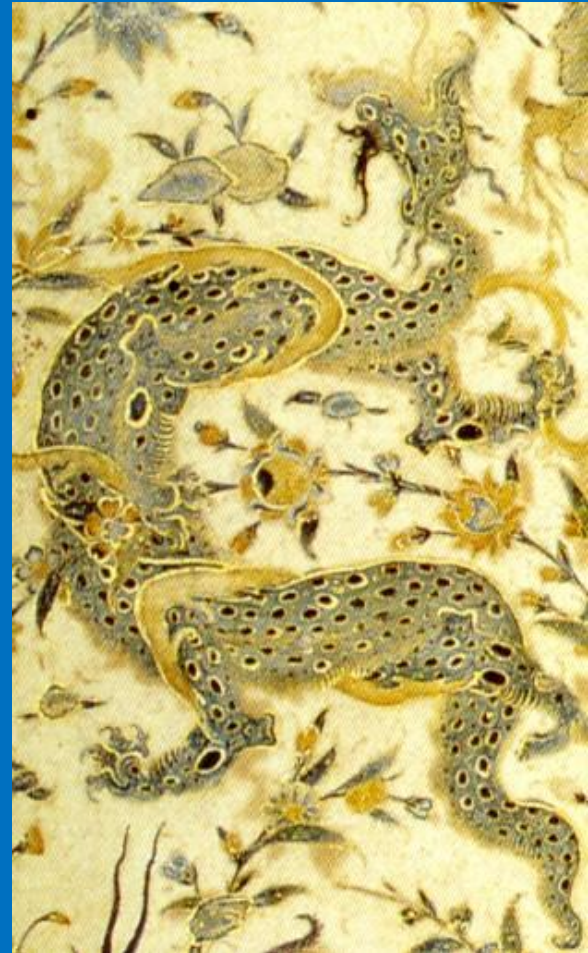


Acupuncture: The New Ancient



Origins of Acupuncture

- Over 4000 years ago
- Stone needles
- 3000 year old hieroglyphics on bones and tortoise shells
- Bronze age—castings of bronze needles found



Iron Age



- About 200 B.C. Iron Age began
- During the feudal age acupuncture grew by leaps and bounds
- Nine kinds of metal needles found
- 1968—Tomb of Western Han Dynasty excavated—4 golden needles 5 silver needles

Growth

Acupuncture continued to grow steadily

By the second century B.C. principles were well formed, including moxibustion herbal therapy, massage and surgery

Many writings associated the human condition with the natural environment



- Writings were not well systemized until about 260 A.D.
- The Canons of Acupuncture, 12 volumes, addresses 349 acupuncture points
- Acupuncture grew during 265-580 A.D. because there were so many wars
- Acupuncture was a convenient and portable therapy



600-900 A.D. much clarification and systemization

Many writings that clarified old mistakes.

Many charts and color coded illustrations

862 A.D.—Earliest block-printed manual,
Acupuncture for Emergencies

Tang Dynasty—Imperial Medical Bureau
was responsible for medical education

The acupuncture branch included 1
professor, 1 asst. professor, 10
instructors, 20 technicians, and 20
students.



Ming Dynasty 1368A.D.—1644A.D.

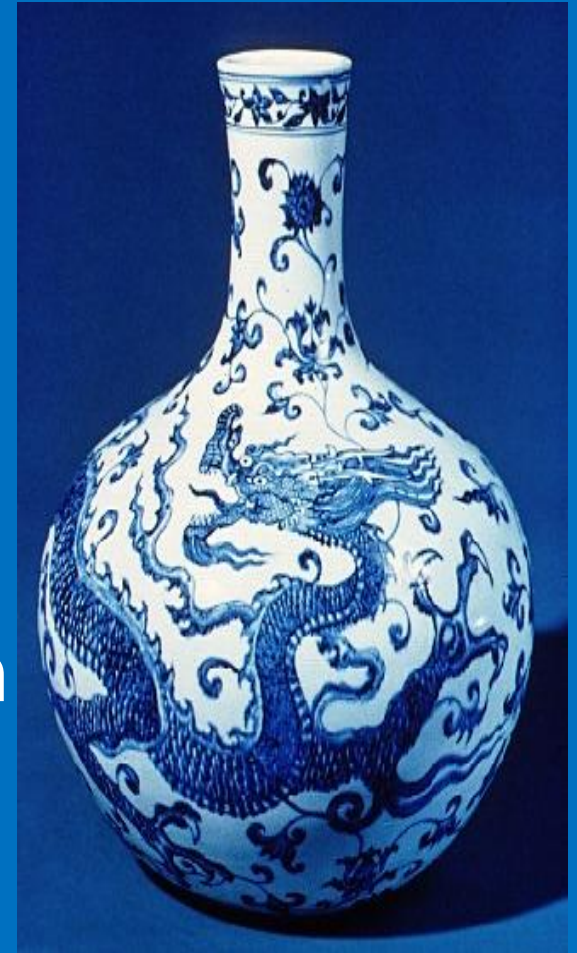
Acupuncture study reached a climax with much deeper study

Many famous practitioners

Extensive collections and revisions

Studies done on the manipulation of needles

Development of moxastick and moxa cone

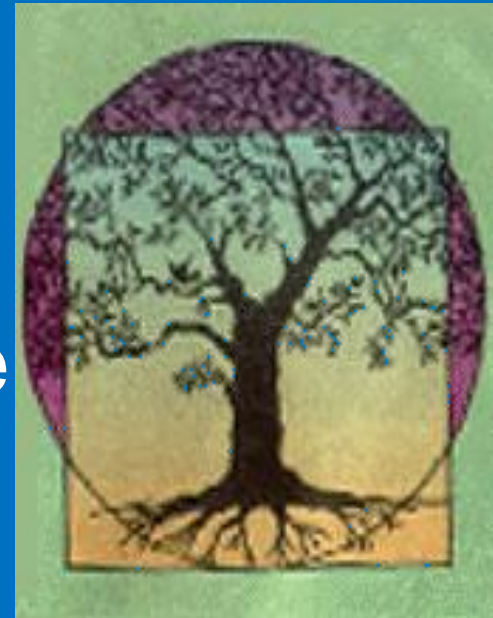


Qing Dynasty 1644A.D.—1840A.D.

Acupuncture and moxibustion fell
out of favor

More emphasis on herbal
treatment

1822 acup/moxi were abolished
from the Imperial Medical College
because these treatments were
not suitable for the Emperor



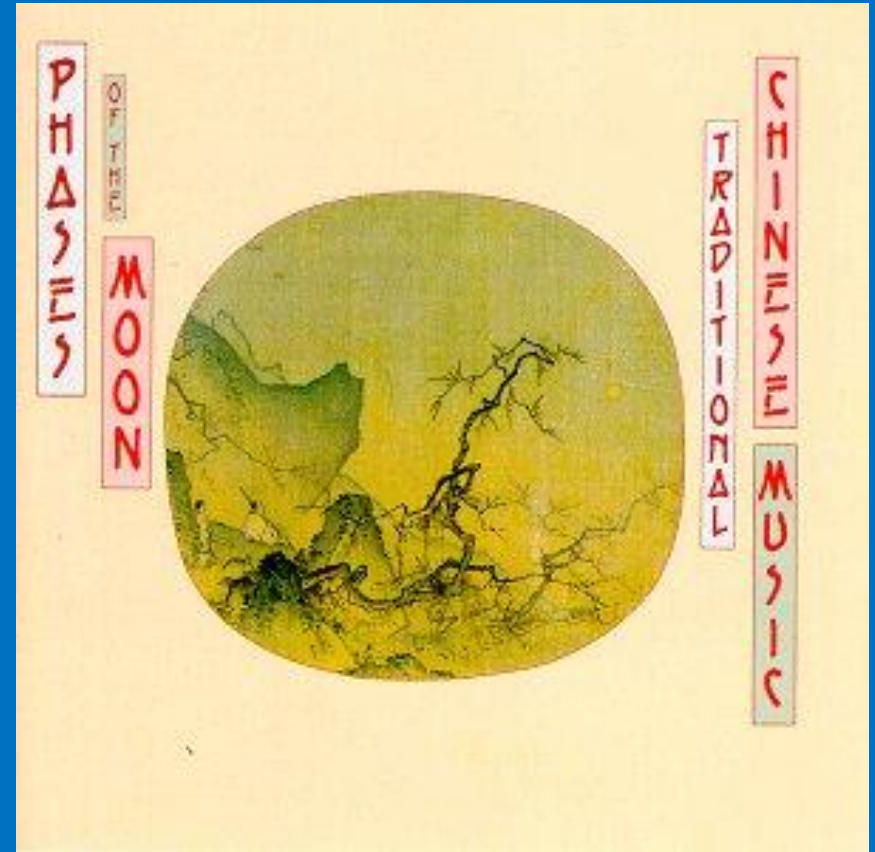
End of the Opium War 1840

Colonial society beginnings
Introduction of Western medicine
promoted Christianity, which
promoted selling goods
TCM was defamed as torture
“the deadly needle”
By 1914 TCM was banned



Folk Medicine

- Great need for medical care in rural China
- Acupuncture became strong among folk populations
- Folk doctors took great care to preserve traditional medicine
- Many published books and launched comprehensive teaching



Cultural Revolution



- Little change until 1944
- Doctors trained in the Communist Party revived acupuncture
- TCM use spread through the organized hospitals, especially the army bases
- 1945 International Peace Hospital built
- It had it's own acupuncture clinic
- First comprehensive merger of TCM and advanced science
- Government ok'd publishing and began acupuncture education again

1950's

- Acupuncture was unprecedentedly promoted by the government
- Strong efforts to unite Western medicine and Western trained practitioners with TCM
- Teaching and research groups were built in each Chinese medical school
- Many city hospitals have their own departments of acupuncture
- On the curriculum of many Western medical schools and seen as a specific research item



1970's

- Since the 1970's more work has been done on anesthesia
- 1972—Nixon's trip to China
- USA has become more aware



The Art of TCM

- TCM takes the whole person into account as an entity, rather than treating a disease



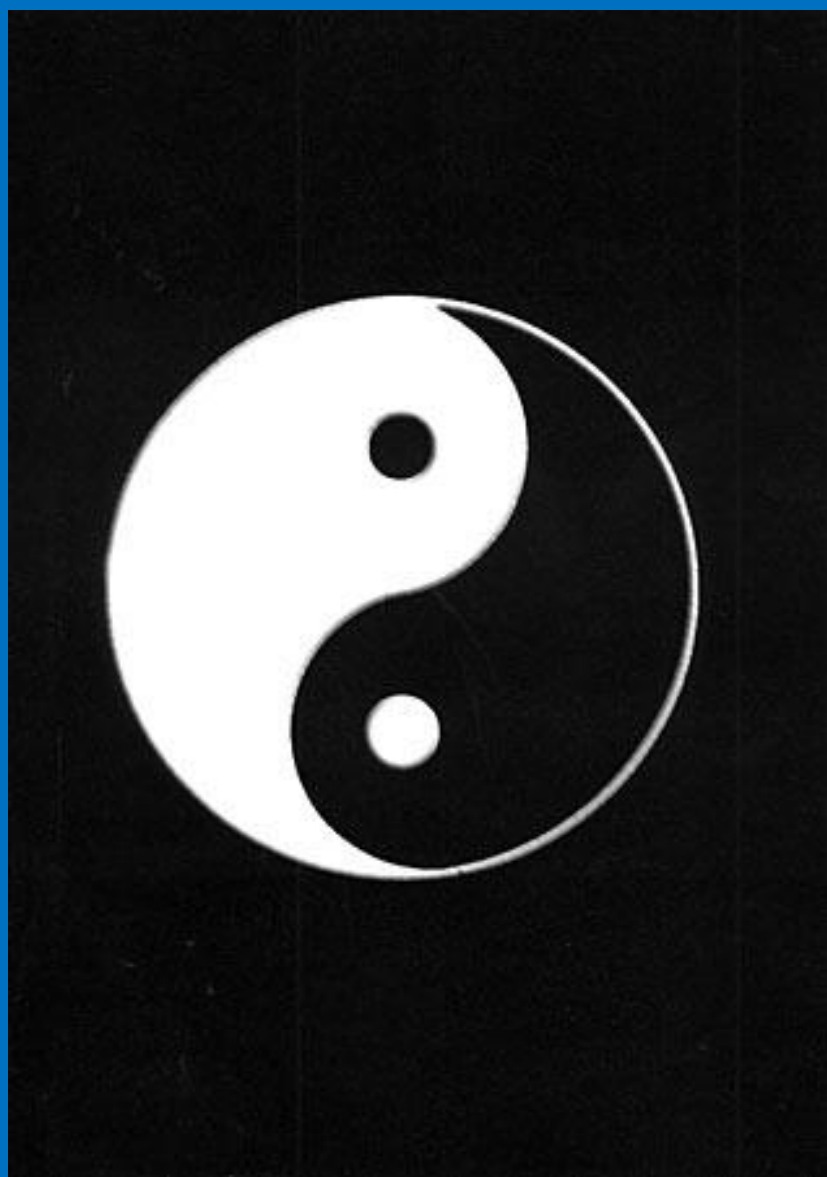
The Three Treasures of Life

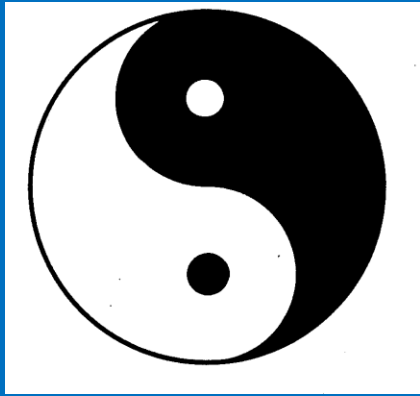
Essence- The concentrated substance of life. Genetic material and neurotransmitters.

Qi- The mobilizing force of life. Channels for life flow, neurotransmission between the cells, matter and energy.

Spirit- Coordinated activities of qi and essence.







Tao Insignia

- Neither white nor black is a semicircle, because there is never absolute balance between yin and yang
- Small circle: each exists within the other
- Complementary forces
- Different but equal
- Both are necessary for balance

Yang - Yin

YANG

Strong, active,
rational and orderly

Activated by physical
exercise, athletics,
martial arts

YIN

Serene, restful,
nurturing

Enhanced by
meditation, mantra,
tai chi, yoga

Basic Concepts of Traditional Chinese Medicine (TCM)

YANG

Sun

Masculine

Upward-seeking

Positive

Fire and Air



YIN

Dark

Feminine

Downward-seeking

Negative

Water and Earth

Homeostasis

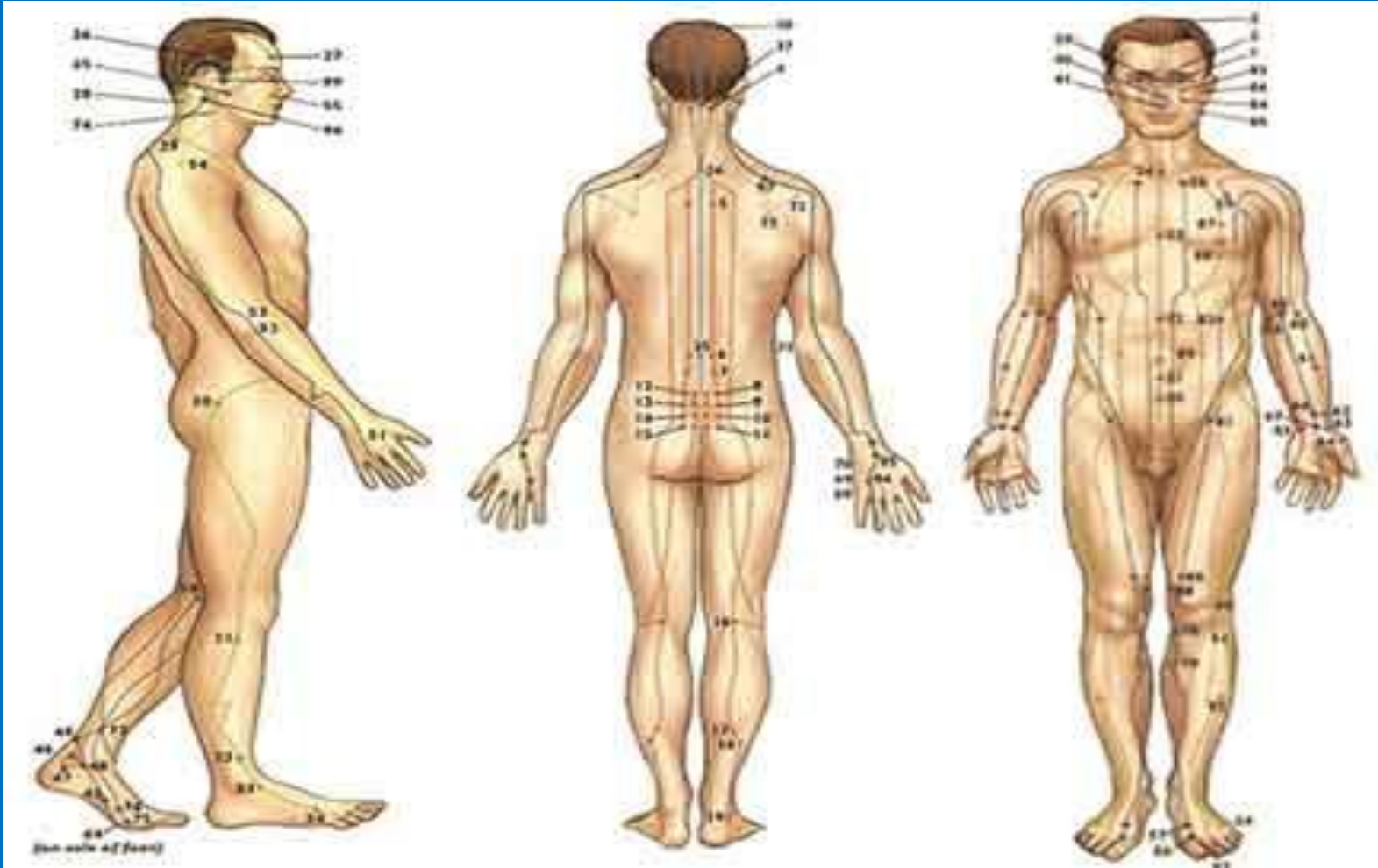




Homeostasis

Homeostasis Claude Bernard wrote,
"La fixité du milieu intérieur est la
condition d'une vie libre et
indépendante." (*"Constance of the
internal environment is the condition
for a free and independent life."*)

Branches of Traditional Chinese Medicine



Herbal Medicine

- Most ingredients from plants
- Some from animal or minerals
- Used to balance mind, body, and spirit
- Need good supervision



Qi Gong

- Chinese art of exercise and meditation
- Dynamic movements and still postures combined with mental, spiritual concentration to influence the flow of qi
- Powerful preventive therapy



Qi Gong Healing

Excellent for healing, emotional conditions: anxiety, depression, stress

With Qi Gong meditation, qi is directed to the frontal lobe, where emotional control is located.

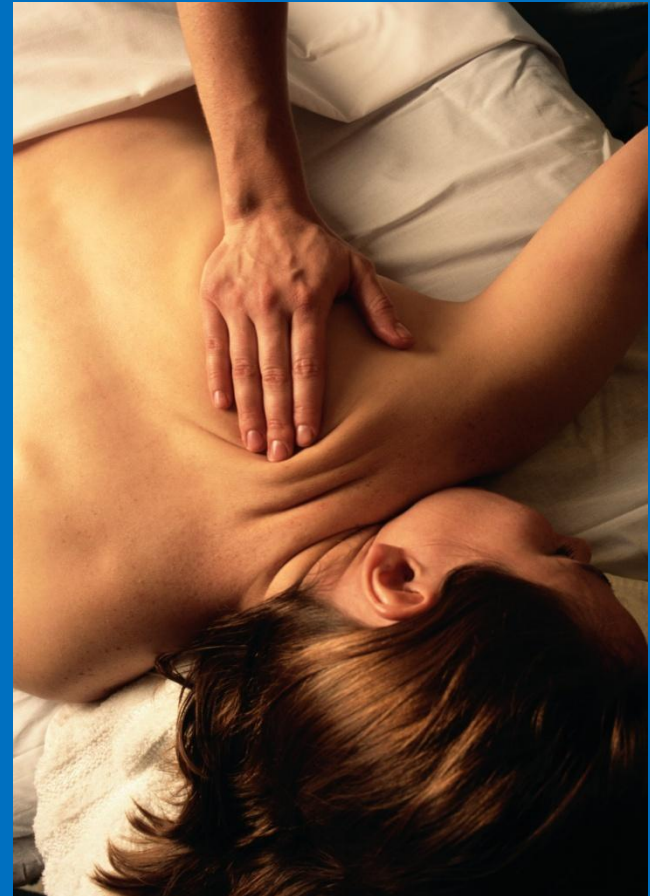
Emotions become more balanced resulting in calmness and a relaxed state.

Qi Gong practice strengthens internal energy. With regular practice enough qi is gained to promote healing.



Massage

- Originally used during the Warring State to treat injuries and pain
- Through repeated practice, found that massage reduced illness, stopped pain, and invigorated spirit
- Treatment became more and more popular as theories around the energy channels were firmed up
- Harmless
- Easy



Acupuncture and Moxibustion

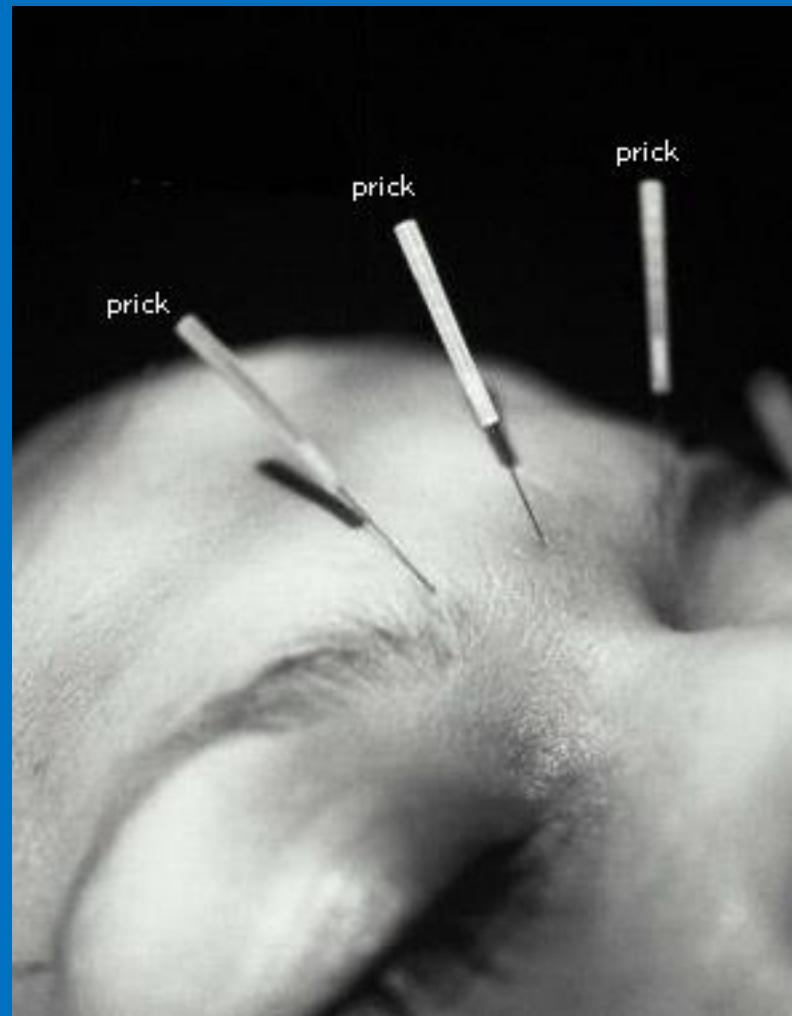
- Insertion of fine needles along 12 meridians that control the flow of qi
- May augment efficacy with electrical stimulation, laser, ultrasound or heat
- Moxibustion is burning of herb, mugwort, over the points to stimulate the point and promote smooth flow of essence



Neuroanatomical Acupuncture

- Needle placement is determined by dermatome, myotome or sclerotome
- This manipulation stimulates the nerve or muscle in a way that changes the interaction between peripheral and central nervous systems
- The body “relearns” the pain response





Mechanics

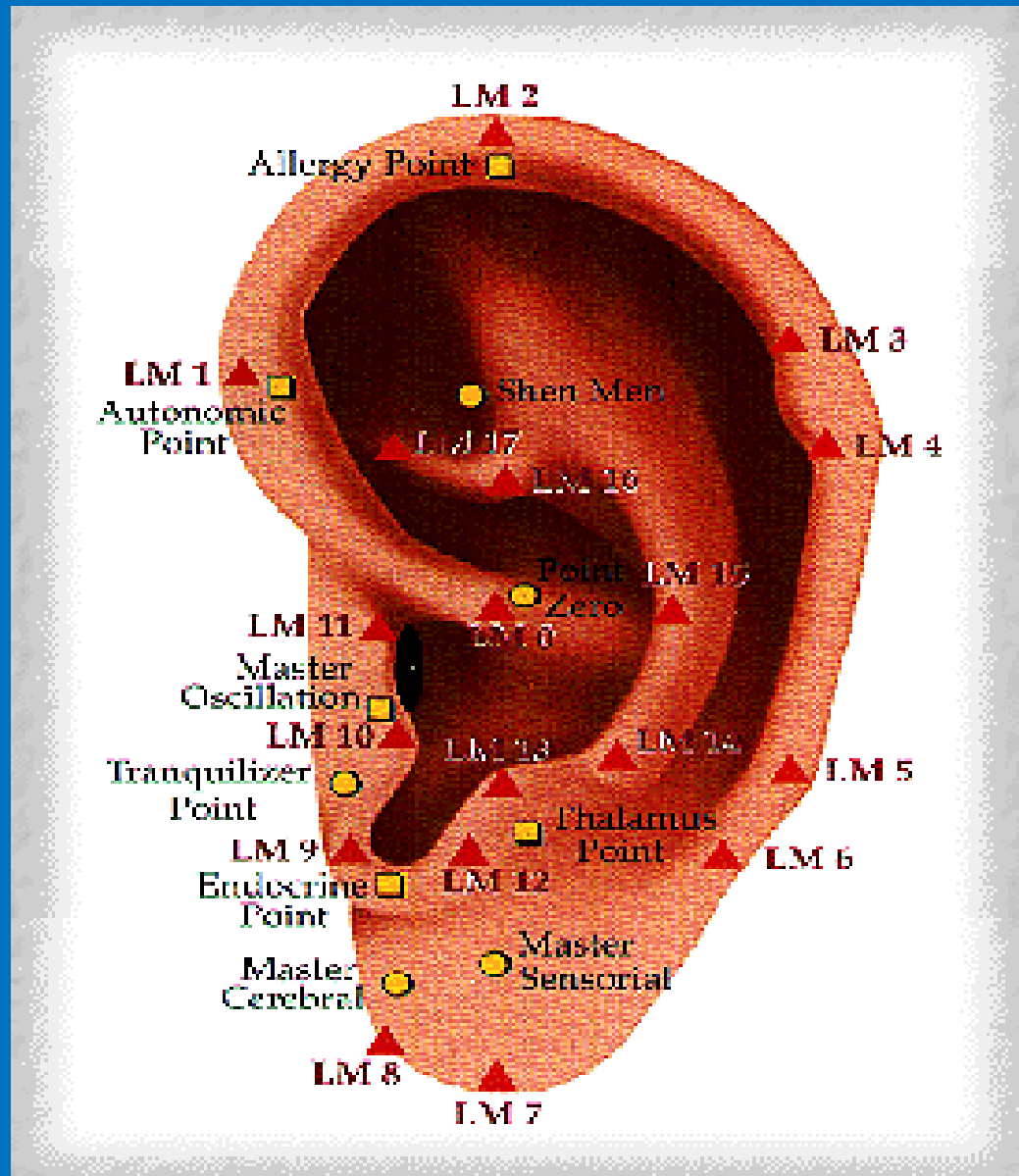
- More than 670 acupuncture points
- 32 gauge needles
- Electrical stimulation
 - Low freq 2-6 Hz (stim alpha-delta fibers)
 - High freq >100 Hz
- Manual rotation
 - thrusting/lifting motion 4-5 cps

How It's Done

- “Acupuncture”
 - Moxibustion, cupping, heat, pressure, electrical stimulation, lasers
- Needles: thin, solid, metallic, sterile (single use)
 - FDA moved needles from “experimental medical devices” to regular medical devices
 - Pliable, fine diameter (0.007-0.020” 0.18-0.51 mm)

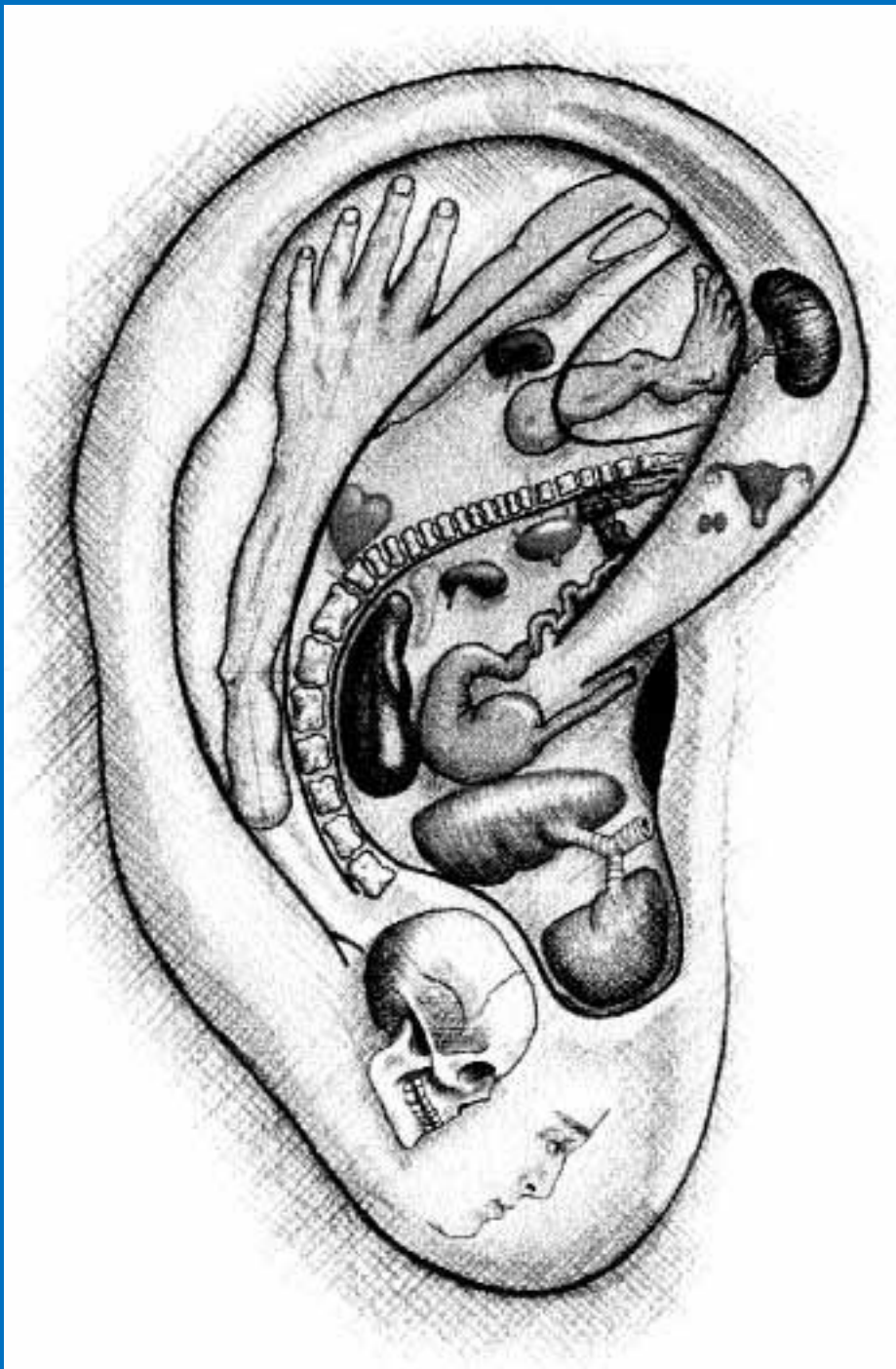


Auricular Acupuncture



Auricular Acupuncture



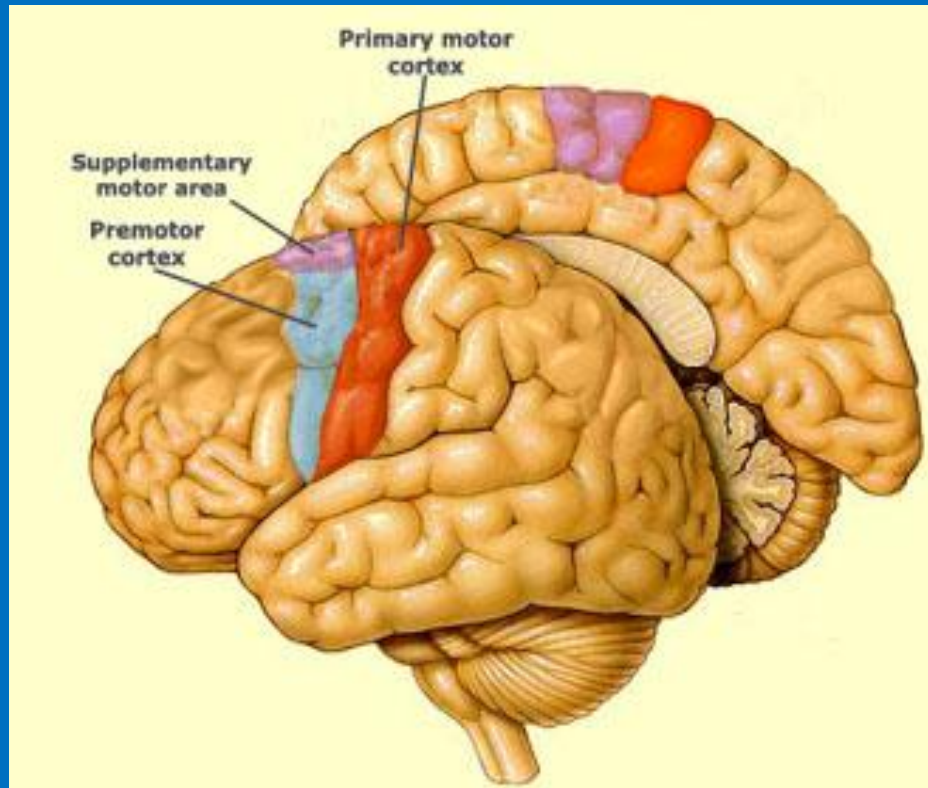


AC: Adverse Events

- Infection, local bleeding, forgotten needles
- Dizziness and syncope
- Pneumothorax
- Paralysis
 - GB-20 (Wind Pond) enter spinal canal
- Death
 - Sternal anomaly – pericardial tamponade

Note: Only 9 complaints of medical complications in the US over a 20 yr period

How Does It Work?



- Endorphins
- Alteration of brain metabolism
- Local neural reflexes
- Neurotransmitters
- Nonspecific needle effect
- Suggestion
- Studies show that about 80-90% respond, usually within 3-5 sessions

Biologic Response

- Opioid peptides are released during AC
- Naloxone reverses the analgesic effects of AC
- Activation occurs in the hypothalamus, amygdala and cingulate cortex
 - PET, fMRI, EEG and MEG
- Substance P
- Histamine-like substances
- Bradykinin
- Serotonin



Biologic Effects of Acupuncture

- Therapeutic AC modulates activity of antinociceptive limbic networks, higher cognitive and affective control centers
 - Primary somatosensory cortex
 - Anterior cingulate cortex
 - PAG and raphe nuclei
 - Thalamus and hypothalamus



Mechanism of Action

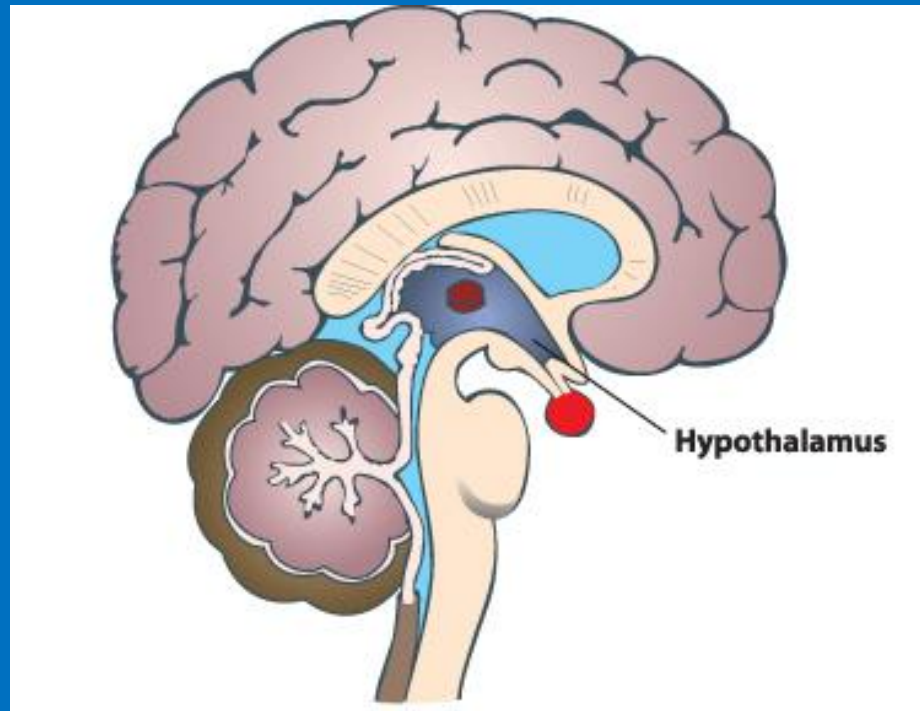
- Animal and human studies:
 - Endorphin production in the PAG
 - Hypophysectomy or blockage of opiate receptors with naloxone abolishes the analgesic effect of acupuncture
 - Mice congenitally devoid of endorphin receptors do not respond to acupuncture
 - Equine “twitch” leads to rise in serum endorphins; acupressure

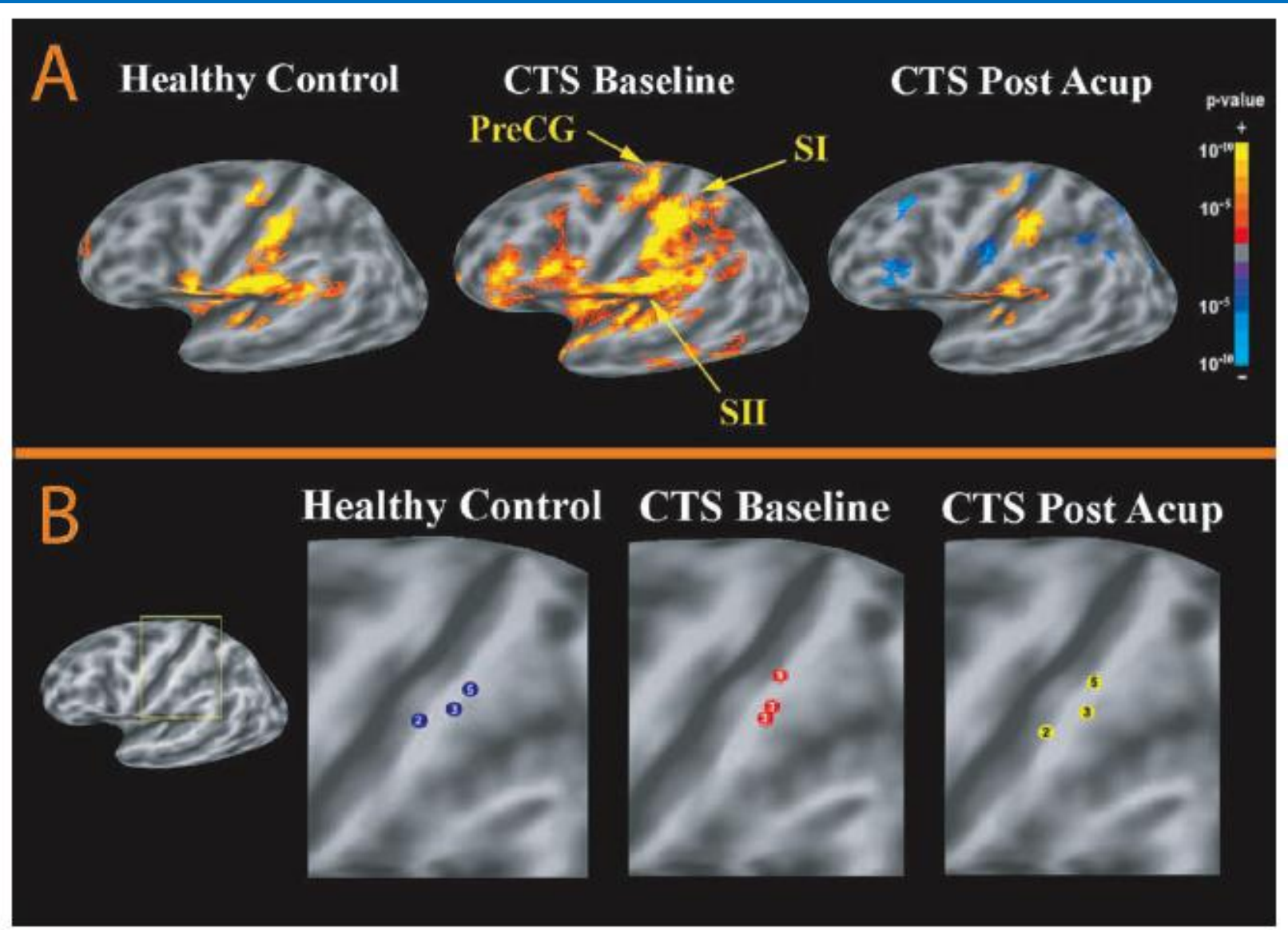




fMRI and PET

- Activation of the hypothalamus
 - key player in maintenance of homeostasis





A. CTS, hyperactivation of innocuous third finger stim in primary
Somatosensory cortex changed post AC. B.close somatos rep

CNS Mediation of AC Analgesia

- Infusion of CSF from rabbits post AC induces elevation of pain thresholds in AC-naïve recipient rabbits
- Opioid peptides released during AC
- Animals developing tolerance to electro-AC analgesia also become tolerant to morphine



Challenges in Clinical AC Trials

- The dilemma of the “control”
 - Sham acupuncture
 - Is not inert
 - Causes a biologic response
 - Points on the same meridian – same response
 - Superficial needling without “deQi”
- Treating the patient, not the disease
 - Rigorous methodologies preclude adjustments according to response.

Challenges

- Placebo arms
 - Inactive points
 - Superficial needling
 - Blunt needles or acupressure/mock TNS
- Placebos produce clinically relevant effects, limiting comparability of studies



Who Uses Acupuncture?

- 10 million treatments a year
- More female than male
- Often desperate patients
- Boomers—early adopters
- Social conscious
- Self care
- Over 65 crowd



Which Conditions Respond?



WHO Acupuncture Indications

Flatulence, abdominal distension

Acute and chronic pain

Allergic sinusitis

Anorexia, Anxiety

Arthritis, Atypical chest pain

Nausea/vomiting, IBS

Cervical and lumbar spine syndromes

Drug detoxification

Frozen shoulder

Headache

Muscle spasms

Hiccups

Phantom
pain

Premenstrual syn

Seventh N
Palsy

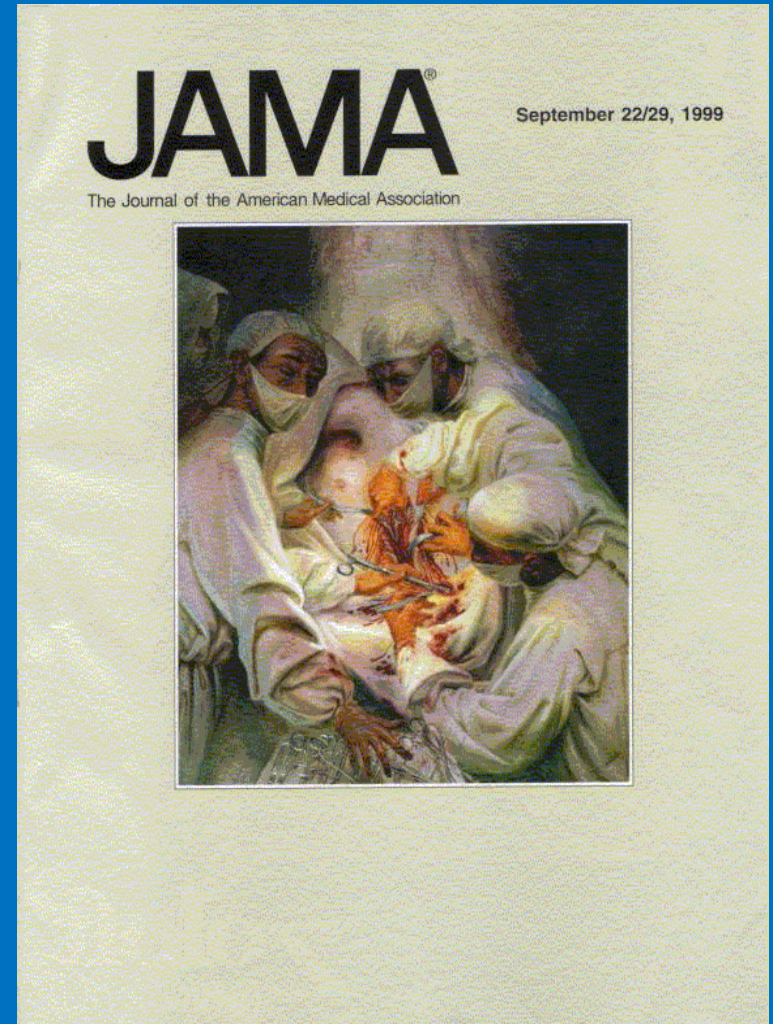
Sleep Disorders

TMJ

Urinary incont.

Anecdotes

- Migraine
- Sport Injuries
- Infertility
- Neurogenic bladder
- Chemotherapy side effects
- Trigeminal Neuralgia
- Recent JAMA article



NIH Evidence

“The data to support acupuncture are as strong as those for many other accepted medical treatments. There is sufficient evidence of acupuncture’s value to expand its use into conventional medicine and to encourage further studies of its physiological and clinical value”



NIH Consensus

- What is the place of AC in comparison or in combination with other interventions (including no intervention)?
 - Adverse events: advantage
 - Conventional Rx for musculoskeletal conditions (FM, epicondylitis, myofascial pain) have potential for deleterious side effects (NSAIDs, steroid inj)
 - “The evidence supporting these therapies is no better than that for acupuncture.”

NIH Consensus Development Program: Acupuncture

<http://consensus.nih.gov/1997/1997>

Acupuncture107html.htm

“Promising Results”

Postop and
chemotherapy
nausea and vomiting
Postop dental pain

“Useful as adjunct or
acceptable alternative
treatment”

Addiction, stroke rehab,
headache, tennis
elbow, fibromyalgia,
myofascial pain, LBP,
CTS, asthma

NIH Consensus Statement

- Pain: postoperative, myofascial and low back pain
 - “Ample clinical experience, supported by some research data...”
- Nausea/vomiting
 - Excellent endpoint: vomit or not



How Many?

- Growing yearly
- Approx 20,000 in USA
- Over 3,000 physician acupuncturists
- 10-15 practicing in Kentucky



Dr. Lee

“Disease is like an
onion,



each layer must be slowly
peeled away”



Dr. Jennings

“You don’t need to believe, just be open.
Rejection uses too much energy that could be
used more beneficially.”



Collective belief
creates a collective
unconsciousness
that is a source of
healthy energy.



Move and the Way will open



和
"Harmony"

