and TE4 have an anti-inflammatory effect on the immune system, while BL20, BL23, CV6, ST36, BL13, and LR14 reinforce the immune system according to traditional Chinese theory [13]. Stimulation of BL23, the dorsal transport point of the kidney meridian, promoted the secretion of adrenal steroid hormones [24,25]; this is quite reasonable, since the organ called the kidney in traditional Chinese theory includes the adrenal gland. If the hypothalamo-pituitary adrenal axis (HPA axis) is activated by acupuncture, cortisol is released, and this relieves the inflammation of arthritis or bronchial asthma. In fact, this meridian point has an anti-inflammatory effect on the five viscera according to traditional Chinese theory [9,14]. On the other hand, Toriiizuka et al. reported that subcutaneous needles at BL23 increased norepinephrine and dopamine in the brain and prevented the decrease in the immune responses accompanying aging or menopause [26]. ST32 in addition to Extra37 also improved immune suppression after surgical stress [27].

Sawada laid weight on the triple energizer meridian, which was considered to promote oxygen intake and alimentation to regulate anabolism, catabolism, and body temperature [7,9,10,28]. Unfortunately, direct
evidence that supports this theory was not found. The only evidence is a report that acupuncture including TE5 decreased vasomotor symptoms in cancer patients, probably due to raising the serotonin level to alter the body temperature set point [29].

The effects of fundamental meridian points for holistic therapies on mental status BL10, BL18, CV6, CV12, GB20, GV12, Kl6, Li11 and ST36 have an anxiolytic effect according to traditional Chinese theory [13]. There is evidence for some of these. For example, acupuncture for ST36 decreased anxiety-related behavior, the serum corticosterone level, and tyrosine hydroxylase-immunoreactive expression of rats under immobilization stress [15].

BL18, CV12, ST36, GB20, GB21 LR14, and ST36 have an antidepressive effect according to traditional Chinese theory. Among these meridian points, electroacupuncture at ST36 and GB20 reduced the Beck Depression Inventory scales in subjects with psychosomatic or psychiatric disorders such as fibromyalgia, irritable bowel syndrome, chronic fatigue syndrome, primary insomnia, and obsessive-compulsive disorder, probably by enhancing the intracephalic release of serotonin [16].

The effects of fundamental meridian points for holistic therapies on nociception

The fundamental points for holistic therapies include such meridian points as BL10, BL11, BL14, BL25, GB20, GB21, LI11, ST25, ST36 and TE4, which are also used for acupuncture analgesia, shown as “analgesia” in Table 2[30]. It has been reported that midbrain monoamines, especially serotonin and norepinephrine, are involved in acupuncture analgesia, not for surgical procedures but for the treatment of chronic pain [31]. There have been many reports indicating that these monoamine neurotransmitters released from the descending inhibition systems are involved in the effects of these meridian points. Increases in the synthesis and utilization of serotonin during acupuncture are supported by a double-blind study that showed that acupuncture analgesia was facilitated in patients who had been given a serotonin reuptake inhibitor [32]. This indicates that acupuncture has a synergistic action with serotonin reuptake inhibitors, which are commonly administered for psychosomatic or psychiatric disorders such as pain disorders and functional gastrointestinal disorders with a decreased visceral pain threshold or depression. In fact,
Zhang et al. reported that a combination of weekly electroacupuncture for six weeks and paroxetine provided more effective treatment for depression than paroxetine alone [33]. The stimulation method is different between Sawada-style and acupuncture analgesia. Moreover, it is unclear whether Sawada selected the fundamental points in consideration of these detailed physiological effects. However, it is possible that the brain monoamine system is facilitated by holistic therapies, since Shirota reported that the Sawada-style was effective in treating many cases with depression or obsessive-compulsive disorder [10], for which monoamine reuptake inhibitors are given.

The effects of fundamental meridian points for holistic therapies on the mind-body correlation

Apart from the central nervous system, acupuncture at ST25 and ST37 relieved chronic visceral hypersensitivity in rats with irritable bowel syndrome [34]. In this study, changes in serotonin metabolism in the colon tissue were observed. ST25 also prevented chronic stress-induced increases in the sympathetic peptide, neuropeptide Y [35].

The effects of fundamental meridian points for holistic therapies according to Qi, blood, and water theory

In Japan, an original scoring system was developed by Terasawa et al., which makes quantification of patterns possible (Table 3) [36,37]. This is quite helpful in clinical diagnosis and research, which is not the case in other countries. In this system, the scores for Qi deficiency, Qi stagnation, Qi counterflow, blood deficiency, blood stagnation, and water retention can be calculated. It is characteristic of Japanese oriental medicine to place weight on water retention instead of phlegm. Phlegm is generated when stagnant water loses its ability to flow and is more serous than water retention. This difference in the main pattern may be attributed to the differences in the climate between the dry continental climate of China and the wet monsoon climate of Japan [38].
Table 3. Terasawa's Qi, blood, and water scoring system

For example, a diagnostic criterion, the Qi-deficiency score, was devised as follows. First, the author Terasawa observed the patients' subjective symptoms and objective findings to achieve synthesis. The severity of Qi-deficiency, assessed by observation, was graded into four levels as an “overall scale” based on the author's empirical knowledge. Second, the prevalence of the symptoms and signs related to Qi-deficiency in previous studies was ordered into four levels. The weight assigned to each symptom
or sign with respect to the overall scale was estimated by multiple regression analysis, and this was used to create the Qi-deficiency score. In addition, Qi-stagnation, Qi-flowback, blood deficiency, blood stagnation, and water retention scores are calculated according to this system [37].

The fundamental meridian points for holistic therapies consist of meridian points with effects on these six Qi, blood, and water patterns in a balanced manner. This is why it is called a holistic therapy. These effects, in addition to their effects on yin deficiency patterns, and the corresponding therapeutic principles are listed in Table 4.

According to this system, the patterns associated with psychiatric and psychosomatic disorders were investigated in detail, in which Qi stagnation scores were associated with mood disorders and major depression [39]. This result is consistent with the notion that “Qi stagnation” consists of depressive mood, loss of interest, heavy-headed feeling, unpleasant sensation of the laryngopharynx, circadian rhythm of the symptoms, burping, and abdominal gas [36], which corresponds to the masked

Table 4. The effects of fundamental meridian points for holistic therapies on Qi, blood, and water patterns

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Faltered disorder</th>
<th>Therapeutic principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qi deficiency</td>
<td>Mood disorders and major depression</td>
<td>Tienying QI</td>
</tr>
<tr>
<td>Qi stagnation</td>
<td>Slowing the flow and regulating Qi</td>
<td>Tienying QI</td>
</tr>
<tr>
<td>Qi counterflow</td>
<td>Anxiety disorders, generalized anxiety disorder, and depression; Qi stagnation, stagnation, cold, coldness, coldness in the larynx, Qi stagnation, stagnation, cold, coldness, coldness in the larynx</td>
<td>Tienying QI</td>
</tr>
<tr>
<td>Blood deficiency</td>
<td>Tienying blood</td>
<td>Tienying blood</td>
</tr>
<tr>
<td>Blood stagnation</td>
<td>Blood stagnation, blood stagnation, blood stagnation</td>
<td>Tienying blood</td>
</tr>
<tr>
<td>Water retention</td>
<td>Water retention, water retention, water retention</td>
<td>Tienying blood</td>
</tr>
<tr>
<td>Ye deficiency</td>
<td>Ye deficiency</td>
<td>Tienying jin</td>
</tr>
</tbody>
</table>
depression or “somatic anxiety” described in Hamilton’s rating scale for depression. In both sexes, high Qi deficiency scores were also associated with mood disorders and major depression and inversely associated with depressive disorder not otherwise specified [39]. For women, high Qi counterflow scores were associated with anxiety disorders, generalized anxiety disorder, and somatoform disorders [39]. On the other hand, high blood deficiency scores were associated with generalized anxiety disorder in men [39]. For women, high water retention scores were associated with eating disorders [39]. High Qi counterflow and blood deficiency scores for women and low water retention scores for both sexes were associated with somatoform disorders [39]. The associations of these disorders with the Qi, blood, and water patterns are also listed in Table 4.

Although Terasawa established no scoring system, yin deficiency listed in Table 4 is quite important. We previously reported three patterns of the depressive state, based on principal component analysis of the results of four examinations given to outpatients [40]. Of the three patterns, two yin deficiency patterns were accompanied by suicidal feelings or planning of suicide, while the depressive state of Qi deficiency pattern was not. This indicates that subjects with the heart yin deficiency-type depressive state are at risk of committing suicide. In this pattern, subjective and objective irritability, which are characteristic of heart yin deficiency, were considered associated with suicidal feelings or the planning of suicide.

In summary, the holistic therapies have physiological effects that correspond to therapeutic principles for mood, anxiety, somatoform, and eating disorders. In fact, a Japanese acupuncturist [41] reported a patient with a specific phobia treated with Sawada-style meridian points. At pain clinics, the Sawada-style is often used to treat chronic pain, which is often accompanied by indefinite complaints [3]. Regrettfully, the Sawada-style has seldom been introduced abroad, and the reports mentioned below are not on the Sawada-style. However, its fixed protocol would be suitable for large-scale, randomized, controlled studies in the future.

**The total effectiveness of holistic therapies**

It is a principle of Sawada-style holistic therapy to use not acupuncture but moxibustion. This is consistent with a report that acupuncture shows quick effects, while moxibustion is recommended for cases for which acupuncture is not sufficiently effective [42].
A randomized controlled trial using holistic therapy and placebo acupuncture for lumbago was done [43]. In this study, use of the thirteen fundamental meridian points for Kurono-style holistic therapy alone was more effective than placebo acupuncture, and as effective as the combination of the fundamental meridian points and electroacupuncture at BL23 and BL40 which are often used for lumbago. These results indicate that holistic therapy alone has a sufficient effect on lumbago, probably owing to adjustment of the whole body. Since this study was of parallel design with placebo acupuncture combined with a crossover design, the non-specific effects of the holistic therapy or electroacupuncture deriving from insertion of needles into the derma including non-meridian points could not be excluded.

Ishigami et al. reported that the Kurono-style fundamental meridian points significantly decreased the indefinite complaints in combination with ST36, which is one of Sawada’s, not Kurono’s fundamental meridian points, and CV17 [44], although it was not a controlled study.

**Effectiveness of acupuncture on fibromyalgia**

A meta-analysis found no statistically significant effect of acupuncture on fibromyalgia [45]. However, if electroacupuncture is distinguished from manual acupuncture, the result is different [46]. In particular, randomized, controlled studies using a combination of high and low frequencies for three weeks showed a statistically significant difference between real and sham acupuncture [47]. Since this study was a randomized controlled study with sham acupuncture, the non-specific physiological effects of the insertion of needles in the control group could be excluded in addition to psychological placebo effects. In addition, Ezzo et al. reported the synergistic effect of acupuncture and antidepressants on pain, depression, and insomnia [1].

Effectiveness of acupuncture on functional gastrointestinal disorders

Hypersensitivity of most of the digestive organs, especially in depressive patients, is known to contribute to painful functional disorders, such as irritable esophagus, functional dyspepsia, biliary dyskinesia, and irritable bowel syndrome. Xing et al. have reported that acupuncture, but not sham acupuncture, significantly increased the threshold of the rectal sensation of gas, desire to defecate, and pain, as compared to a control [48]. Recently, a meta-analysis reported that acupuncture-moxibustion for irritable bowel syndrome is better than the conventional Western drug therapy [49].
Although the evidence level is lower than for irritable bowel syndrome, Xu et al. found that regular acupuncture had better therapeutic effects and fewer side effects in improving gastric motility and relieving discomfort sensations in functional dyspepsia compared to internationally accepted medicines such as cisapride and motilium [50].

Recently, activation of the right dorsal prefrontal area in patients with irritable bowel syndrome [51] and stress-induced visceral hyperalgesia [52] has been reported. Functional MRI has shown that activation of such regions as the prefrontal area is associated with a low visceral pain threshold in patients with irritable bowel syndrome [53]. The activation of this area and visceral pain was reduced by amitriptyline [54].

According to Jiao’s scalp acupuncture theory, stimulation of the scalp over the cerebral cortex has an effect on the functional localization corresponding to that of the cerebral cortex [55]. Actually, it was reported that scalp acupuncture in the forehead area changed the glucose metabolism in the cortex beneath [56]. Interestingly, the right dorsal prefrontal area is anatomically beneath Jiao’s “stomach area” and “intestinal area” on the scalp according to scalp acupuncture theory. Scalp acupuncture in these areas may influence the neural activity in the right dorsal prefrontal area. Therefore, it would be quite rational to stimulate this area as a therapy for irritable bowel syndrome. Although there have been few reports on scalp acupuncture for irritable bowel syndrome, a randomized controlled study in which the effects of scalp acupuncture were directly compared with those of western medication was done [57]. Neither a placebo effect nor non-specific physiological effect of the insertion of acupuncture needles in the control group could be excluded since neither a placebo nor sham control group was set. However, it was shown that scalp acupuncture in Jiao’s stomach area and intestinal area was significantly more effective for diarrhea-type irritable bowel syndrome than was western drug therapy.

**Conclusions**

Acupuncture and moxibustion are helpful for improving the psychological relationship between the therapist and the patient, especially with respect to a negative “game”, and they are especially effective for chronic pain, fibromyalgia, irritable bowel syndrome, and functional dyspepsia, even if serotonin reuptake inhibitors have already been administered. Japanese Sawada-style holistic therapy can regulate the whole body with effects on
brain monoamines and the autonomic nervous, immune, metabolic, and endocrine systems.

Abbreviations
HPA axis: Hypothalamo-pituitary adrenal axis.

Competing interests
The authors declare that they have no competing interests.

Authors’ contributions
TK drafted the paper. MK revised the paper and provided books of reference. Both authors read and approved the final version.

Acknowledgements
We are deeply grateful to Dr. T. Oka for his support in constructing the paper.

References


How might acupuncture work? A systematic review of physiologic rationales from clinical trials
Howard H Moffet

This is an Open Access article distributed under the terms of the
Creative Commons Attribution License (http://creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

Background
Scientific interest in acupuncture has led numerous investigators to conduct clinical trials to test the efficacy of acupuncture for various conditions, but the mechanisms underlying acupuncture are poorly understood.

Methods
The author conducted a PubMed search to obtain a fair sample of acupuncture clinical trials published in English in 2005. Each article was reviewed for a physiologic rationale, as well as study objectives and outcomes, experimental and control interventions, country of origin, funding sources and journal type.

Results
Seventy-nine acupuncture clinical trials were identified. Twenty-six studies (33%) offered no physiologic rationale. Fifty-three studies (67%) posited a physiologic basis for acupuncture: 33 (62% of 53) proposed neurochemical mechanisms, 2 (4%) segmental nervous system effects, 6 (11%) autonomic nervous system regulation, 3 (6%) local effects, 5 (9%) effects on brain function and 5 (9%) other effects. No rationale was proposed for stroke; otherwise having a rationale was not associated with objective, positive or negative findings, means of intervention, country of origin, funding source or journal type. The dominant explanation for how acupuncture might work involves neurochemical responses and is not reported to be dependent on treatment objective, specific points, means or method of stimulation.
Conclusion
Many acupuncture trials fail to offer a meaningful rationale, but proposing a rationale can help investigators to develop and test a causal hypothesis, choose an appropriate control and rule out placebo effects. Acupuncture may stimulate self-regulatory processes independent of the treatment objective, points, means or methods used; this would account for acupuncture's reported benefits in so many disparate pathologic conditions.

Background
Clinical trials often test a causal association between intervention and outcome [1]. However, Ernst has asserted that, "Viewed from a scientific perspective, acupuncture is rarely, if ever, a causal therapy" [2]. Perhaps acupuncture is not causal – no more so than flipping a light switch "causes" illumination. However, if acupuncture is a causal intervention, investigators should be able to suggest a biological pathway, hypothesis or rationale for how it might work.

"How might acupuncture work?" is asked and answered on the website of the National Center for Complementary and Alternative Medicine (NCCAM) of the National Institutes of Health: "It is proposed that acupuncture produces its effects through regulating the nervous system, thus aiding the activity of pain-killing biochemicals such as endorphins and immune system cells at specific sites in the body. In addition, studies have shown that acupuncture may alter brain chemistry by changing the release of neurotransmitters and neurohormones and, thus, affecting the parts of the central nervous system related to sensation and involuntary body functions, such as immune reactions and processes that regulate a person’s blood pressure, blood flow, and body temperature"[3]. More detailed rationales for acupuncture are readily available [4].

The CONSORT (Consolidated Standards of Reporting Trials) Statement recommends that clinical trial authors "suggest a plausible explanation for how the intervention under investigation might work" [5]. Clinical trials of acupuncture might be more useful if they had not just a hypothesis about efficacy, but also a hypothesis about a mechanism. The purpose of this study was to determine to what extent contemporary acupuncture clinical trials proposed physiologic rationales and present the findings in the context of other characteristics of the studies.
Methods
The author sought a fair sample of acupuncture clinical trials and conducted a PubMed search using the keyword "acupuncture," further limiting the search to "clinical trials" published in "English" in "2005." The author obtained and reviewed a copy of every article identified from this search; articles were excluded if they were not actually clinical trials of acupuncture; letters and brief articles were also excluded as they were unlikely to have the details sought. Each article was reviewed for a physiologic rationale; that is, a description of any human physiologic process as an explanation linking the intervention to the outcome. Articles were also reviewed for their objectives (indications or experimental conditions) and outcomes of interest, the experimental and control interventions, country of origin, funding sources and type of journal. Rationales were not counted if based only on acupuncture theory or practice or on published or historical reports; a description of some physiologic process was required. This study had no external funding.

Results
The PubMed search on May 16, 2006, using the keyword "acupuncture" yielded 698 publications in 2005; 101 were indexed as acupuncture clinical trial reports, of which 93 were published in English. Five articles had an advance e-publish date in 2005 but were formally published in 2006 and were excluded. Six articles were excluded because they were not, in fact, clinical trial reports; also, two letters and one brief article were excluded. The study sample includes all remaining articles (n = 79) [6-84]. (Figure 1) After reviewing these papers, they were categorized according to their rationale: none, neurochemical, segmental ("gate control"), autonomic regulation, local effects, functional effects in the brain or other effects.

Rationales
Twenty-six articles (33%) offered no discernible physiologic rationale for how acupuncture might work. Indications with no rationale include addiction [42], auditory hallucinosis [35], breech presentation [13], chronic fatigue syndrome [49], chronic sinusitis [70], depression [67], irritable bowel syndrome [29], mental fatigue [32], overactive bladder syndrome [27] and stroke rehabilitation [62,80,82].

Fifty-three articles (67%) proposed some physiologic process or mechanism attributing the effects of acupuncture to neurochemical, segmental ("gate theory"), autonomic regulation, local effects, effects on
brain function or other effects. Most rationales were less specific than the NCCAM website, but at least suggested a non-metaphysical explanation, e.g., "Acupuncture functions by regulating the physiological state of the human body" [66]. Some explanations were inadequate, such as this for treating Parkinson's disease: "needles promote the release of endorphins and improve local blood flow" [20]. The best rationales were informative, albeit brief, for example, that for analgesia, "acupuncture stimuli act as a central nervous system input that can activate the descending antinociceptive pathway to release endogenous opioids to deactivate the ascending nociceptive pain pathway" [31]. Except for studies which measured specific physiologic outcomes, few studies directly tested their rationale. Studies which cited multiple rationales were assigned to the one which appeared to be primary.

The dominant rationale cited by 33 studies is that acupuncture stimulates the release of neurochemicals (usually endogenous opioids [beta endorphins, enkephalins and dynorphins] or serotonin). Among 36 studies of analgesia, this rationale was cited by 20 (56% of 36) articles [9,10,15,16,18,21,24-26,30,31,37,40,43,52-54,65,68,72]. This rationale was also used to explain the effects of acupuncture on nausea/vomiting [6,11,41,55], obesity [12], Parkinson's [20], irritable bowel [29], immune function [45], lower esophageal sphincter relaxations [84], blood pressure [71], post-menopausal vasomotor symptoms [56], colitis [83] and sleep quality [22].

Two studies identified segmental effects or "gate theory" as a primary mechanism specifically for analgesia [17,47], though five others referred secondarily to this rationale [15,24,26,30,54]. Sensory input from acupuncture is thought to block or interfere with nociceptive pain signals at a spinal level.

Six studies referred to modulatory effects of acupuncture on the autonomic nervous system [14,36,48,50,58,73]. However, several other studies that did not refer to autonomic regulation in their rationale did nonetheless measure outcomes which may reflect autonomic regulation: heart rate [21,45,48,66,82], heart rate variability [14,36,48], blood pressure [21,45,66,71,82], post-menopausal vasomotor symptoms [56] or respiration [82]. Other studies measured outcomes which also suggest possible ANS regulation: effects on smooth muscle [50], sleep quality [15,22,34], urinary
continence [27], sweat rate [58], rate of transient lower esophageal sphincter relaxations [84] or nausea/vomiting [73].

Three studies referred to local effects of acupuncture on tissues or nerves [61] or mechanical effects on connective tissue [7,44]; other studies secondarily referred to changes in circulation [20,52,54], especially vasodilation [72], or effects on immune function [52,83].

Five studies proposed that acupuncture can have specific functional effects in the brain and used fMRI to correlate acupuncture points to specific areas of the brain with specific sensory or motor functions [38,39,63,74,78]. These raise fascinating possibilities even if no clear mechanism is posited.

Five studies suggested other rationales: that acupuncture promotes homeostasis [66], regulates brain function [59,75], affects sperm motility [64] or suggests that response to acupuncture may vary by patient genotype[60].

**Objectives and outcomes**
Studies used appropriate biomedical diagnostic inclusion criteria and outcome measures, although one study did rely on a traditional Chinese medicine (TCM) differential diagnosis to assign subjects to a treatment group [49]. No rationale was proposed for stroke; otherwise, having a rationale was not associated with treatment objective. Sixty-one out of 79 (77%) articles had positive findings, of which 42 (70% of 61) had a rationale; having a rationale was not associated with obtaining positive findings. However, there were positive findings in 17 of 18 studies (94%) whose outcome of interest measured specific physiologic changes (brain blood flow using fMRI imaging [38,39,63,78], muscle blood flow [72], morphologic changes in sperm structure [64], association of acupuncture response to genotype [60], effect on leukocyte circulation [45], heart rate or heart rate variability [14,36,48], blood pressure [66,71], sweat rate [58], tissue impedance [7], sensations of skin piercing [61], post-menopausal vasomotor symptoms [56] or ultrasound imaging of tissue morphology [44].)

**Interventions and controls**
These studies utilized a variety of interventions which satisfy a textbook definition of acupuncture as "stimulation of points and channels" [85]. Sixty-four studies used some form of "puncture." Forty-seven studies used acupuncture needles [9,10,15,18-24,26,27,29,31,33,34,36-40,43-
46,48,49,51-54,57,59-66,70,72,73,75-77,80,81,83]; others specified the use of electro-acupuncture [7,12,14,16,30,35,47,50,56,58,68], auricular acupuncture [42,79], plum blossom needling [28,83], or blood-letting acupuncture [82]. Fourteen studies used alternatives to needles: transcutaneous electrical stimulation [34,41,71], acupressure [8,32], toothpicks [78], small seeds [49] or wrist bands [69]; others used stimulation by low-power laser [11,25,67,74], topical ointments [6,55], or moxibustion [13]. Having a rationale was not associated with the means of intervention.

There were a variety of control procedures: "placebo" needles which do not puncture the skin, "sham" acupuncture which does puncture the skin (but at alternate points or non-points, near or far from true points), transcutaneous electrical stimulation or laser devices with the power "off", placebo ointment, usual care or alternative treatments.

Acupuncture point selection was usually based on traditional indications or functions (e.g., to balance the yin and yang). No study proposed in its rationale that the neurochemical effects of acupuncture are dependent on point selection nor were important distinctions in physiologic effects made among the various means (needles, pressure, electricity, laser, heat or ointment) or methods (depth, style, frequency or intensity) of stimulation, except for differences in sensations experienced by subjects.

**Country, funding, journal type**
The studies originated in 21 countries and were published in 52 different journals. No funding sources were reported in 34 studies (43%); major funding was provided by U.S. National Institutes of Health [16,19,44,76], especially NCCAM [7,9,10,32,33,38,43,47] and from German national insurance providers [46,52,54,81]. NIH-funded trials were no more likely to have a rationale than other studies. Seventeen studies were published in three journals of acupuncture or Chinese medicine [12,14,22,25,28,34-36,39,49-51,61,67,75,82,83] and eight were published in 2 journals of complementary/alternative medicine [7,32,33,41,47,60,70,73]; the remaining 54 were published in 47 medical journals. Having a rationale was not associated with country, funding source or journal type.

**Discussion**
Seventy-nine acupuncture clinical trials reports were reviewed and 53 (67%) had some rationale for the use of acupuncture. The study...
interventions stimulated points using needles, electricity, lasers, pressure, heat or ointments compared to various controls. No rationale was proposed for stroke; otherwise, having a rationale was not associated with objective, positive findings, means of intervention, country of origin, funding source or journal type. The dominant rationale involved release of neurochemicals (usually endogenous opioids [beta endorphins, enkephalins and dynorphins] or serotonin).

No study proposed that the neurochemical effects of acupuncture depend on point selection. No study claimed to select points based on neurochemical effects. However, it should be noted that the locations of traditional points are well-established and often correspond to underlying nerves; thus, the selection of traditional points over "non-points" may be justified. Also, the local and segmental effects would logically depend on the needling sites. Certainly, no study proposed that the neurochemical effects depend on means (needles, pressure, electricity, laser, heat or ointment) or method (depth, style, frequency or intensity) of stimulation. While there is great emphasis on point selection and stimulation technique in traditional acupuncture, the neurochemical response to acupuncture may not depend on them.

The neurochemical rationale was proposed not just for analgesia, but insomnia, nausea/vomiting, obesity, Parkinson's and effects on blood pressure, immune function, colitis, vasomotor symptoms and lower esophageal sphincter relaxation. Further, it cannot be ruled out that other outcomes (e.g., autonomic regulation) may be secondary to neurochemical effects. Also, the same points may be stimulated for many different indications; alternatively, one indication may be treated with disparate point selections, not just between studies, but within studies, even varying by each treatment visit. This suggests that acupuncture simply stimulates self-regulatory processes and would account for acupuncture's reported benefits in so many disparate pathologic conditions.

Hypothesizing a mechanism can aid in selecting an appropriate control intervention. The sham needling with puncture may not be different in effect from "true" acupuncture and even the placebo needling is problematic: "Despite no skin penetration, the [placebo needle] tip exerted a mechanical stimulation... [which] may also excite nociceptive primary afferents. No ideal method of placebo stimulation acupuncture exists at present" [48].
addition, placebos are also associated with neurochemical effects [24,39]. One study concluded that effects of acupuncture may well be "attributable to other mechanisms than perforation of subcutaneous tissue. Repetitive relaxation and being cared for may be just as important" [53]. In an experiment or clinical trial, the control intervention should depend on (i.e., "control for") the hypothesized mechanism and also control for so-called placebo effects. Without a theoretical mechanism and in the absence of a truly inert placebo, it can be difficult to define an appropriate control.

Finally, why is a rationale important? It is not enough to lament that "the mechanisms underlying acupuncture are still poorly understood" [80]. Understanding the physiologic basis of acupuncture may be critical to producing reliable (i.e., reproducible) results. A rationale should be offered as an explanation for the trial intervention, especially when the intervention is poorly understood. The rationale should offer a scientific hypothesis, either explanatory or pragmatic [5], to be tested explicitly or implicitly. Of course, pragmatic trials may proceed without a clear hypothesis about the mechanism involved. Ultimately, however, the effects of acupuncture must be mediated through human physiology and investigators should be able to suggest some possible mechanism(s). Proposing and testing ideas about the underlying mechanisms of acupuncture could eventually lead to a real understanding about how acupuncture does work.

Limitations
First, only articles published in English were included; six articles in Chinese were excluded [86-91] and one article in Korean was excluded [92]; but studies from Asia were well-represented: China [28,35,48-50,75,82,83], Taiwan [14,15,36], Hong Kong [17], Japan [58,78] and Korea[18,39]. Also, articles indexed in PubMed after May 16, 2006, were not included. Second, the reviewed studies were coded as "having" or "not having" a rationale, but many provided inadequate explanations linking intervention to outcome and no conclusions may be drawn as to whether any of these rationales are valid or relevant to their objectives. Also, while there were no apparent associations between having a rationale and most other characteristics (objectives, interventions, etc), no formal statistical tests were performed to confirm this. It is possible, though unlikely, that there are significant statistical associations which went unnoticed.
Conclusion
Every clinical trial should attempt to explain the use of the intervention, but many acupuncture trials fail to offer any meaningful rationale. The dominant rationale for acupuncture involves neurochemical responses which appear to be independent of objective, point selection or the means or method of stimulation; this raises questions about the beliefs underpinning this intervention and deserves further investigation. Many studies have attempted to test traditional acupuncture without a physiologic rationale, but proposing a hypothesis for how acupuncture might work is good science and costs nothing; a rationale can help investigators to develop a causal hypothesis, choose an appropriate control and rule out placebo effects. Reviewers making decisions about funding or publication of acupuncture research should seek a physiologic hypothesis from investigators.

Competing interests
The author(s) declare that they have no competing interests.

Authors' contributions
The author conceived and designed the study; acquired, analyzed and interpreted the data; and wrote the manuscript.

Acknowledgements
The author thanks Bruce Fireman, Ph.D. for critical feedback and Andrew J. Karter, Ph.D., for invaluable feedback and support. This work had no funding source.

References
2-8-2006. Ref Type: Electronic Citation

Kabalak AA, Akcay M, Akcay F, Gogus N: Transcutaneous electrical acupoint stimulation versus ondansetron in the prevention of postoperative vomiting following pediatric


Linde M, Fjell A, Carlsson J, Dahlof C: Role of the needling per se in acupuncture as prophylaxis for menstrual migraine: a randomized placebo-controlled study.


Lin Q, Li X, Han J, Leng J: Electro-acupuncture treatment for the upper segment ureterolithiasis under B-ultrasound.


He D, Hestmark AT, Veiersted KB, Medbo J: Effect of acupuncture treatment on pain-related social and psychological variables for women with chronic neck and shoulder pain – an RCT with six month and three year follow up.


Hong L, Cheng L: Clinical observation on treatment of auditory hallucinosis by electroacupuncture: a report of 30 cases.


Huang ST, Chen GY, Lo HM, Lin JG, Lee YS, Kuo CD: Increase in the vaginal modulation by acupuncture at neiguan point in the healthy subjects.


Li Z, Wang C, Max heart rate variability in normal subjects under fatigue and non-fatigue state.


Linde M, Feggli A, Carlsson J, Dahlöf C: Role of the needling per se in acupuncture as prophylaxis for menstrually related migraine: a randomized placebo-controlled study.


129
Zhang RY: [Clinical observation on treatment of cerebral infarction by combined therapy of acupuncture with extremities tissue separating manipulation].

Gao XA, Zhu JS: [Clinical observation on hailong juanxi ao recipe combined with kechuanping mounting on yongquan acupoint in treating children' bronchial asthma in the stage]


Lai XS, Huang Y: [A comparative study on the acupoints of specialty of Baihui, Shuigou and Shenmen in treating vascular dementia.].


acupuncture and massotherapy in treating hypertensive cerebral hemorrhage.].


Misra MN, Pulleni AJ, Mohamed ZU: [Prevention of PONV by acupressure at a modified thumb point, and its efficacy in comparison with standard antiemetic agents].


Morita MN, Pulleni AJ, Mohamed ZU: [Prevention of PONV by acupressure at a modified thumb point, and its efficacy in comparison with standard antiemetic agents].


Pet J, Stell PJ, Bols JJ, Altmann ME, Baccino F: [Quantitative evaluation of spermatozoa ultrastructure after acupuncture treatment for idiopathic male infertility.]


Pohodenko-Chudatova IO: [Acupuncture anaesthesia and its application in cranio-maxillofacial surgical procedures.]


Quash S, Smith JI, Tang WM, Russell J: [Laser acupuncture for mild to moderate depression in a primary care setting – a randomised controlled trial.]


Resim S, Gumsalas Y, Ektercicer HC, Sahin MA, Sahinkanat T: [Effectiveness of electro-acupuncture compared to sedo-analgesics in relieving pain during shockwave lithotripsy.]


Sandberg M, Larsson P, Nord C, Stell PJ, Stell MG: [Quantitative evaluation of acupuncture elicited circulating cytokines in healthy subjects and patients with fibromyalgia and work-related trapezius myalgia.]


Perucca E: [Functional magnetic resonance imaging of real and sham acupuncture. Noninvasively measuring cortical activation from acupuncture.]


Severino F, Di Mauro V, Di Cristo A, di Giacomo G, Cimino M: [Acupuncture for the prevention of postoperative nausea and vomiting: a randomized controlled trial.]


Kamijo T, Amemiya M, Iseki Y, Hasegawa A, Yamada T, Nishigaki K: [Comparison of traditional Chinese acupuncture, minimal acupuncture at non-acupoints and conventional treatment for chronic migraines.]


Saghaei M, Ahmedi A, Rezvani M: [Clinical trial of nitroglycerin-induced controlled hypotension with or without acupuncture electrical stimulation in microscopic middle ear surgery under general anesthesia with halothane.]


Serafini A, Gugliuzza A, Campanile L, Di Maggio N, Florio N, Giordano M, Festa L: [Acupuncture for the prevention of postoperative nausea and vomiting: a randomized controlled trial.]


Saghaei M, Ahmadi A, Rezvani M: [Clinical trial of nitroglycerin-induced controlled hypotension with or without acupuncture electrical stimulation in microscopic middle ear surgery under general anesthesia with halothane.]


Serafini A, Gugliuzza A, Campanile L, Di Maggio N, Florio N, Giordano M, Festa L: [Acupuncture for the prevention of postoperative nausea and vomiting: a randomized controlled trial.]


Saghaei M, Ahmadi A, Rezvani M: [Clinical trial of nitroglycerin-induced controlled hypotension with or without acupuncture electrical stimulation in microscopic middle ear surgery under general anesthesia with halothane.]


Acupressure for smoking cessation – a pilot study

Adrian R White, Russell C Moody and John L Campbell

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

Background
Tobacco smoking is a serious risk to health: several therapies are available to assist those who wish to stop. Smokers who approach publicly funded stop-smoking clinics in the UK are currently offered nicotine replacement therapy (NRT) or bupropion, and group behaviour therapy, for which there is evidence of effectiveness. Acupuncture and acupressure are also used to help smokers, though a systematic review of the evidence of their effectiveness was inconclusive. The aim of this pilot project was to determine the feasibility of a study to test acupressure as an adjunct to one anti-smoking treatment currently offered, and to inform the design of the study.

Methods
An open randomised controlled pilot study was conducted within the six week group programme offered by the Smoking Advice Service in Plymouth, UK. All participants received the usual treatment with NRT and group behavioural therapy, and were randomised into three groups: group A with two auricular acupressure beads, group B with one bead, and group C with no additional therapy. Participants were taught to press the beads when they experienced cravings. Beads were worn in one ear for four weeks, being replaced as necessary. The main outcome measures assessed in the pilot were success at quitting (expired CO ≤ 9 ppm), the dose of NRT used, and the rating of withdrawal symptoms using the Mood and Symptoms Scale.

Results
From 49 smokers attending four clinics, 24 volunteered to participate, 19 attended at least once after quitting, and seven remained to the final week. Participants who dropped out reported significantly fewer previous quit attempts, but no other significant differences. Participants reported
stimulating the beads as expected during the initial days after quitting, but most soon reduced the frequency of stimulation. The discomfort caused by the beads was minor, and there were no significant side effects. There were technical problems with adhesiveness of the dressing. Reporting of NRT consumption was poor, with much missing data, but reporting of ratings of withdrawal symptom scores was nearly complete. However, these showed no significant changes or differences between groups for any week.

**Conclusion**
Any effects of acupressure on smoking withdrawal, as an adjunct to the use of NRT and behavioural intervention, are unlikely to be detectable by the methods used here and further preliminary studies are required before the hypothesis can be tested.

**Background**
Smoking is recognised as a major cause of ill health, and in developed countries cigarettes are the single biggest avoidable cause of death and disability [1], so that quitting smoking is generally the single most important action that any individual can take to improve health [2]. But stopping smoking is known to be difficult, mainly because of nicotine withdrawal symptoms. Most smokers wish they were non-smokers, but their attempts to stop frequently fail [3]. The unassisted quit rate at one year is about 3% [4], and a wide range of interventions have been proposed to help those who want to quit.

One such intervention is acupuncture, which has been used for centuries in China for treating opium withdrawal symptoms [5]. Acupuncture using only points in the ear (auricular acupuncture) was found by chance to help withdrawal in opium smokers in Hong Kong in the 1970s [6]. One common technique of auricular acupuncture involves inserting an small indwelling needle in the ear, which is pressed by the wearer whenever cravings occur. The needle should be removed and replaced frequently to avoid infection.

There is some evidence that acupuncture may act on the nucleus accumbens to inhibit the rise in dopamine which seems to be the common pathway for withdrawal symptoms [7,8]. However, a systematic review of the acupuncture literature found that, overall, the evidence was inconclusive on whether acupuncture is clinically effective for nicotine withdrawal [9]. A subsequent review which explored the data for auricular
acupuncture only suggested that this result might be a false negative [10]. Most controlled trials had compared the 'correct' sites with 'incorrect' sites on the ear, but there is some doubt whether any sites in the ear can be regarded as 'incorrect'. Auricular acupuncture was more effective than other interventions it was compared with, but not more effective than treatment at 'incorrect' sites.

Other interventions for smoking cessation have developed an evidence base, and there is now clear evidence to support pharmacological therapy with nicotine replacement therapy (NRT) or bupropion, to reduce withdrawal symptoms [4]; and psychological therapies including education, support, and behavioural therapy on either a group [11] or individual basis [12] to deal with the behavioural aspects of quitting. Some of these therapies may double the abstinence rate at one year [13]. They are now widely available in England as part of the NHS Stop Smoking Service set up in response to the Government's White Paper Smoking Kills [14]. Data available for the clinic in Plymouth show that over 300 patients attended courses of these interventions in 2003 (Smoking Advice Service report April 2004).

In the context of the success of NRT and counselling, it is reasonable to ask whether acupuncture has a role as a possible adjunct. There is some evidence that combining different methods for quitting increases success rates more than by simple addition [15]. It would be of interest if acupuncture could either further reduce the withdrawal symptoms and increase the success rate, or reduce the use of NRT and possibly minimise total costs of the intervention.

However, auricular acupuncture with indwelling needles is not without problems, particularly the risk of lost needles causing spread of blood borne infection. The major professional body of medical acupuncturists in the UK no longer recommends the use of indwelling needles [16]. Therefore small beads (acupressure) are commonly used as a substitute and one study found them superior to advice alone in smoking cessation [17]. We decided to conduct a pilot study of acupressure within the setting of the Stop Smoking Service, to explore the feasibility of conducting a full scale randomised controlled trial. We wished to address the questions of a) the accrual and dropout rates, b) compliance with stimulation of beads, c) adverse events. We also wished to explore the feasibility of the planned outcome measures, involving d) compliance with completing symptom
diaries and e) methods to monitor the use of NRT. In addition, we sought f) information on outcome data variance and possible effect size, for sample size calculation.

**Methods**

An open pilot RCT was conducted with three arms: two treatment groups with one or two acupressure beads, and a control group who received no acupressure. All participants received usual therapy. Approval was given by the South West Devon Research Ethics Committee (04/Q2103/154).

The study was run within the group therapy service of the community based, NHS-funded Smoking Advice Service in Plymouth. Smokers join a Quit Smoking Group which meets for six consecutive weeks (Table 1). At the initial meeting, smokers are offered general information and motivational and behavioural counselling, and given a letter to the GP recommending the dose of NRT or, more rarely, bupropion tailored to the individual according to their smoking history. The quit date is set for the second session one week later, when members of the group smoke their last cigarette and take their medication for the first time. Four subsequent weekly meetings offer monitoring, advice and group support.

**Table 1. Study flow chart indicating the acupressure study running alongside the usual smoking clinics**

<table>
<thead>
<tr>
<th>Clinic attendance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking Advice Service activity</td>
<td>advice; prescription for nicotine replacement</td>
<td>QUIT DATE 1&lt;sup&gt;st&lt;/sup&gt; nicotine replacement</td>
<td>behavioural support &amp; compliance</td>
<td>behavioural support &amp; compliance</td>
<td>behavioural support &amp; compliance</td>
<td>behavioural support &amp; compliance</td>
</tr>
<tr>
<td>Acupressure study activity</td>
<td>information, consent</td>
<td>groups A &amp; B: bead(s) placed</td>
<td>replaced if necessary</td>
<td>replaced if necessary</td>
<td>replaced if necessary</td>
<td>removed</td>
</tr>
<tr>
<td>Study diary issued</td>
<td>run-in</td>
<td>quit 1</td>
<td>quit 2</td>
<td>quit 3</td>
<td>quit 4</td>
<td></td>
</tr>
</tbody>
</table>

Smokers were invited to join the study by letter which included the study information sheet and questionnaire, sent before their first meeting. At the first group session, we explained the research. Smokers were eligible for inclusion if they smoked ≥ 10 cigarettes/day, were aged 18 years or over, intended to stop smoking on the quit date, chose NRT rather than bupropion, and gave informed consent. Exclusion criteria were: history of current otitis externa or other pathological condition of the ear, history of a poorly controlled relevant medical condition, currently taking anti-depressant or anti-psychotic medication, history of allergy to adhesive dressing, belief of pregnancy, or already participating in a research project. All smokers wishing to join the study were interviewed on first attendance by AW or RM; they then gave consent and provided socio-demographic information and smoking history including the Fagerstrom severity questionnaire.

All participants in the study received the usual NRT and group counselling and support; on the quit date, participants opened an opaque, numbered envelope containing a code generated by computerised blocked randomisation (blocks of four) prepared by a researcher unconnected with the study. The three codes indicated A) two acupressure beads B) one bead, both in addition to the usual interventions, and C) usual interventions only.

**Acupressure interventions**

In the intervention groups, beads were applied on the second attendance (quit day) by AW or RM. Beads were of Pyonex® type, manufactured without a needle for this study (Seirin, Japan).

In group A, two beads were placed, using the so-called 'Lung' and 'Shenmen' points of the ear; in group B, one bead was placed at Lung point. These points are the two most commonly used in the literature [18] and included in a manual [19]. They were identified by inspection of surface anatomy, looking for the most prominent depression in the centre of the concha (Lung point), and the anterior angle of the triangular fossa (Shenmen). The dominant side of the body was used in the first instance. Participants were given oral and written instructions on how to tap, press or squeeze the beads repeatedly for up to a minute each time a craving occurs. They were also advised on maintaining local hygiene, and on possible adverse events and how to deal with them including how to remove the bead if it became painful. They were also asked to bring their
empty packets of NRT to subsequent clinics, to allow direct assessment of NRT consumption. All participants' GPs were informed by letter of their participation in the trial.

At each subsequent weekly visit, the ear was inspected. Each bead was removed after 14 days, or earlier if inflammation was present, and fresh bead(s) placed in the opposite ear, using the same location(s). Beads were worn throughout the period of attendance of groups (i.e. the first 4 weeks of withdrawal) and removed at the last attendance.

Outcomes
The proposed outcomes to measure the intended effect of acupressure were NRT consumption and nicotine withdrawal symptoms.

We aimed to measure consumption of NRT (patch, gum, microtablets, lozenges or inhalator) in two ways: both from counting used packs at each attendance,[20] and from reports in daily diaries. We assessed withdrawal symptoms using the seven-item Mood and Physical Symptoms Scale (MPSS) [21,22]. The MPSS is sensitive to changes resulting from abstinence [23]: smokers rate the severity of depression, irritability, restlessness, hunger, poor concentration, anxiety and insomnia. We also asked them to rate cravings with the questions 'time spent in urge to smoke' and 'strength of urge to smoke'. We asked one additional question to rate severity of constipation, as discussed by one author [23]. All these measures used five-point scales. Since withdrawal symptoms were an important focus of the study, we asked participants to score the diary daily. Initially, we asked participants to complete the MPSS for just three days in the week before quit date, as recommended. However, when one participant continued to do this for the following week, we altered our procedures to ask participants to complete the diary for seven days for all five weeks of the trial period.

The planned secondary outcomes were: quit rate at four weeks defined as self-reported cessation, validated by carbon monoxide concentration in expired air of ≤ 9 ppm, obtained by clinic staff using the Bedfont Smokerlyser (Bedfont Scientific Ltd, Bedfont House, Holywell Lane, Upchurch, Kent UK) calibrated at the start of trial; and how much discomfort the beads caused (five point scale from none to extreme) recorded in the daily diary. We also asked participants to record how many times they stimulated the beads over 24 hours (in five categories: none, <
5, 5–9, 10–20 and over 20 times), on the premise that a minimum of 5 times would be necessary in the first two weeks unless the bead was already causing discomfort.

At each clinic attendance, participants were interviewed by either AW or RM. They were asked whether they had experienced any adverse events during the previous week that might have been due to NRT or acupressure. This information and CO reading were recorded in a clinic data sheet.

**Analysis**

Data were entered into Excel spreadsheets by clinic staff with reference to the usual clinic records where necessary e.g. for missing CO readings.

For the analysis of outcomes, missing data were handled as follows: for NRT use, blank cells indicating possible missing data were completed or not according to the context, which was usually daily application of a nicotine patch. For MPSS, we could not find published guidelines, and none were available from the author (Robert West, personal communication) so we established the following rules: from the seven questions on each daily diary, if three responses or less were missing they were substituted by the mean of the remainder; if more than three responses were missing, that day's diary was discarded. For the remaining outcome measures, no data substitutions were made.

Analysis was descriptive and exploratory, using Excel and SPSS. NRT use was calculated as the weekly mean of the daily total mg of nicotine, using the pack data (e.g. 15 mg for each nicotine 15 mg patch) for all products except for the inhalator for which we used a reasoned estimate of 6 mg, in the absence of published data. MPSS scores were total daily scores averaged for each week. Urge and constipation scores were analysed separately. Analysis was planned per protocol, as we would choose for an efficacy study.

**Results**

With regard to accrual and dropouts, just under half the smokers who attended four clinics (24 from 49) agreed to participate and were randomised on the quit date. One decided against using NRT so was excluded, and four did not attend the following week so were presumed not to have quit. Thus, 19 (39% of those invited) remained in the study for at least one week after quitting, and 7 (14%) remained throughout the study.
period (Figure 1). One participant withdrew from the study at week 3 for lack of perceived effect of acupressure, but continued to attend the clinic.

Figure 1. CONSORT diagram of patient flow through the study. Participants who dropped out of the study were slightly older (47.5, SD 11.5 against 41.7, SD 14.0 years), and reported median 2 previous quit attempts, compared with 6 in those who remained (z = 2.175, p = 0.030, Mann-Whitney U test). Dropouts did not report higher daily consumption of cigarettes, and were similar in nicotine dependence scores, measured expired CO concentration and prescribed form of NRT.

One participant (in group A) did not report pressing the beads more than four times per day from the quit day onwards, but was the only person to rate discomfort as higher than 'slight' at the end of the first week. The other participants reported pressing the bead more than 10 times most days at the beginning of the first week, but only two were continuing at that frequency by the end of the first week. By the end of the second week, only four people reported stimulating it more than five times a day, though one other person reported discomfort. In week quit 3 four participants, and in week quit 4 three participants reported still pressing the bead more than five times a day. Discomfort from the bead was scored as 'none' or 'slight'
at the great majority of time points, though two participants, both in group A, reported 'somewhat' on 3 and 4 days, respectively. There were several technical problems with adhesiveness of the dressing: beads frequently either fell off or moved around on the surface of the ear (numbers not recorded). In response to the question on adverse events, two patients reported 'soreness', but no participant reported removing the bead on account of soreness.

Completion rates for diaries varied for different outcomes. Every participant who attended any clinic returned a diary that was at least partially completed. Out of the 95 weeks' diaries of MPSS data, six days (1%) contained too little information to be included, and 15 other items were missing and required substitution (total missing data = 2.0%). Missing data for urge scores were 1%, and for bead pressure and discomfort 3%. Missing data were highest for the number of doses of NRT used per day, at 10.2%. The majority of data missing referred to the use of either a patch, which could be accurately checked by questioning at the subsequent clinic, or use of the second form of NRT which is designed to be used less frequently so missing data might result in only small errors in the analysis. The alternative method for reporting NRT use – counting of empty packets – was generally unsuccessful as very few participants remembered to bring the packets back.

The exploratory analysis is based on 19 smokers who provided outcome data for at least one week after randomisation, week quit 1. Their background characteristics and summary of NRT interventions are given in Table 2. All CO readings were ≤ 9 ppm except in one participant: on week 3 the reading was 10 ppm, but subsequent readings were 1 and 2 ppm. Therefore we considered all who attended to be successful quitters: at the last attendance, seven had quit, one in group A and three each in groups B and C.
Table 2. Background characteristics of three groups as analysed (means except where stated, with SDs in parentheses)

<table>
<thead>
<tr>
<th></th>
<th>group A</th>
<th>group B</th>
<th>group C</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>6</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>males (n)</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>age in years</td>
<td>51.0 (7.9)</td>
<td>39.8 (18.2)</td>
<td>44.4 (8.4)</td>
</tr>
<tr>
<td>initial expired CO</td>
<td>23.7 (12.3)</td>
<td>17.2 (4.5)</td>
<td>19.5 (7.8)</td>
</tr>
<tr>
<td>cigs/day</td>
<td>17.5 (5.1)</td>
<td>16.5 (4.4)</td>
<td>17.5 (3.3)</td>
</tr>
<tr>
<td>years smoking</td>
<td>34.3 (5.3)</td>
<td>21.0 (11.4)</td>
<td>24.8 (11.2)</td>
</tr>
<tr>
<td>quit attempts</td>
<td>4.8 (6.7)</td>
<td>6.8 (6.9)</td>
<td>3.3 (1.9)</td>
</tr>
<tr>
<td>quits last 6 mo</td>
<td>0.5</td>
<td>1.0</td>
<td>0.4</td>
</tr>
<tr>
<td>live alone (n)</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>smoker in home (n)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>modified Fagerstrom: max score 10</td>
<td>4.7 (1.5)</td>
<td>4.3 (1.5)</td>
<td>6.0 (2.0)</td>
</tr>
<tr>
<td>used NRT patch (n)</td>
<td>6</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>used 2 forms of NRT (n)</td>
<td>6</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

NRT = nicotine replacement therapy

We limited the comparative analysis to weeks 3 and 5 (see Tables 3 and 4), because of the dropout rate, particularly the small number of participants attending on week 6 as shown in Figure 2. The mean (SD) dose of NRT, based on diary entries, used by participants in the three groups (A, B, C) show no meaningful changes. Mean withdrawal symptom scores (MPSS) are relatively constant throughout the study in all groups (Tables 2 and 3) with no significant difference between group scores on any week (p > 0.5, Kruskal-Wallis for 3 independent groups). Mean MPSS scores for all 19 participants were 11.8 (SD 2.9) and 12.8 (3.0) for the run-
in week and quit week respectively. Mean MPSS scores for the first two weeks were not higher in participants who dropped out than those who remained in the study: 11.3 (3.2) and 11.8 (2.8) for the dropouts, and 12.8 (2.2) and 14.5 (2.9) for those who stayed in the study at run-in and quit 1 weeks respectively.

Table 3. Mean scores (SD) for main outcomes for participants attending 3rd clinic (first following quit date)

<table>
<thead>
<tr>
<th></th>
<th>group A n = 6</th>
<th>group B n = 6</th>
<th>group C n = 7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean NRT consumption</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quit week</td>
<td>201.8 (80.4)</td>
<td>125.5 (26.9)</td>
<td>157.9 (32.1)</td>
</tr>
<tr>
<td><strong>Mean MPSS scores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run-in week</td>
<td>12.5 (2.9)</td>
<td>11.1 (2.2)</td>
<td>11.9 (3.6)</td>
</tr>
<tr>
<td>Quit week</td>
<td>12.2 (3.0)</td>
<td>12.6 (1.8)</td>
<td>13.4 (4.1)</td>
</tr>
</tbody>
</table>

NRT = nicotine replacement therapy


Table 3. Mean scores (SD) for main outcomes for participants attending 3rd clinic (first following quit date)
Table 4. Mean scores (SD) for main outcomes for participants attending the 5th clinic*

<table>
<thead>
<tr>
<th></th>
<th>Group A n = 4</th>
<th>Group B n = 5</th>
<th>Group C n = 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean NRT consumption</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quit week</td>
<td>208.8 (56.3)</td>
<td>122.4 (27.9)</td>
<td>179.0 (19.1)</td>
</tr>
<tr>
<td>FU1 week</td>
<td>202.5 (36.7)</td>
<td>143.6 (58.7)</td>
<td>162.5 (20.8)</td>
</tr>
<tr>
<td>FU2 week</td>
<td>173.3 (27.0)</td>
<td>150.0 (108.2)</td>
<td>152.5 (8.5)</td>
</tr>
<tr>
<td><strong>Mean MPSS scores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run-in week</td>
<td>13.1 (1.9)</td>
<td>11.4 (2.4)</td>
<td>12.2 (3.8)</td>
</tr>
<tr>
<td>Quit week</td>
<td>11.4 (2.4)</td>
<td>12.9 (1.9)</td>
<td>13.8 (4.0)</td>
</tr>
<tr>
<td>FU1 week</td>
<td>12.0 (3.4)</td>
<td>11.8 (3.7)</td>
<td>13.1 (4.7)</td>
</tr>
<tr>
<td>FU2 week</td>
<td>12.7 (4.1)</td>
<td>11.2 (3.8)</td>
<td>13.8 (5.1)</td>
</tr>
</tbody>
</table>

*insufficient data to analyse 6th (final) week

NRT = nicotine replacement therapy

FU = follow up

Attendance of 3 groups each week – all attendees were confirmed abstinent on each meeting: all dropouts were assumed to have relapsed. There were no discernible differences between groups for urges or constipation scores (data not presented).

In view of the lack of effects observable in the measured outcomes, the researchers asked some of the participants informally at the end of the study whether they had noticed any discernible effect of the beads. One participant reported that pressing the bead 'definitely helped to relax' her; one reported that 'it was a distraction only' and four reported that the acupressure did not help. Two participants dropped out of the study after reporting a lack of any noticeable effect.

**Discussion**
This pilot study found that about half the smokers that were seeking help from a local smoking advice service were willing to try acupressure beads as an adjunct to usual treatment, but the dropout rate during the five week study was 84%. Compliance with instructions to press the bead was good for the first week but then deteriorated. Adverse events were minimal.
Each clinic of approximately 12 smokers generated about five participants in the first week after the quit date, of whom about two remained at the final (sixth) follow up. High dropout rates are not unusual in trials of addiction.

We were surprised how little stimulation the participants reported using, and how little discomfort the beads caused: we designed the study on the premise that acupressure needs to cause a perceptible stimulus for it to be effective. The original observation of an effect of acupuncture in heroin withdrawal involved electrical stimulation of the needles,[6] and other authors have reported using a surgical suture in the ear [24]. Stimulation of indwelling devices is a consistent feature of reports of this method.

Diaries were returned efficiently, but recording of NRT consumption was poor, probably because participants thought we would assume that an NRT patch would be used every day, and because participants found it difficult to recall the use of variable items like gum or inhalator. We noted wide variability in the reported consumption of NRT, particularly in group B. This was due largely to two participants in this group who did not use NRT patches: one used small numbers of microtabs, taking only 16 mg nicotine in the last week: another used large numbers of nicotine gum 4 mg, amounting to 308 mg in the last week. The alternative measure for NRT use, counting used packs, was also unsuccessful. We conclude that further investigation of the best way to measure NRT consumption is needed before this can be considered a suitable outcome for a clinical trial.

In contrast, there were few missing data for MPSS scores. The mean values scored by our participants (ranging between about 11 and 14) are similar to those observed in 83 smokers in a previous study [22]. Daily scores rose dramatically in that study to about 18 among the 43 smokers who voluntarily abstained, without nicotine replacement, for 24 hours. The lack of any such increase in our participants is presumably due to the effects of NRT and the behavioural intervention: either withdrawal symptoms do not occur, or any that do occur are not detected by the MPSS. The lack of any measurable increase in withdrawal symptoms suggests a 'floor effect', i.e. that there is no possibility of measuring an additional effect of acupressure because smoking withdrawal symptoms are already managed effectively within the limits of current measurement tools.
In addition, in interacting with the participants, we detected an initial enthusiasm for trying acupressure at the time of quitting, but a marked lack of enthusiasm for the intervention at the end of the study. Future studies could profitably explore the effectiveness of acupressure in smokers who have chosen acupressure in preference to NRT or bupropion using a patient preference design [25]. High levels of expectation could in themselves increase the effectiveness of acupressure, and may improve compliance with instructions to stimulate the bead. Open studies should be conducted first to determine whether an effect exists, then by blinded studies using a placebo intervention, to test the causal relationship. We have not been able to design a convincing placebo for acupressure beads. Placebo-controlled studies of acupressure in smoking cessation require careful consideration of the ethical aspects: in view of the proven benefits of certain interventions, and the life-threatening consequences of failure, smokers should not be offered only a control intervention which the researcher expects to be ineffective. This is why we initially sought a dose-related effect in our design, and why we offered acupressure as an adjunct to known effective treatment.

Conclusion
This pilot study suggests that any effects of acupressure on NRT consumption or nicotine withdrawal symptoms in smoking cessation, as an adjunct to the use of NRT and behavioural intervention, are unlikely to be detectable by the methods used in this study, and further preliminary studies are required before the hypothesis can be tested.

Competing interests
AW receives an income from the British Medical Acupuncture Society as editor in chief of their journal, Acupuncture in Medicine. AW also runs a private acupuncture clinic, but does not offer acupuncture for smoking cessation. RM and JC declare that they have no competing interests.

Authors’ contributions
All authors were involved in the design of the study, and writing and editing the report: AW and RM collected the data; AW performed the analysis. All authors read and approved the final manuscript.

Acknowledgements
We are grateful to the Specialists and secretarial staff of the Smoking Advice Service for their cooperation without which this study could not have
taken place; and to Seirin, Japan, for providing the acupressure beads. Adrian White was supported by the DH-National Co-ordinating Centre for Research Capacity Development (NCC RCD)

References


The effect of TCM acupuncture on hot flushes among menopausal women (ACUFLASH) study: A study protocol of an ongoing multi-centre randomised controlled clinical trial

Einar K Borud, Terje Alraek, Adrian White, Vinjar Fonnebo and Sameline Grimsgaard

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

Background
After menopause, 10–20% of all women have nearly intolerable hot flushes. Long term use of hormone replacement therapy involves a health risk, and many women seek alternative strategies to relieve climacteric complaints. Acupuncture is one of the most frequently used complementary therapies in Norway. We designed a study to evaluate whether Traditional Chinese Medicine acupuncture-care together with self-care is more effective than self-care alone to relieve climacteric complaints.

Methods/Design
The study is a multi-centre pragmatic randomised controlled trial with two parallel arms. Participants are postmenopausal women who document ≥7 flushes/24 hours and who are not using hormone replacement therapy or other medication that may influence flushes. According to power calculations 200 women are needed to detect a 50% reduction in flushes, and altogether 286 women will be recruited to allow for a 30% dropout rate.

The treatment group receives 10 sessions of Traditional Chinese Medicine acupuncture-care and self-care; the control group will engage in self-care only. A team of experienced Traditional Chinese Medicine acupuncturists give acupuncture treatments.

Discussion
The study tests acupuncture as a complete treatment package including the therapeutic relationship and expectation. The intervention period lasts for 12 weeks, with follow up at 6 and 12 months. Primary endpoint is change in daily hot flush frequency in the two groups from baseline to 12
weeks; secondary endpoint is health related quality of life, assessed by the Women's Health Questionnaire. We also collect data on Traditional Chinese Medicine diagnoses, and we examine treatment experiences using a qualitative approach. Finally we measure biological variables, to examine potential mechanisms for the effect of acupuncture. The study is funded by The Research Council of Norway.

Background
After menopause, almost two thirds of women experience hot flushes. One third have symptoms persisting up to five years after natural menopause, and 10–20% find symptoms very distressing [1]. Hormone replacement therapy (HRT) is considered the most effective treatment for hot flushes [2]. However, HRT has other biological effects: it prevents fractures and cancer of the colon [3], but increases the risk of breast cancer [4] and thrombo-embolic disease [5]. Based on these data, the Norwegian Medicines Agency revised the guidelines for prescribing HRT in 2003 [6]. Indications are now only hot flushes and urogenital symptoms. HRT should be used for a short time period, in the lowest possible dose, and other strategies should be considered. The reports of adverse events generated considerable public interest in Norway, and sales figures for systemic HRT have decreased by 45 % since 2001 [7]. Moreover, a Scandinavian study conducted among women treated for breast cancer was terminated when the interim analysis showed that HRT was associated with an increased risk for relapse of the disease [8]. A Norwegian cohort study showed that HRT formulations used in Norway are also associated with an increased risk of breast cancer [9]. The data received considerable public attention and we suppose that they enhanced Norwegian women's interest in low risk strategies to relieve their climacteric complaints.

A large body of data already shows that HRT effectively relieves hot flush activity (frequency and severity) by approximately 80% [2]. Estrogen placebo interventions reduce hot flush activity by 20–30% [10]. Selective serotonin reuptake inhibitors (SSRIs) and selective noradrenaline reuptake inhibitors (SNRIs) reduce the number of hot flushes by 50–60% in the short term in some studies [11]. On this basis it has been advocated that clinically relevant interventions must have the ability to reduce hot flush activity by 50% or more [10].

Women may explore other approaches to manage their menopausal symptoms. These include phyto-estrogens such as soy, herbal remedies
such as black cohosh and red clover, or vitamin E. There is a lack of good
evidence of their effectiveness, and lack of knowledge of drug interactions
and of long-term safety [1]. Commonly recommended lifestyle changes
include stress reduction, increased fruit and vegetable intake, reduced
caffeine and alcohol intake, smoking cessation, and increased physical
exercise. The evidence for these is anecdotal, supported in some cases by
epidemiological studies but not by intervention trials [12].

Acupuncture is one of the most frequently used complementary therapies
in Norway [13], and is considered safe in the hands of competent
practitioners [14]. One small randomised trial (n = 24) conducted in a
Swedish university clinic showed that hot flushes decreased by 50%
among women who received standardized electroacupuncture [15]. A
further study (n = 30) by the same group found a trend in favour of
acupuncture compared with sham acupuncture for climacteric symptoms
[16]. In a small crossover study (n = 10) in hypertensive postmenopausal
women, acupuncture was associated with a significant reduction in
'complaints' though not in blood pressure [17]. An uncontrolled study in 11
participants found a mean reduction in flush score from 4.2 to 1.9 [18]. A
small RCT (n = 16) found genuine acupuncture more effective than sham-
acupuncture, with a 76% reduction in flushes [19]. An unpublished
Norwegian case series (n = 18) suggests that individualized Traditional
Chinese Medicine (TCM) acupuncture can reduce hot flushes by 77%. The
current data are insufficient to make recommendations regarding
acupuncture treatment for hot flushes, but sufficient to justify further
research.

Two studies of acupuncture for hot flushes published since the
development of this protocol yielded conflicting results: one study of 103
participants found no effect on daily flush frequency [20], whereas a second
study of 29 participants found a reduction in severity but not frequency of
nocturnal flushes [21].

There is common agreement among acupuncturists that a minimum of six
treatment sessions are necessary to evaluate treatment effect, and as
many as eight to ten sessions are necessary to establish a maximum effect
[22]. Continuation of the effect may require repeated, but less frequent,
treatments. If symptoms relapse, as little as two to three treatments can be
sufficient to trigger the treatment effect again. An acupuncture session
usually costs NOK 300, and accordingly a typical series of treatments costs NOK 3000.

In Norway, most acupuncture practitioners use the TCM approach, and about 500 practitioners belong to the professional organisation, NAFO. A woman who seeks a TCM acupuncture practitioner for hot flushes chooses a treatment strategy rather than a single intervention. The practitioner will most likely focus on climacteric complaints and general well being rather than hot flush activity alone. Treatment involves a comprehensive TCM diagnostic procedure and general life-style advice in addition to individualized acupuncture treatment. Acupuncturists generally consider that these elements interact intentionally with each other during treatment and constitute a treatment package, i.e. "acupuncture-care". If the elements are separated, the treatment will not reflect what TCM acupuncturists consider relevant and good quality acupuncture for a given condition.

**Methods/design**

The objective of the study is to address a pragmatic question, to compare the effectiveness of two low risk strategies to relieve climacteric complaints in postmenopausal women who seek alternatives to HRT: is individualized TCM acupuncture-care together with self-care more effective at reducing the frequency and severity of hot flushes compared with self-care alone. The study will test acupuncture as a complete treatment package, i.e. including the therapeutic relationship and expectation, and address the important question of the overall effect of acupuncture-care, which is highly relevant to both postmenopausal women and their health care providers. The limitations of other possible control groups are discussed below. The changes that are likely to be experienced by women undergoing acupuncture in this study will not be fully captured by the quantitative measures used, and therefore the study team will collaborate with other investigators who wish to explore these qualitatively. If the study shows that acupuncture-care has a clinically relevant effect on climacteric complaints, the research group will proceed further and apply for funding to perform a placebo-controlled trial to determine the importance of needle insertion in the overall effect of acupuncture treatment. In addition, a positive result will justify a study of the effect of acupuncture in other groups of patients such as women with hot flushes induced by tamoxifen and men undergoing treatment for prostate cancer.
A sub-study is conducted in 70 women who participate in the Tromsø-arm of the study, to investigate effects of acupuncture-care on biological variables. Evaluations take place at baseline and after 12 weeks. It is hypothesized that acupuncture reduces hot flushes by increasing β-endorphin activity in the hypothalamus [15]. Calcitonin gene-related peptide (CGRP) is a potent vasodilator, and may be a proxy for β-endorphin activity [15]. Plasma concentration of CGRP and neuropeptide Y (NPY) increases during a hot flush [23], and the urine excretion of CGRP is reduced parallel to the reduction of hot flushes after acupuncture treatment [15]. The urine excretion of CGRP and NPY will be measured.

Acupuncture can modulate autonomic nerve system activity [24], and central sympathetic activity is considered to influence hot flush activity [25]. Autonomic nerve system function is assessed by measuring heart rate variability [26]. Bone mass density is measured at baseline and after 12 months, to investigate rate of bone loss among women with climacteric symptoms. Evaluations further include measurements of serum FSH and estradiol at baseline and end of intervention, to confirm that the women are postmenopausal.

Participants are recruited to three centres (Tromsø, Oslo and Bergen), by the use of newspaper advertisements and promotion through media coverage. Informed consent is obtained from all participants before randomisation. See eligibility criteria in table 1.

**Randomization**
Participants are stratified by centre and thereafter block randomised (random block size) to additional acupuncture or no additional acupuncture. Staff at study headquarters at University Hospital of North Norway (UNN), which is not connected with the study, prepared the randomisation database and acts as a central randomisation service. Each local coordinator (Tromsø, Oslo and Bergen) obtains distance randomisation of included participants.

**Experimental intervention**
Traditional acupuncturists, using diagnostic methods according to the principles of Traditional Chinese Medicine, diagnose TCM syndromes associated with the symptoms of menopausal hot flushes. The acupuncturists meet the criteria for membership in the Norwegian acupuncture society, "Norsk Akupunkturforening" (NAFO), and have at
least five years experience of practice. There are four practitioners in Oslo, three in Bergen and three in Tromsø. This will ensure that the study tests the effects of TCM acupuncture-care, not the individual practitioner.

The Delphi technique [27] has been used to establish a consensus between acupuncturists regarding the standardized diagnostic criteria and treatment guidelines, as previously successfully used for acupuncture treatment of lateral epicondylitis [28].

After the initial diagnosis, each participant is treated with points selected according to the syndrome diagnosis. The acupuncturists are free to add individualised points to treat other symptoms related to the menopause (i.e. those included on the WHQ such as depression, anxiety, insomnia), but not unrelated symptoms. In addition, acupuncturists can use moxibustion (warmed needles) if indicated. The acupuncture treatment comprises up to 10 treatment sessions over 12 weeks. This period can be extended for 2 weeks to allow for personal circumstances. The minimum treatment defined 'per protocol' is 6 sessions.

The acupuncture-care group is free to use any over the counter (OTC) drugs and self-provided non-pharmaceutical intervention during the intervention period. In addition, they can use soy, specific dietary supplements and herbal medicines.

**Control intervention**

The control group is free to use any OTC drugs and self-provided non-pharmaceutical intervention during the intervention period. In addition, they can use soy, specific dietary supplements and herbal medicines.

Many possible control interventions were considered and rejected for a variety of reasons. Standard HRT has been tested many times and its effect is well known, as is the effect of placebo HRT [2,10]. Acupuncture is expected to be somewhat less effective in relieving hot flushes, and in this study we focus specifically on the increasing number of women who deliberately are seeking an alternative to HRT. At present there is no satisfactory placebo for acupuncture. Needles inserted into the skin avoiding acupuncture points and meridians (sham acupuncture) are likely to have some effect [29], and the blunt needles (Streitberger needles) that have been developed are difficult to use [30]. In addition, acupuncturists are generally uncomfortable using placebo-needles. This attitude is likely to
influence the interaction between therapist and study participant and may influence study results. In this study we want to evaluate acupuncture as it is practised in Norway.

**Adjunctive intervention: self care**

All participants are given an information leaflet on available self-provided care (e.g. soy, herbs, local oestrogen, physical activity, relaxation techniques to treat menopausal symptoms), and they are free to use any of these.

The information leaflet is specially prepared by the project team and is based on an authoritative book [31] and best current advice [12].

**Effect measures**

Primary endpoint is mean number of hot flushes per 24 hours measured over a one-week period. The numbers of hot flushes are recorded in a daily diary, and flushes are scored by severity on a scale from of zero to ten. The diary is administered for two weeks during the qualifying period, and for one week after 4, 8 and 12 weeks of the intervention period.

Secondary endpoint is the Women's Health Questionnaire (WHQ), a validated, self-administered instrument containing 36 questions assessing a wide range of physical and emotional symptoms of women in the postmenopausal period [32]. A Norwegian version is available and has been validated linguistically. A psychometric validation of the WHQ will be performed during the study period. The WHQ is administered at baseline and at 12 weeks.

Baseline assessment includes sociodemographic data collected in a manner parallel to the NOWAC study [33], medical and gynaecological history, previous experience with acupuncture, which other self-provided and therapist-provided interventions they have used earlier to relieve their climacteric complaints, current use of drugs and dietary supplements, level of physical activity, smoking status and level of alcohol consumption.

At the end of interventions, all participants are asked which other self-provided and therapist-provided interventions they have used to relieve their climacteric complaints during the intervention period.
A hot flush diary and the WHQ are administered to participants in the acupuncture group at 6 and 12 months after the baseline evaluation. The follow up-period allows us to investigate the development of symptoms and the use of symptom relieving interventions after the intervention period (natural course of symptoms and choice of treatment).

At each treatment session the acupuncturists ask specifically about, and record, any adverse events that have occurred during or after the last treatment, and adverse event forms are filled in at 4, 8 and 12 weeks. The women are asked specifically about adverse events in the 8- and 12-weekly diaries.

The excretion of CGRP and NPY in early morning and evening urine samples are measured with a radioimmunoassay method [15], to determine any changes during the intervention period. The measurements are related to serum creatinine.

Heart rate variability measurements are done at baseline and after 12 weeks. After five minutes rest, a ten minutes registration is done with a Novacor Holter-monitor and Holtersoft Ultima software. Figure 1 shows a flow diagram of the study design, and the data collection schedule is detailed in table 2.

**Statistical power and sample size**
Calculations were made in consultation with a professional statistician. The sample size was calculated using NCSS (PASS 2002) programme, using data for hot flush frequency from many previous trials of HRT, herbs and acupuncture. With a baseline daily flush rate of 7.0 (SD 3.0), and assuming that the difference of interest is 20 percentage points (post-treatment flush rates of 3.5 and 4.9 for acupuncture and no acupuncture groups respectively, equivalent to reductions of 50% and 30%, and SD 3.5 for change in flush rate), and employing a two-sided, two-sample t-test for the changes, 100 women in each group were needed to identify a 20% difference with a power of 80% and \( \alpha \)-value of 0.05. Assuming a total withdrawal and dropout rate of 30%, we estimated that a total sample size of 286 women is required.

Power calculations for the sub-study of biological variables are based on earlier studies of the CGRP excretion in urine during acupuncture treatment [15]. To identify a supposed 30% difference in CGRP urine excretion with a
power of 80% and $\alpha$-value of 0.05, we need 25–30 participants in each group. To allow for some measurement inaccuracies because CGRP and NYP are to be measured in early morning and evening urine samples, we will use 35 participants in each group.

Data entry is undertaken by the central coordinator, with checking of random 10% samples by the research fellow. Data on primary endpoint are entered by a person not connected to the study team, and who is blinded to treatment allocation.

**Data analysis and handling**

All analyses are conducted blinded to group allocation. Missing data are substituted by last value carried forward. The primary analysis is intention-to-treat, comparing mean changes from baseline to end of treatment after 12 weeks in the two groups, using a two-sample t-test. In the presence of meaningful baseline differences, analysis of covariance will be employed. It is anticipated that the data will be somewhat right-skewed, therefore analyses will be checked after appropriate data conversion, and also checked using non-parametric methods. Secondary analyses will compare the changes at different time points. Secondary measures will be analysed using appropriate parametric or non-parametric methods. Subgroup analyses include per-protocol analyses to assess efficacy of acupuncture care, and comparison of changes in hot flush rate among women grouped by TCM syndromes.

The trial headquarters is located at UNN Clinical Research Centre where they have experience in running multicenter studies. All data sheets are rendered anonymous by removing participant names and addresses. The personal information and the index that links trial numbers with individual participants is kept under lock and key in the possession of each local coordinator. Trial number alone identifies all computerised data. To prevent reporting bias, all the participant evaluation forms are administered by the trial headquarters in Tromsø. The participants return the evaluation forms to the trial headquarters in Tromsø.

Participants in either study group who choose to use any therapist-provided care to relieve hot flushes (e.g. massage, homeopathy or any prescribed medication to relieve hot flushes such as systemic estrogen or SSRI's from any source) during the 12 week study period, are followed up with registration of events and included in the intention-to-treat analysis.
Data and safety monitoring
A Steering Group retains responsibility for quality control and meet on a regular basis throughout the study period. In addition, the Steering Group can be convened as an emergency in the event of a serious adverse event associated with the trial to decide on appropriate action to prevent recurrence. Regular meetings will consider any reported adverse events, protocol violations, the recruitment rate, and any practical issues concerning local coordination, acupuncture practitioners, as well as any issues raised by participants.

The study is performed according to the Helsinki declaration and Good Clinical Practice requirements [34]. The study has been approved by the Norwegian Data Inspectorate and the Norwegian Biobank Registry, and recommended by the Ethics Committee.

Competing interests
The author(s) declare that they have no competing interests.

Authors' contributions
EKB is research fellow and main author of this paper. SG conceived of the study, and is the principal investigator. TA is responsible for the design of the acupuncture intervention, and participated in the design of the study. AW is member of the steering group, and gave substantial input to the study design. VF participated in the design of the study, and is member of the steering group. The whole group gave comments on the drafts for this paper.
Figure 1. Flow diagram of study design.
### Table 1. Eligibility criteria

#### Inclusion criteria

- Postmenopausal (≥1 year past last menstruation)
- Willing to receive acupuncture
- Mean value of ≥7 hot flushes/24 hours during a time period of 7 days

#### Exclusion criteria

- Surgical menopause
- History of cancer within the past five years
- Use of anticoagulant drugs
- Heart valve disease
- Poorly controlled hypertension
- Poorly controlled hypothyroidism
- Hypothyroidism
- Poorly controlled diabetes mellitus
- Organ transplant
- Mental disease
- Overt drug or alcohol dependency
- Inability to complete study forms
- Use of HRT (Wash out period: 8 weeks for systemic and 4 weeks for local use)
- Use of SSRI (Wash out period: 8 weeks)
### Table 2. Data collection schedule

<table>
<thead>
<tr>
<th></th>
<th>Qualifying period 2 wks</th>
<th>Baseline Randomisation</th>
<th>End</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit number</td>
<td>1</td>
<td>2</td>
<td>3²</td>
<td></td>
</tr>
<tr>
<td>Week number</td>
<td>≤-1</td>
<td>0</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

**Participant provided data**

- Hot flush diary: X
- WHQ: X
- EQ-5D: X
- Sociodemographic variables: X
- Beck depression inventory²: X
- Hopkins symptoms checklist²: X
- SF36²: X
- Lifestyle/physical activity: X
- Medical history: X
- Use of health care services²: X
- Dietary supplements/herbs: X
- OTC-drugs: X
- Prescribed drugs: X
- Side effects: X

**Biological variables¹**

- Sex hormones, creatinine: X
- CGRP, NPY: X
- Heart rate variability: X
- Bone mass density: X

**Qualitative data²**

- Acupuncturist provided data: X
- TCM diagnosis: X

---

1. Biological variables and qualitative data may vary depending on the specific study.
2. Data collection timeline varies between studies.
Acknowledgements

This project is funded by The Research Council of Norway. The principal investigator is funded by the University Hospital of North Norway.

References


161
Summary of Meridians and Acupoints for Massage Therapists
In traditional Chinese medicine theory, the meridians - or channels carry and distribute qi and blood to all parts of the body, connect the organs, limbs and joints. Any break in the flow is an indication of imbalance. If a person's vitality or energy is recognizably diminished it is an indication that the body's organs or tissues are functioning poorly, therefore the qi flow is inadequate. When qi flow is inadequate, disease and poor health follow.

Many methods of stimulating this flow of energy exists, Acupuncture, Cupping, Moxibustion Herbal medicine, Therapeutic exercises and of course, massage therapy.

The Asian forms of massage are based on the same meridian system as acupuncture and share the belief that an insufficient supply of qi makes a person vulnerable to disease. Restoring the qi is the ultimate goal in restoring overall health and well being to the individual.

TCM practitioners, whether they are acupuncturists, herbalists, or massage therapists, assist their clients in repairing dysfuctioning areas within their meridian systems to restore a natural balance and Yin Yang harmony.

The twelve major meridians correspond to specific human organs: kidneys, liver, spleen, hearth, lungs, pericardium, bladder, gall bladder, stomach, small and large intestines, and the triple burner (body temperature regulator). Yin meridians flow upwards. Yang meridians flow downwards.

Pathways corresponding to the Yang organ is often used to treat disorders of its related Yin organ.

If you have never received formal Shiatsu or Tui-Na massage training do not be dismayed, the traditional Swedish Massage stimulates the meridians and acupoints in a similar fashion. To be truly effective in treating illnesses with TCM theory you need understand the workings of the meridians and the points, and simply work them as you would with the massage strokes you are already familiar with.
Certificate of Completion and Transcript

In order to receive your certificate of completion and an updated transcript for this course you must complete and pass the quiz.

Once we have received your quiz we will generate your certificate and transcript and both will be emailed to you. If you completed the last quiz during our business hours (Monday-Friday 8:00 am-5:00 pm Pacific Standard Time) it should be emailed to you within a few minutes.

If you complete the last quiz after business hours, or on a weekend it will still be emailed to you as quickly as possible. We check the system every hour until midnight most days so it should go out within an hour of you taking it.

If you take the last quiz after midnight you will probably have to wait until the next morning, we do sleep.

Please give us a full 24 hours before you call us if you have not received your certificate and transcript. We pride ourselves on being very fast, but if there is a condition beyond our control (the Internet Service Provider is down, etc) it may take us longer than usual.

Also please be aware that many people wait until the last minute to do their courses. For this reason, the last few days of the month (28th, 29th, 30th, etc) are usually very, very busy times for us so our turn around time may be a little slower-but it should still be within 24 hours.

If it has been more than 24 hours and you still have not received your emailed certificate, by all means call us! The number is (209) 777-6305.

Lost Certificates and Transcripts

If you need another copy of your documents emailed to you we will gladly do that for free at any time, just go to the contact page on our website and ask for it.
Course Evaluation
We would like to hear some feedback from you. You can complete the evaluation online by clicking this link:

http://www.sasionline.com/courseevaluation.html

If you are using the “embedded” version of this course you will not be able to click the link above but there should be one you can access on the webpage itself.

Thanks for taking our course; we really appreciate your business and we hope you come back to us next time you need continuing education hours.

Please check out our blog, www.beyondmassageschool.com where we post interesting articles, funny stories, games and yes, coupon codes for our courses (now we tell you, right?).

Errata
If you found a typo PLEASE LET US KNOW what page it is on and the paragraph and we will fix it ASAP. This book has 50,000 words in the course content alone. Some of those are going to be misspelled. We’re not perfect, but we strive to be- so help us out.

Help and Technical Support
We have worked hard to make this course as easy to use as possible, but it does rely on technology and sometimes there are factors that are out of our control (like your local internet provider, your computer, your browser version, the device you are using etc).

If for some reason you are not able to access the quiz you can call us and let us know, and we will problem solve it for you. We have office hours, Monday-Friday 8:00 am-5:00 pm PST but you can call or email for help at any time after hours, I monitor the system every hour until I go to sleep, so call if you need to and I will do my best to help you. The number is (209) 777-6305.
Bibliography


