Medical Acupuncture: Modern Application of an Ancient Healing Practice
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Mary Kimball Anhaltzer Center for Integrative Medicine
Affinity’s Integrative Medicine Program

- Consults—Drs. Kimbrough and Norden
  Treatment plans include nutrition, physical activity, stress management, supplements
- Acupuncture
  Drs. Kimbrough and Norden
  Corrine Rathbun, L.Ac.
- Massage Therapy
- Classes - mindfulness meditation, yoga, acupressure, aromatherapy
- Locations - AMG-Koeller Street in Oshkosh and AMG-Greenville
History of Acupuncture

- Over 3000 years old originating in China
- Part of Traditional Chinese Medicine
- Introduced in Europe in the 1700’s and in USA in 1970’s
- One of the oldest and most commonly used medical treatments used around the world
Many Types of Acupuncture

• Traditional Chinese Medicine
• Japanese Style acupuncture
• Anatomical Acupuncture  
  – Based on Western knowledge of neuroanatomy
• Acupuncture Microsystems  
  – Korean Hand Acupuncture  
  – Scalp Acupuncture  
  – Auricular Acupuncture
Acupuncture Microsystems

- Auricular Acupuncture
- Korean Hand Acupuncture
How Does It Work?

Traditional Chinese Medicine Theory

• Qi - Chinese word representing the concept of energy
• Qi circulates through the body through meridians
• Over 1,000 acu-points - an area where Qi is easily found
• Each point is very individual, can be categorized in many different ways and has its own indications and contraindications.
• Therapies applied to acu-points to restore the flow of Qi – acupuncture/acupressure, massage, moxa, etc.
How Does It Work?

Traditional Chinese Medicine Theory

• Balances yin and yang – 2 opposing factors found in everything (water/fire, night/day, excess/deficiency, cold/hot, fixed/fluid)

• Restores balance and harmony

• Concepts of dampness, wind, fire, phlegm, etc.
How Does It Work?

Western Medicine Research

- Acupuncture points on myofascial trigger points and near major nerves: vasodilation, muscle relaxation
- Gate Control Theory: blocks pain
- Needles stimulate nerves affecting CNS and regulating release of neurotransmitters: endorphins, serotonin, norepinephrine, dopamine, substance P
- Neurotransmitter release: influences immune system, balances ANS and reduces pain
- Stimulates hypothalamus and pituitary gland
# Acupuncture v. Dry Needling

<table>
<thead>
<tr>
<th>Acupuncture</th>
<th>Dry Needling</th>
</tr>
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<tbody>
<tr>
<td>• Mind/body/spirit considered in treatment plans along with specific condition</td>
<td>• Treats specific condition – decreases inflammation, improves ROM, decreases pain</td>
</tr>
<tr>
<td>• Can treat internal complaints and musculoskeletal complaints</td>
<td>• Needles placed at local area</td>
</tr>
<tr>
<td>• Needles placed throughout body, along meridians</td>
<td>• Needles not retained</td>
</tr>
<tr>
<td>• Needle depth varies for each patient and condition</td>
<td>• Often deeper needle depth</td>
</tr>
<tr>
<td>• Needles retained for 10 – 30 minutes</td>
<td>• Manual stimulation</td>
</tr>
<tr>
<td>• Possible manual manipulation</td>
<td></td>
</tr>
<tr>
<td>• Possible electrical stimulation</td>
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</table>
Typical Course of Treatment

• Number of treatments required dependent on chronicity of problem
• Typically 1-2 treatments for acute problems, 4-12 for chronic
• Usually has lasting effects
• Sometimes requires maintenance treatments
• Cost ranges from $65-120 per treatment
Insurance Coverage

- Network Health Plan covers acupuncture for headache, neck pain, back pain, nausea from chemo, osteoarthritis of the knee.
- Anthem covers acupuncture for nausea, osteoarthritis of the hip or knee
- Humana covers acupuncture for headaches, low back pain, neck pain, chemo and pregnancy nausea, and osteoarthritis of the knee
- Medicare and medicare supplements do not cover acupuncture
- Patients need to check their policies
Does It Hurt?

• Possible mild discomfort at time of needle insertion
• Sometimes electrical or manual stimulation of needles
• Mild euphoria or drowsiness after treatment is possible
Accessory Modalities: Moxa, Massage Therapy, Cupping and Guasha
## WHO-Orthopedic Conditions

<table>
<thead>
<tr>
<th>Diseases, symptoms or conditions for which acupuncture has been proved through controlled trials to be an effective treatment</th>
<th>Diseases, symptoms or conditions for which the therapeutic effect of acupuncture has been shown but for which further proof is needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Knee Pain</td>
<td>• Fasciitis</td>
</tr>
<tr>
<td>• Low Back Pain</td>
<td>• Osteoarthritis</td>
</tr>
<tr>
<td>• Neck Pain</td>
<td>• Radicular and Pseudoradicular Pain Syndrome</td>
</tr>
<tr>
<td>• Periarthritis</td>
<td>• Acute Spine Pain</td>
</tr>
<tr>
<td>• Post-operative Pain</td>
<td>• Stiff Neck</td>
</tr>
<tr>
<td>• Rheumatoid Arthritis</td>
<td>• TMJ Dysfunction</td>
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<tr>
<td>• Sciatica</td>
<td></td>
</tr>
<tr>
<td>• Sprain</td>
<td></td>
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<tr>
<td>• Tennis Elbow</td>
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</tbody>
</table>
### WHO - Other Conditions Appropriate for Acupuncture Treatment

<table>
<thead>
<tr>
<th>Digestive</th>
<th>Neurological</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Abdominal pain</td>
<td>• Headaches</td>
<td>• Addiction Control</td>
</tr>
<tr>
<td>• Constipation</td>
<td>• Migraines</td>
<td>• Blood pressure regulation</td>
</tr>
<tr>
<td>• Diarrhea</td>
<td>• Bladder dysfunction</td>
<td>• Chronic fatigue</td>
</tr>
<tr>
<td>• Hyperacidity</td>
<td>• Parkinson’s disease</td>
<td>• Immune system tonification</td>
</tr>
<tr>
<td>• Indigestion</td>
<td>• Postoperative pain</td>
<td>• Stress reduction</td>
</tr>
<tr>
<td></td>
<td>• Stroke</td>
<td>• Tonsilitis</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Eye-Ear-Nose-Throat</th>
<th>Respiratory</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>• Cataracts</td>
<td>• Asthma</td>
<td></td>
</tr>
<tr>
<td>• Gingivitis</td>
<td>• Bronchitis</td>
<td></td>
</tr>
<tr>
<td>• Poor vision</td>
<td>• Common cold</td>
<td></td>
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<tr>
<td>• Tinnitus</td>
<td>• Sinusitis</td>
<td></td>
</tr>
<tr>
<td>• Toothache</td>
<td>• Smoking cessation</td>
<td></td>
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<tr>
<td></td>
<td>• Tonsilitis</td>
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<table>
<thead>
<tr>
<th>Gynecological</th>
<th>Emotional</th>
<th></th>
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<tbody>
<tr>
<td>• Infertility</td>
<td>• Anxiety</td>
<td></td>
</tr>
<tr>
<td>• Menopausal symptoms</td>
<td>• Depression</td>
<td></td>
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<tr>
<td>• Premenstrual syndrome</td>
<td>• Insomnia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Nervousness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Neurosis</td>
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</tbody>
</table>

| Miscellaneous                  |                                   |                           |
|--------------------------------|                                   |                           |
Acupuncture for Chronic Pain

- Individual patient meta-analysis of acupuncture for chronic pain, 29 studies
- Pain conditions: nonspecific musculoskeletal pain, OA, headaches, shoulder pain
- **BOTTOM LINE:** Acupuncture is associated with improved pain outcomes compared with sham-acupuncture and no-acupuncture control, with response rates of approximately 30% for no acupuncture, 42.5% for sham acupuncture, and 50% for acupuncture.

  - *Acupuncture for Chronic Pain.* Vickers, Andrew; Linde, Klaus JAMA. 311(9):955-956, March 5, 2014
Acupuncture for Chronic Pain.
Vickers, Andrew; Linde, Klaus

JAMA. 311(9):955-956, March 5, 2014. DOI: 10.1001/jama.2013.285478

Figure. Results of the Individual Patient Data Meta-analysis Source: Vickers et al. A standardized mean difference of 0.42, for instance, means that pain scores were 0.42 SDs lower in patients undergoing acupuncture compared with controls. These differences are converted to clinically meaningful statistics in the text.
Clinical Acupuncture Research
Methodologic Difficulties

• Many different types of acupuncture
• Treatment is usually specific to the patient
• Blinding difficult
• “Sham” acupuncture may have effects
• High placebo effect
Acupuncture-evoked response in somatosensory and prefrontal cortices predicts immediate pain reduction in carpal tunnel syndrome.

• Background: RCT’s have shown improvement in CTS comparable to steroids and night splinting
• 59 subjects with CTS by EMG
• 3 groups—local EA, distal EA, and sham (nonpenetrating) EA
• fMRI and VAS pain scores
(a) Local and sham acupoints

(b) Distal acupoints

(c) Study design

Structural MRI → Functional MRI

2 s
OFF → ON → OFF

ISI: 6–12 s

ON → OFF

Total: 5 min 6 s, 27 stimulations
Results

• VAS scores improved in local and distal groups, not sham
• Brain changes were seen with local and distal EA, but not sham.
• Greater brain activation in prefrontal cortex, contralateral postcentral gyrus, and supplementary motor area was associated with more pronounced pain relief.
Inserting Needles Into the Body: A Meta-Analysis of Brain Activity Associated With Acupuncture Needle Stimulation

The Journal of Pain
Volume 14, Issue 3, March 2013, Pages 215–222

- Acupuncture changes areas of the brain involved in the sensory, cognitive and affective dimensions of pain!
CLINICAL GUIDELINES
Diagnosis and Treatment of Low Back Pain: A Joint Clinical Practice Guideline from the American College of Physicians and the American Pain Society

• For patients who do not improve with self-care options, clinicians should consider the addition of nonpharmacologic therapy with proven benefits—for acute low back pain, spinal manipulation; for chronic or subacute low back pain, intensive interdisciplinary rehabilitation, exercise therapy, acupuncture, massage therapy, spinal manipulation, yoga, cognitive-behavioral therapy, or progressive relaxation.
Acupuncture for migraine prophylaxis.

- **Cochrane Database**, January 2009:
  - CONCLUSIONS: In the previous version of this review, evidence in support of acupuncture for migraine prophylaxis was considered promising but insufficient. Now, with 12 additional trials, there is consistent evidence that acupuncture provides additional benefit to treatment of acute migraine attacks only or to routine care. There is no evidence for an effect of 'true' acupuncture over sham interventions, though this is difficult to interpret, as exact point location could be of limited importance. Available studies suggest that acupuncture is at least as effective as, or possibly more effective than, prophylactic drug treatment, and has fewer adverse effects. Acupuncture should be considered a treatment option for patients willing to undergo this treatment.
Acupuncture for tension-type headache.

• Cochrane Database Syst Rev. 2009
• Review of 11 trials with 2317 patients
• Conclusion: In the previous version of this review, evidence in support of acupuncture for tension-type headache was considered insufficient. Now, with six additional trials, the authors conclude that acupuncture could be a valuable non-pharmacological tool in patients with frequent episodic or chronic tension-type headaches.
Points to Remember

• Acupuncture is an ancient practice that has withstood the test of time.
• Western medical research confirms physiologic changes and clinical improvements
• NIH, WHO support acupuncture
• Extremely safe
• Likely cost-effective