

# “CAM” we talk? Complementary / Alternative Medicine for Pain Management

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# Objectives

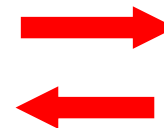
- After this talk, you should be able to:
  - Define the terms “complementary”, “alternative” and “integrative”
  - Discuss the basic background, risks, and benefits of some common CAM therapies used for pain
  - Advise patients who are interested in CAM
  - Identify good CAM practitioners

# Overview

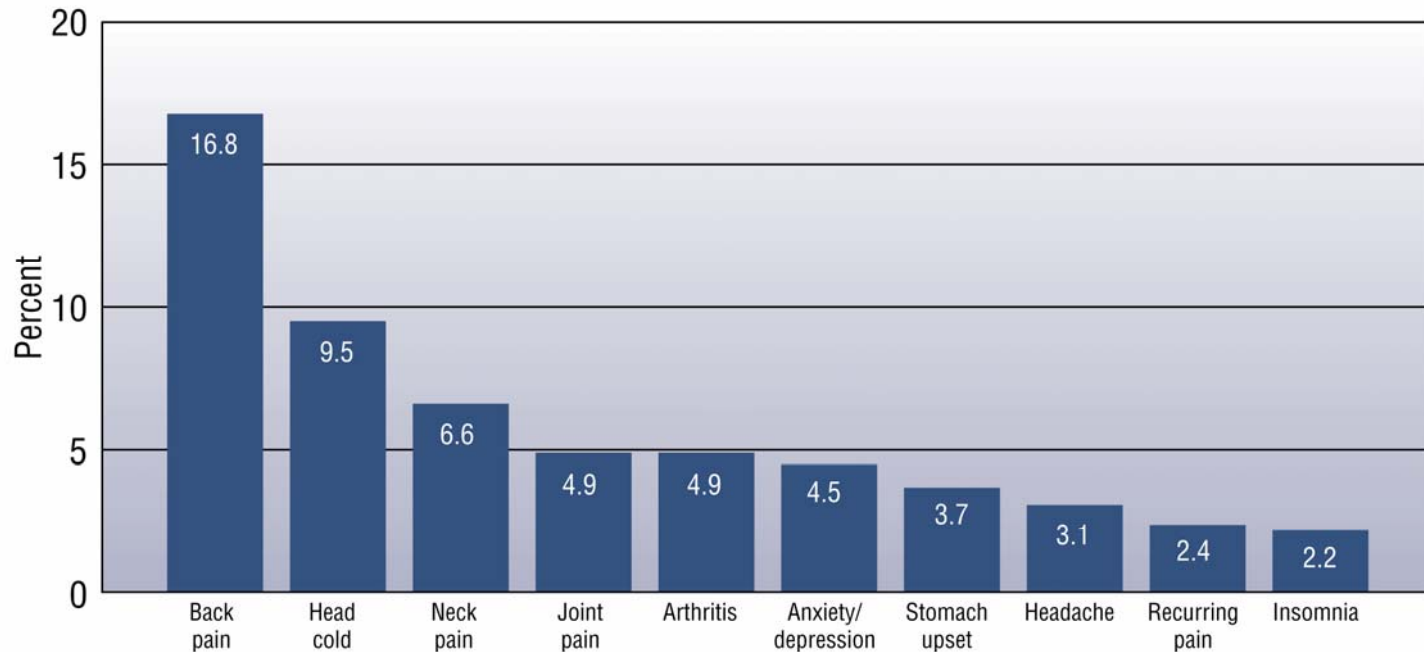
- Defining CAM
- Risks, benefits, and balance of CAM
- Specific CAM therapies for pain
- Finding a good practitioner
- Summary

# Terminology

- **CAM**
  - Complementary / Alternative Medicine
  - Therapies not usually associated with hospitals or medical schools
    - Acupuncture, Massage Therapy, Chiropractic
- **Integrative Medicine**
  - CAM therapies *coordinated* with conventional medical treatments



# Disease/Condition for Which CAM Is Most Frequently Used\*



\*These figures exclude the use of megavitamin therapy and prayer.

Source: Barnes P, Powell-Griner E, McFann K, Nahin R. CDC Advance Data Report #343. Complementary and Alternative Medicine Use Among Adults: United States, 2002. May 27, 2004

# Potential Risks of CAM

- Treatment with direct harm to patient's health
- Treatment indirectly harmful
  - Reducing efficacy of conventional treatment
  - *Replacing* curative conventional care
- Cost

# Potential Benefits of CAM

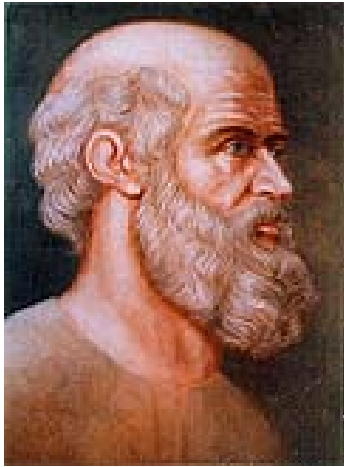
- Symptom control
  - Reducing use of medications with side effects
  - Better tolerance of curative conventional care
  - Improvement in QOL
- Empowering to patient
- Less cost (avoid surgery, procedures, meds)
- Less risk (avoid surgery, procedures, meds)

# Balancing Risks and Benefits

- Discuss CAM with each patient
  - Enhance doctor / patient relationship
    - Increase compliance with conventional treatments
  - Improve health
    - Dissuade from harmful practice
    - Encourage beneficial treatments
- Integrate care with all providers
  - Avoid interactions, misconceptions
- Be informed about specific risks and benefits

# Physician / Patient Discussions

- Avoid harmful practices
- Consider non-harmful modalities
- Promote interventions with proven benefit



Hippocrates :  
“First, do no harm”

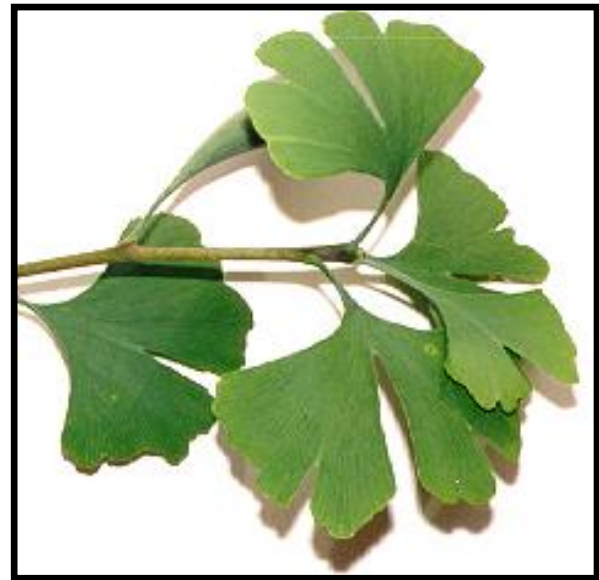
# Harmful CAM therapies

- Colonic enemas
- Chelation therapy
- Unproven IV therapies
- Restrictive diets
- Megavitamins
- Some herbs and supplements
  - Direct toxicity
  - Indirect toxicity by interfering with drugs



# Therapies to Discuss

- Mind / body techniques
- Exercise / Diet
- Herbs and supplements
- Acupuncture
- Massage
- Chiropractic



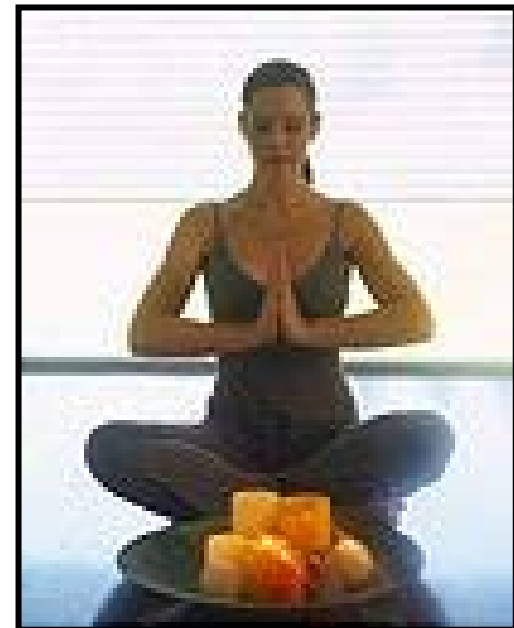
# Mind-body Therapies

- Examples
  - Hypnosis
  - Relaxation techniques
  - Breathing techniques
  - Cognitive Behavioral Therapy
  - Biofeedback
  - Art, music, pet therapy
  - Imagery / visualization
  - Yoga and tai chi
  - Meditation



# General Advice: Mind-body

- Perception of pain requires processing by the mind; mind-body therapies can alter perception
- Stress / anxiety perceived as a threat, processed by the mind as equivalent to pain
- Insomnia worsens pain
- Identity issues may keep patients from healing
  - “Giving up” vs “acceptance”
- Mind-body therapies are generally safe
  - Caution in unstable mental illness
  - Caution with “blame the victim”
- Practitioner training, costs vary

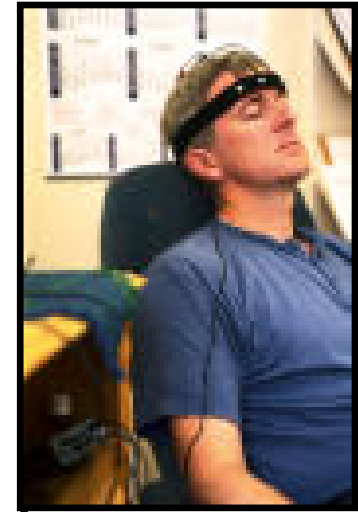


# Mind-body: Nitty Gritty

- CBT, biofeedback, relaxation training etc
  - Typically will meet with therapist weekly or every 2 weeks for 5 – 10+ (depending on treatment)
  - Need to practice at home
  - Not all therapists comfortable with all methods
  - Many pain programs, hospitals, PMR programs have affiliated psychologists

# Mind-body: Pain Relief

- Anxiety, depression, insomnia
- Acute / chronic pain control
  - Labor and delivery
  - Fibromyalgia
  - Headaches
- Biofeedback / CBT: 93 SLE patients improved pain, QOL, psychological function
- Meta-analysis of various interventions for RA: flawed studies but likely beneficial
- Tai chi: multiple studies - improved balance, decreased pain and falls in elderly



# Get Some Sleep!

- Restorative sleep improves pain, fatigue, and mood
- Sleep deprived “normals” develop FM-like pain
- FM: decreased stage 3 & 4 sleep, restored with TCA
- Behavioral approaches:
  - Don't eat, drink, or exercise just before bed
  - Avoid late day caffeine and too much alcohol
  - Get consistent exercise earlier in the day
  - Pay attention to room environment
  - Establish consistent sleep times
  - Get out of bed if not tired
  - Don't nap
- Medications / supplements



# Exercise: Pain



- Improves sleep, depression
- Improves pain in degenerative and inflammatory arthritis
- Meta-analysis: supervised strengthening / stretching for LBP
- Improvement in pain, functioning with FM; more with BID for some

# General Advice: Exercise

- Aerobic exercise
  - Begin at 40% of your target heart rate
  - Gradually increase to 75% of your target heart rate for 45 minutes 5 days a week
- Strength training
  - Exercise the major muscle groups once a week
  - The appropriate amount of weight will let you do 10 reps with muscle fatigue at the 10th rep
- Exercise early in the day

# Special diets: General Advice

- Can't go wrong with solid, well-balanced diet that supports the body's own defenses
- Begin by reaching a healthy weight, *then* tinker if interested
- Beware of anything too restrictive



# Special Diets: Pain

- Weight control helpful for arthritis
- Intriguing: food hypersensitivity
  - Reports of associations:
    - SLE and alfalfa
    - RA with dairy, wheat, corn, beef...
    - Behcet's with walnuts
  - Rabbits develop synovitis with cow's milk diet
  - Food / symptom diary or elimination diet for an "N of 1" clinical trial may be reasonable

# Special Diets: Pain

- Animal and human studies support efficacy of decreasing omega 6 FA (bad fats) and increasing omega 3 FA (good fats)
  - BAD: corn, soybean, safflower, sunflower oil
    - Limit to 10 gm / day
  - GOOD: fish, fish oil, cod liver oil, olive oil, walnuts, flaxseeds
    - Aim for 620 mg of EPA/DHA daily
    - Mediterranean diet (less animal fat, more olive oil, veggies): study in RA patients with improvement

# Herbs and Supplements

- Three types of medicines:
  - Prescription medications (Rx)
  - Over-the-counter (OTC) medications
  - Dietary Supplements
- Unlike Rx and OTC, supplements:
  - Are not required to prove safety or effectiveness
  - Are not required to enforce quality control
  - Vary tremendously in concentration of ingredients



# General Advice: Supplements

- Natural  $\neq$  safe
  - Some herbs are blood thinners or toxic to the liver
- Use extra caution when taking prescriptions
  - Herb / drug interactions may be dangerous
- Use trustworthy resources for information
- If you choose to take a supplement:
  - Look for a well-labeled brand
    - lot #, expiration, standardized, dosing, ingredients



# Supplements: Pain

## Omega 3 fatty acids (fish oils)

- Inhibit inflammation and thrombosis
- Beneficial in trials for OA
- 600 mg / daily of EPA and DHA

## Glucosamine and chondroitin in OA

- Beneficial in multiple trials; well tolerated
- Glucosamine 500 mg TID, chondroitin 400 mg TID
- May take 6 weeks to see effect

## Dimethyl Sulfoxide (DMSO) and Methylsulfonylmethane (MSM)

- DMSO absorbed topically, converted to MSM
- Thought to be antiinflammatory, exact mechanism unknown
- MSM better than placebo (16 patients), equivalent to ibu (12 patients) – that's it, the rest are case reports

# Supplements: Pain

## Ginger

- Inhibits PG and LT synthesis in vitro
- Clinical benefit NOT proven, but safe

## SAM-e in OA

- Methyl donor in all cells, important in methylation reactions that aid in the production of cartilage proteoglycans
- Meta-analysis of 1500 patients with equivalency to NSAIDs and less SE (some diarrhea; costly)
- 400 – 1200 mg/d

**“What we know for sure is  
the United States secretes  
the richest urine in the  
world”**

**--Victor Herbert, MD**

# Acupuncture

## Chinese Medicine Background



- Health = balance of yin and yang
- Qi = energy force created by interaction of yin and yang
- Meridians = channels that carry qi throughout the body; each corresponds with a specific organ
- Excess, deficiency, or stagnant flow of qi results in disease
- Examples of TCM diagnoses:
  - Yin deficiency and yang predominance with reduced kidney qi
  - Stomach qi rebelling

# Acupuncture

## Western Medicine Background

- Osler, 19<sup>th</sup> century
  - “best treatment for lumbago”
- James Reston, China, 1971
- Biological effects
  - Local nerve activation
  - Endorphins, ACTH, endogenous opioids (reversal of analgesia with naloxone)
- SPECT scanning: increased activity and reversal of asymmetry in chronic pain patients in thalamic and prefrontal cortex during acupuncture over baseline
- Patient expectation, placebo effects?



# General Advice: Acupuncture

- Acupuncture is generally safe
  - Adverse events: minor or rare (pain, bleeding, fatigue)
  - Disposable needles, alcohol wipes to avoid infection
- Practitioners
  - State to state variability ([www.acupuncture.com/statelaws](http://www.acupuncture.com/statelaws))
  - TCM: National Certification Commission for Acupuncture and Oriental Medicine ([www.nccaom.org](http://www.nccaom.org))
  - MD: American Academy of Medical Acupuncture ([www.medicalacupuncture.org](http://www.medicalacupuncture.org))
- Costs
  - Initial / follow up: \$80 (MD \$175) / \$55 (MD \$100)
  - Covered by some insurances

# Acupuncture: Pain

- Over 2400 Medline citations!
  - Not many well-designed RCTs
- WHO - Chronic pain of any etiology
- NIH – N/V, dental pain; consider for HA, menstrual cramps, epicondylitis, FM, myofascial pain, LBP, CTS
- Indirect benefit: may help patients tolerate conventional medications

# Acupuncture: Fibromyalgia

- Trigger points / acupuncture points overlap
- RCT: 70 patients, acupuncture vs sham, six sessions over three weeks
  - Improved pain threshold, med use, VAS scores, sleep
- RCT: 100 patients, acupuncture vs 3 sham groups, 24 sessions over 12 weeks
  - No difference in pain scores

# Acupuncture: Back and Neck

- Back pain
  - Chronic pain RCT: 50 patients, acupuncture vs usual care, 10 sessions / 5 weeks
    - Improved disability & pain, less medication side effects; outcomes maintained at 10 weeks
- Neck pain
  - 24 women with average of 12 years neck / shoulder pain
    - Real vs sham acupuncture / acupressure, 10 times / 4 weeks
    - Pain, sleep, anxiety, depression, QOL improved at end of study, 6 months, 3 years
  - 34 patients
    - Real vs sham needling of tender points 3 times / 3 weeks
    - Improved short term but **not long term pain control**

Meng CF. Rheum 2003;42(12):1508-17.

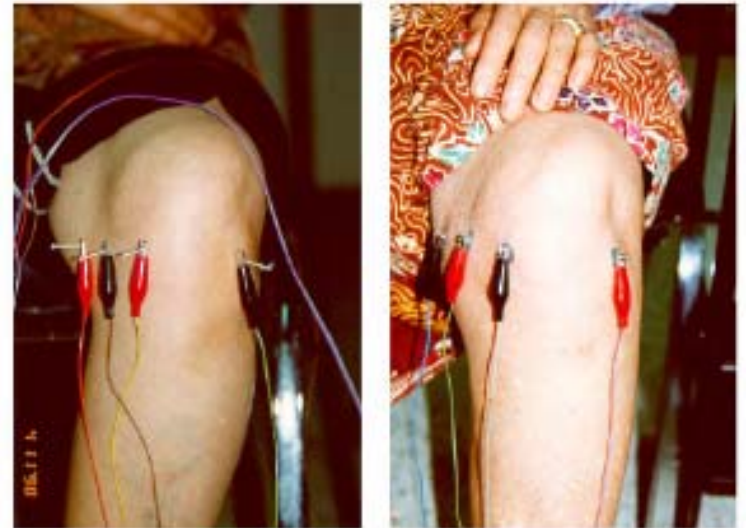
Asati D. Jpn Orthop Assoc 2005;38(1):10-19.

He D. Acupuncture in Med 2005;23(2):52-61.

Nabeta T. Compl Ther Med 2002;10(4):217-22.

# Acupuncture: Arthritis

- Osteoarthritis
  - Better than placebo or diclofenac for OA of knee (n=193)
  - Better than sham; less diclofenac use for OA of the knee (n=97)
  - Review: likely efficacious



# Acupuncture: Other

- Cancer pain
  - Systematic review
    - 7 studies: 2 non-blinded, 4 uncontrolled
    - 1 high quality ear acupuncture trial with statistically significant improvement
    - Conclusion: not enough research
- Labor Pain
  - Metanalysis: 3 RCTs identified
    - 2 acupuncture and usual care vs usual care alone
      - Reduction in meperidine and / or epidural analgesia; high patient satisfaction (89 / 103 would want acupuncture again in one trial)
    - 1 acupuncture vs sham
      - Improved subjective and objective pain control
  - Conclusion: not enough research



# Acupuncture: Other

- Post-op pain metanalysis: 19 RCTs
  - 2 of 9 “high quality” showed efficacy
  - Conclusion: “Evidence that acupuncture is more effective than no acupuncture as an adjunct to standard anesthesia is inconclusive”
- Reduction of anesthesia
  - Mostly negative trials
- Oocyte aspiration
  - 160 patients, EA vs conventional analgesia
  - *Worse* pain with procedure with EA, but same at 1 hour with less fatigue and confusion
- Colonoscopy, EMG, phantom pain...

# Massage Therapy

- Developed by almost all cultures
- Many different forms
- Emphasis on improving circulation, releasing muscle tension, calming and relaxing patient



# General Advice: Massage

- Massage is generally safe. Use caution with:
  - Congestive heart failure
  - Infections
  - Blood clots / bleeding disorders
  - Osteoporosis or bone metastases
  - Pregnancy
- A license is NOT required in Colorado
  - Look for a “Certified Massage Therapist” (CMT)
  - Look for involvement in NCBTMB or AMTA
- Costs generally run around \$60 for an hour, and massage is occasionally covered by insurance

# Massage Therapy: Pain

- Chronic low back pain
  - 10 week study of 262 patients: acupuncture vs self-care vs massage; massage best and lowest cost, benefits persisted at one year
- Post op pain
  - 202 patients: massage vs attention vs usual care
  - No change in pain or med use, but decrease in “unpleasantness” of pain
- Neck pain
- Fibromyalgia
  - Improvement in pain, depression, QOL
  - Better than TENS unit in one study (which was better than sham TENS)
  - Magnetic sleep pads not effective

# Chiropractic



- “Manipulation” referenced by Hippocrates; Galen
- Daniel David Palmer, 1895
  - “Normalization of the nervous system” is key to health
- CAM vs. subspecialty
- Manipulation; often exercises, fitness, general health advice; acupuncture, supplements
- Practice styles, practice philosophies vary

# Chiropractic: General Advice

- Safety
  - Generally safe
  - Local discomfort, headache, fatigue not uncommon
  - Stroke (arterial dissection), dislocation, fracture rare but possible
  - Avoid high velocity neck manipulation
  - Caution with known cerebrovascular disease, osteoporosis, rheumatoid arthritis, metastatic cancer

# Chiropractic: General Advice

- Practitioners
  - 4 year accredited school after at least some college
  - Philosophies and styles vary widely
  - Licensing required in 50 states; scope of practice variable
- Costs / reimbursement
  - Initial / follow-up \$35 - 150 / \$25 - 50
  - OMT usually covered; chiropractic often

# Chiropractic: Pain

- NO NO NO NO if contraindications exist
- Back pain
  - Chronic: efficacy similar to PT in Swedish study of 323 patients
  - Acute: included in recommendations from AHCPR
- Neck pain
- Headaches
- Fibromyalgia
  - Study: better than usual care; if no response by 5 sessions, none was seen subsequently

# Choosing / Integrating Therapies

- Very little data comparing CAM therapies
  - 262 patients with chronic LBP
    - Massage vs acupuncture vs self-care booklet; up to 10 visits in 10 weeks
    - 10 weeks: Massage > Acupuncture = Self Care
    - 1 year: Massage = Self Care > Acupuncture
    - Least medications / lowest subsequent costs with massage
- No data on combining CAM therapies with each other: all at once versus stepwise
- Use patient preference

Acupuncturists

Sun Acupuncture & Chinese Health Center Dr. Yun-Ching Sun, L.M.D. 303-756-1166

Nana's Acupuncture Clinic Traditional Chinese Medicine (TCM) treats and prevents disease. 303-721-6123

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Kerry Fromerman, R.A.C., NCCAOM N.A.E.T. Allergy Elimination. 20 Years Experience • VISA/MC. 203-751-9546

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# Finding a good practitioner

- Training and licensure
- Experience with symptom
- Risks
- Costs / reimbursement
- Time frame / progress assessment
- Ability to work with conventional physicians

# Legal issues

- Malpractice claims for CAM providers rare
  - Many providers carry coverage
- Physician with direct supervision of CAM provider: can be liable for malpractice
- Physician referring to CAM provider: not liable unless provider known incompetent
- Physician practicing CAM: informed consent

- Ethics of selling products

# Summary

- CAM treatments can be safely integrated into conventional treatments
  - Don't use harmful therapies
  - Try proven therapies
  - Consider safe, plausible therapies
- Find a good practitioner, give patient info