Acupuncture

Linda Chun
Clinical Assistant Professor
Internal Medicine – Pediatrics
OSU Center for Integrative Medicine
The Ohio State University Wexner Medical Center

WHAT IS ACUPUNCTURE?

• Acu = Greek for needle
• Acupuncture = Puncture with needles
• Insertion of very fine needles into the skin at specific points
• Sometimes
  – Combined with electric pulse
  – Used with moxibustion
     (herbal heat source)

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WHAT IS ACUPUNCTURE?

Can influence health by:

- Promoting health and well-being
- Preventing illness
- Treating various symptoms and medical conditions

Image provided courtesy of Welcome Images

ACUPUNCTURE

- Key component of Traditional Chinese Medicine
- Practiced for 1000’s of years
- To analyze and categorize symptoms and disease, TCM utilizes concepts of:
  - Cold/heat
  - Interior/exterior
  - Excess/deficiency
  - Yin/yang

Image from Wikipedia
QI

- Qi is vital energy or life force
- Circulates in the body through meridians
- Health involves maintaining balance and harmony of Qi circulation
- Flow can be blocked, deficient, excessive, imbalanced
- Influence Qi at acupuncture points
- Insertion of fine, metallic needles

Image provided courtesy of Welcome Images

Human body meridians

Image from Wikipedia
# ACUPUNCTURE TECHNIQUES

- **Moxibustion** – therapeutic application of heat to acupuncture points by burning herb (*Artemesia vulgaris*)
- **Cupping** – applying suction to skin with small glass jars
- **Acupressure** – manual pressure applied to acupressure points and meridians
- **Electroacupuncture** – electric current applied to needle

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# ACUPUNCTURE IN THE U.S.

- 2007 National Health Interview Survey
- Comprehensive survey of CAM use by Americans
- 3.1 million adults and 150,000 children had used acupuncture in previous year
- Between 2002 and 2007 NHIS, use by adults increased by 1 million people
### MEDICAL ACUPUNCTURE

- Combination of Western medicine and TCM concepts
- Utilized by physicians
- Treats wide scope of conditions including prevention
- Looks at both medical paradigms
- American Board of Medical Acupuncture

### COMMUNITY ACUPUNCTURE

- Community Acupuncture Network
- Treatments in community setting
- Sliding scale fee typically
- No insurance plans
- More affordable and accessible
- Acupuncture often more effective when done more frequently

Image from Wikipedia
ACUPUNCTURE IN OHIO

• Education and training requirements for licensure vary from state to state
• In Ohio, acupuncture considered an extension of branch of medicine
• Medical license or licensed acupuncturist (following training at accredited school)
• Chinese herbal medicine excluded from scope of practice of acupuncture in Ohio

HOW DOES ACUPUNCTURE WORK?
RESEARCH DEMONSTRATES THAT ACUPUNCTURE:

- Stimulates
  - Bone regrowth
  - Clotting factor
- Regulates
  - Blood pressure
  - Serotonin
- Stimulates production of
  - Cortisol
  - Dynorphin
  - Endorphin
  - Enkephalin (pain modulators)

THEORIES

- Autonomic nervous system theory
  Acupuncture stimulates the release of norepinephrine, acetylcholine and several types of opioids, affecting changes in turnover rate, normalizing the autonomic nervous system, and reducing pain

- Vascular-interstitial theory
  Acupuncture manipulates the electrical system of the body by creating or enhancing closed-circuit transport in tissues. This facilitates healing by allowing the transfer of material and electrical energy between normal and injured tissues.
• **Blood chemistry theory**
  Acupuncture affects concentrations of triglycerides, cholesterol, and phospholipids, suggesting that acupuncture can both raise and diminish peripheral blood components, thereby regulating the body toward homeostasis.

• **Gate-control theory**
  Acupuncture activates non-nociceptive receptors that inhibit the transmission of nociceptive signals in the dorsal horn, “gating out” painful stimuli.

• **Neurotransmitter theory**
  Acupuncture affects higher brain areas, stimulating the secretion of beta-endorphins and enkephalins in the brain and spinal cord. This influences the immune system and the antinociceptive system.
**WHAT CAN ACUPUNCTURE HELP?**

- World Health Organization (WHO) recognizes the use of acupuncture in the treatment of a wide range of illnesses
- Based on clinical experience, not necessarily on controlled clinical research

<table>
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<td>Arthritis</td>
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<td>Asthma</td>
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<td>Carpal tunnel syndrome</td>
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<td>Chronic fatigue</td>
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<td>Colitis</td>
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<td>Common cold</td>
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<td>Constipation</td>
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<td>Dental pain</td>
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<td>Depression</td>
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<td>Diarrhea</td>
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<td>Digestive trouble</td>
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<td>Dizziness</td>
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<td>Dysentery</td>
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<td>Emotional problems</td>
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<td>Eye problems</td>
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<td>Facial palsy/tics</td>
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<td>Fatigue</td>
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<td>Fertility</td>
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<td>Fibromyalgia</td>
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<td>Gingivitis</td>
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<td>Headache</td>
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<td>Hiccups</td>
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<td>Incontinence</td>
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<td>Indigestion</td>
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<td>Irritable bowel syndrome</td>
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<td>Low back pain</td>
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<td>Menopause</td>
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<td>Menstrual irregularities</td>
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<td>Migraine</td>
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<td>Morning sickness</td>
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<td>Nausea</td>
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<td>Osteoarthritis</td>
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<tr>
<td>Pain</td>
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<td>PMS</td>
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<td>Pneumonia</td>
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<td>Reproductive problems</td>
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<td>Sciatica</td>
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<td>Seasonal affective disorder</td>
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<td>Sleep disturbances</td>
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<td>Smoking cessation</td>
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<td>Sore throat</td>
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<td>Stress</td>
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<tr>
<td>Tennis elbow</td>
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<tr>
<td>Tonsillitis</td>
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<tr>
<td>Trigeminal neuralgia</td>
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<td>Urinary tract infections</td>
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<td>Vomiting</td>
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</table>
### FREQUENTLY TREATED SYMPTOMS

- Chemotherapy-induced nausea and vomiting
- Post-op pain
- Neck and Lower back pain
- Myofascial pain
- Osteoarthritis
- Headaches/Migraines
- Menstrual problems
- Shoulder and arm pain
- Digestive problems
- Addictions
- Asthma
- Fertility concerns

Image provided courtesy of Welcome Images

### SAFETY OF ACUPUNCTURE

- FDA regulates acupuncture needles for use by license practitioners
- Needles manufactured and labeled according to certain standards
- Sterile, non-toxic, single use
- Practitioners use new set of disposable needles
- Swab sites with alcohol before insertion
# RESEARCH

## ACUPUNCTURE AND CHRONIC PAIN

- Recent NCCAM-funded study published Sept 2012 Archives of Internal Medicine
- Individual patient data meta-analyses
- 29 high quality randomized controlled trials
- 17,922 people
- Back and neck pain, OA, shoulder pain, headaches

ACUPUNCTURE AND CHRONIC PAIN

- Statistically significant differences between acupuncture and simulated acupuncture (modest)
- Statistically significant differences between acupuncture and no-acupuncture control (larger)
- Similar across all pain conditions
- Noted by authors as most robust evidence to date that acupuncture more than just placebo


ACUPUNCTURE AND KNEE OSTEOARTHRITIS

- Randomized placebo-controlled trial
- 570 patients
- Compared 24 acupuncture sessions over 26 weeks with sham acupuncture or educational approach
- WOMAC pain and function scores at 4, 8, 14, 26 weeks
- PAIN: By week 14, pain significantly decreased more in true acupuncture group (40% decrease) compared to sham
- Significant differences remained at week 26

ACUPUNCTURE AND KNEE OSTEOARTHRITIS

- FUNCTION: At weeks 8, 14, 26 true acupuncture group with significantly greater improvement compared to sham
- Acupuncture appears to be safe and effective for reducing pain and improving function
- High attrition rate, particularly educational group (52%)! – greatest weakness of this study.


ACUPUNCTURE AND HEADACHES

- 48 patients with chronic migraine and muscle tension headaches
- Compared prophylactic course of acupuncture and medical treatment
- 24 out of 41 improved on acupuncture; very marked in 9
- 9 out of 36 improved on medical treatment; very marked in 3

ACUPUNCTURE AND HEADACHES

• Larger proportion preferred acupuncture (did not switch)
• Acupuncture more likely beneficial if +tender points
• Length of time patient had headache – no difference
• Depressive features did not preclude satisfactory treatment


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ACUPUNCTURE AND NAUSEA/VOMITING

• 2006 Cochrane systematic review assessing P6 stimulation
• Post-operatively
  – 26 trials (>3000 patients) showed superiority of real P6 stimulation over sham for both nausea and vomiting
  – P6 stimulation superior to anti-emetic for nausea, equivalent for vomiting

ACUPUNCTURE AND NAUSEA/VOMITING

• Chemotherapy induced
  – 11 trials (>1200 patients) showed electroacupuncture, not manual, effective for first-day vomiting
  – Acupressure effective for first-day nausea, not vomiting
• Pregnancy induced
  – 6 trials (1150 patients) with mixed results


ACUPUNCTURE AND PTSD

• Pilot study with 73 people
• Received either acupuncture or group cognitive-behavioral therapy over 12 weeks
• Wait-list control group
• Primary outcome measure was self-reported PTSD symptoms (depression, anxiety, impairment)

ACUPUNCTURE AND PTSD

- Acupuncture effects similar to group CBT
- Both interventions superior to control group
- Treatment effects maintained for 3 months for both
- Larger trials warranted


ACUPUNCTURE AS PART OF INTEGRATIVE APPROACH

- Safe and effective modality
- No side effects
- Drug-free
- Affordable options exist
- Wide variety of conditions
- Desired by patients

Image provided courtesy of Welcome Images
Clinical Practice of Acupuncture

David Wang, RAC
OSU Center for Integrative Medicine
Department of Family Medicine
The Ohio State University Wexner Medical Center

General Clinical Procedure of Acupuncture Treatment

1. Make TCM Diagnosis
2. Determine Treatment Principle
3. Pick Up Acupuncture Points
4. Manipulate On The Points
5. Remove Needles or Other Instruments
Make TCM Diagnosis

Step one

• Collection of clinical data

Step two

• Differentiation of Syndrome

Collection of Clinical Data

Inquiring

Observation

Listening and Smelling

Pulse-feeling and Palpation
Tongue Diagnosis
Pulse Diagnosis

Differentiation of Syndrome

- Analyze & sort out clinical date
- Determine
- The cause, the location and the nature etc.
The eight principle syndrome differentiation

Etiological syndrome differentiation

Qi, Blood and Body-fluid syndrome differentiation

Zang-fu syndrome differentiation

Meridian syndrome differentiation

Syndrome differentiation of exogenous diseases (including the six meridian syndrome differentiation, Wei-Qi-Ying-Xue syndrome differentiation and San-jiao syndrome differentiation)

Deficiency

Reinforcing

Excess

Reducing

Heat

Clearing heat

Cold

Expelling cold
## Pick Up Acupuncture Points

<table>
<thead>
<tr>
<th>Body Acupuncture System</th>
<th>Micro-Acupuncture Systems</th>
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<tbody>
<tr>
<td></td>
<td>Auricular Acupuncture</td>
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<tr>
<td></td>
<td>Scalp Acupuncture</td>
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<td></td>
<td>Facial and Nasal Acupuncture</td>
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<td>Occular Acupuncture</td>
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<td></td>
<td>Wrist &amp; Ankle Acupuncture</td>
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<td></td>
<td>Hand &amp; Foot Acupuncture</td>
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<tr>
<td>Acupuncture on the Radial Aspect of the 2nd Metacarpal bone</td>
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</table>

## The Basic Principles of Selecting Points

- Based on TCM theories
- Based on the practitioner’s experiences
- Based on modern science research
## Manipulate on the Acupuncture Points

<table>
<thead>
<tr>
<th>Needling with specific techniques (reinforcing, reducing, even methods)</th>
<th>Moxibustion</th>
<th>Vaccarie Seeds</th>
<th>Point Injection</th>
</tr>
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<tbody>
<tr>
<td>Electro-acupuncture</td>
<td>Magnetic</td>
<td>Laser</td>
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<tr>
<td>Cupping</td>
<td>Acupressure</td>
<td>Scrubbing</td>
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## Acupuncture Tools

![Image of acupuncture tools]
## Acupuncture Needles

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Filiform Needles</td>
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<tr>
<td>Other Needles</td>
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<td>Intradermal Needles</td>
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<td>Cutaneous Needles</td>
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<tr>
<td>Three-Edged Needles</td>
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## Procedure of Acupuncture with Filiform Needles

1. **Step 1**: Full attention of the acupuncturist & spiritual concentration of the patient
2. **Step 2**: Insertion of the needle
3. **Step 3**: Attainment of needling sensation
4. **Step 4**: Direction of needling sensation
Procedure of Acupuncture with filiform needles

Step 5: Reinforcing, Reducing or Even techniques

Step 6: Retaining of the needle

Step 7: Withdrawal of the needle

Methods of Manipulating the Needle

- Lifting & Thrusting Manipulation
- Twirling & Rotating Manipulation
## Reinforcing and Reducing Manipulations

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
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<tbody>
<tr>
<td>By lifting and thrusting the needle</td>
<td>By rapid and slow insertion and withdrawal of the needle</td>
</tr>
<tr>
<td>By twirling and rotating the needle</td>
<td>By keeping the needling hole open or close</td>
</tr>
<tr>
<td>By puncturing along and against the direction of the meridian</td>
<td>Yin occluding in Yang</td>
</tr>
<tr>
<td>Heat-inducing needling</td>
<td>Dragon-Tiger fighting</td>
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<tr>
<td>Yin occluding in Yin</td>
<td>Midnight-Noon lifting and thrusting of the needle</td>
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<tr>
<td>By manipulating the needle in cooperation with the patient's respiration</td>
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<tr>
<td>Cool-inducing needling</td>
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<tr>
<td>By keeping the needling hole open or close</td>
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<td>By puncturing along and against the direction of the meridian</td>
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<td>Yin occluding in Yang</td>
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## Moxibustion

<table>
<thead>
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<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Moxibustion with Moxa Cone</td>
<td>Direct Moxibustion</td>
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<tr>
<td>Moxibustion with Moxa Stick</td>
<td>Mild-Warming Moxibustion</td>
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<tr>
<td>Moxibustion with Moxa on Needle</td>
<td>Sparrow-Pecking &amp; Rounding Moxibustion</td>
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<tr>
<td>Direct Moxibustion</td>
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<tr>
<td>Indirect Moxibustion</td>
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<tr>
<td>Mild-Warming Moxibustion</td>
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<tr>
<td>Sparrow-Pecking &amp; Rounding Moxibustion</td>
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Acupuncture Procedures

Functions of Moxibustion

- Warming and Dispersing the cold
- Warming and Dredging the Meridians, promoting Blood Circulation
- Recuperating the Depleted Yang and Rescuing Collapsed Patient
- Relieving Stagnation
- Preventing Diseases and Promoting Health
Contraindication for Moxibustion

- Excess Syndrome, Heat Syndrome
- The abdominal region and lumbosacral region of the pregnant woman are not allowed to use moxibustion
- Direct moxibustion should not be applied to the face and head, the area where the main vessels lie.

Electro-Acupuncture
• Pregnancy
  (the first trimester or close to the uterus at any stage of pregnancy)

• Cancer
  (over the tumors or cancerous tissue)

• Broken Skin

• Disoriented Patients

• Metal
  (near the metal or over areas of the body with metal staples, implants or pins)

• Heart
  (peripheral to the heart, patient with pacemaker, defibrillator)

• Laryngeal Musculature

• Carotid Sinus

• Infections
Cupping

Indications of Cupping

- Bi syndrome (Pain of the low back, shoulders, legs etc.)
- Gastrointestinal disorders (Stomachache, Vomiting, Diarrhea)
- Lung disease (Cough and Asthma)
### Contraindications of Cupping

<table>
<thead>
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<td>Over ulcers</td>
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<td>Edema</td>
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<td>On an area overlying large blood vessels</td>
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<td>High fever and convulsion</td>
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<td>Hypersensitivity</td>
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<tr>
<td>Bleeding</td>
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<tr>
<td>Low abdomen or low back of pregnant women</td>
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- **Pregnant women:**
  - Points on the lower abdomen and lumbosacral region under three months, points on the upper abdomen and lumbosacral region after three months, LI4, SP6, UB60, UB67, GB21, ST12

- **Infants:**
  - Points on the vertex when the fontanel is not closed, in addition, no retaining of needles

- **Blood vessels:**
  - ST30, LV14, ST9, LU8, ST42

- **Internal organs:**
  - Points of the chest and back should be carefully needled
- Patients who are: extremely weak, over fatigue, too huger, very drunk, very angry
- Lymph edema (no needles in direct area)
- Platelets <50,000
- ANC <500
- WBC <1500
- Acute irregular heartbeat or failure
- Caution with anticoagulant use, bleeding tendency

### Acupuncture is Extremely Safe

- Treated billions of people over thousands of years
- Out of 55,291 acupuncture treatments (5 years)
  - 64 = minor adverse events
  - 99.8% without significant adverse events*
- Serious adverse events in acupuncture treatment are uncommon in the practice of adequately trained acupuncturists*

*JAMA, Yamahita, H., Tskayama, Dr. H., et. al.*
Acupuncture is Extremely Safe

Benefits:
- Feel better (76%)
- Miss fewer work days (71%)
- Get along better with others (69%)
- Have less pain (64%)
- Have more energy (58%)
- Are more focused (58%)
- Can work better (64%)

Claire Cassidy, “Health Visions 2000”

What is an Acupuncture treatment like?

Once the needles are placed there may be a slight tingling, numbness or heaviness in the area while the practitioner is stimulating the point.

These are positive signs that the needles are affecting the acupuncture point.
How long do treatments take?

**An office visit**—30 minutes to 1 hour.

The needles remained—15 to 45 minutes, average: 30 minutes

The technique and desired result will determine the duration.

Usually the patient will be lying on a comfortable padded table or in an easy chair. Often patients will become very relaxed and fall into a light sleep during the session.

How many treatments and how often?

Although some people will respond well to only one treatment, more are often necessary.

The frequency of treatment and number of treatments needed is related to the patient's condition.

Generally, the longer you have had the condition, the longer the course of treatment will be before showing substantial and lasting results.
Acupuncture can be scheduled as often as five times a week or as little as once a month.

Typically, in China patients are treated two to five times a week.

Although some patients respond favorably after only one or two treatments, others may not respond until the ninth visit.

As symptoms improve fewer visits are required.

**Acupuncture Is:**

- Safe
- Effective
- Cost effective
- Desired by the public
A Rapidly Growing Profession For Tomorrow’s Health Care World