

Complementary and Alternative Medicine Should Definitely be Incorporated in Healthcare Systems on the Basis of Cost Effectiveness Evaluations



PM Brooks, Executive Dean
Health Sciences

Costs

- Patients
 - A \$2.3 billion (2000)
- Neutraceuticals (worldwide)
 - US \$5 trillion (2050)
- Research
 - UK £5 million (3 years)
 - US \$113 million (2003)
 - A \$850,000 (since 2001)

Why do patients turn to complementary therapies?

- Value emphasis on “whole” person
- Believe it can be more effective
- Want an active role in their health
- Conventional therapies not effective

- Use in Rheumatology
 - Widespread
- General population >50% use
- Musculoskeletal 50 – 70%
- Fibromyalgia 90% +

Rheumatology/Musculoskeletal Medicine

- Homeopathy
- Herbal remedies
- Acupuncture

Homeopathy

- Samuel Hahnemann – 1800's
 - Medication that produces same signs/symptoms in healthy individual
 - Serial Dilutions retain effects

Homeopathy

Fisher & Scott, 2001

RA

- 112
 - 58
 - RCT
 - Placebo
- Randomised
Completed 6 months
Cross Over Design
42 Homeopathic meds
(10^{-12} / 10^{-30})

	Initial	3 months (H)	3 months (P)	P
Pain	51.7	46.2	39.6	0.03
AI	14.3	11.8	11.4	NS
ESR	49.3	42.9	46.1	NS

Fisher and Scott 2001

Meta-Analysis

- 186 trials, 199 met criteria, 89 adequate data only 26 good quality
- Odds ratio 1.66 in favour of homeopathy

Linde et al 1997

Our study has no major implications for clinical practice because we found little evidence of effectiveness of any single homeopathic approach to any single clinical condition.

Linde et al 1997



Example of herbs used in rheumatologic conditions

Herbal Preparations

- Combinations
- Highly individualised
- Self medication
- Interactions

Food Supplement | Therapeutic Effect

Phytoinflammatory Drugs

	Cycloo	Lipox	Cytokine Release
Devils Claw	Inhibits	Inhibits	Inhibits
Stinging Nettle	Inhibits	Inhibits	Inhibits
Willow Bark	Inhibits	Inhibits	-
Blackcurrant Leaf	Inhibits	Inhibits	-

Chrubasik and Roufogalis 1999

R.CTS

Decrease pain in OA

- Devils Claw
- Willow Bark
- Capsaicin (Cayenne)

Herb/Drug Interactions in Rheumatology

Asian Herbs	Drug	Result
Saiboku-to	Steroid Levels	Ashma
Betelnut	Steroid Salbutamol	Inadequate Ashma Control
Devils Claw	Warfarin	Purpura
St John's Wort	↓ Cyclosporin Sertraline	Serotonin-like Syndrome

Neutraceuticals

- Omega-3 (Fish Oils)
- Glucosamine
- Chondroitin
- Shark Cartilage
- Vitamins
- Minerals

The 2001 Cochrane Review of glucosamine in OA

Characteristics of considered trials:

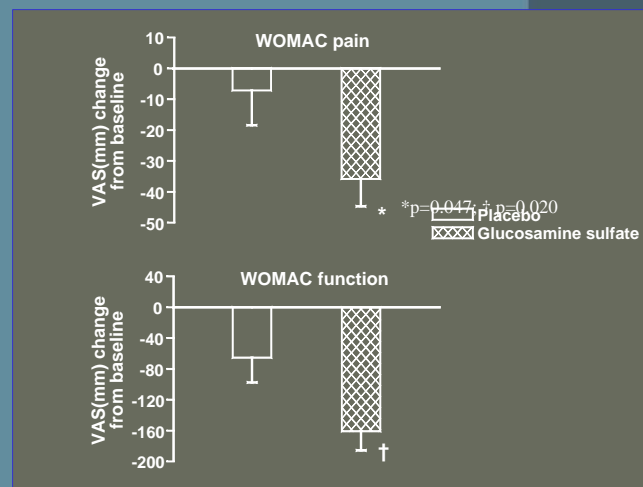
- 12 RCTs considered
- All double-blind, randomised, parallel-group
- Total of 2029 patients (mean age 61 yrs, 75% females), 992 to glucosamine-1037 to comparator (87% completers)
- Mean trial duration: 6.25 weeks
- The oral route (1500 mg/day) was used in the majority of trials
- The knee was the OA joint investigated in the majority of trials

Methodological quality:

- Glucosamine trials were collectively as good (if not better) than NSAID trials in OA (total median quality score 9/16; more recent RCTs better than older 12 vs. 7.5)

Towheed TE et al, The Cochrane Library, 2001

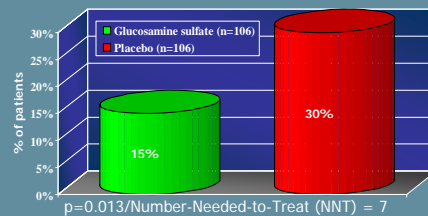
Intention-To-Treat Change (Sum of VAS Scores) in the WOMAC Subscales



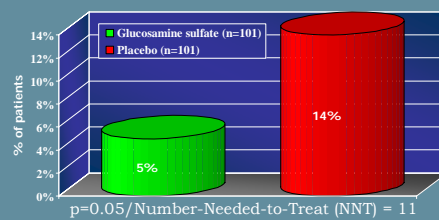
Reginster JY et al, Lancet. 2001; 357: 251-56

#3097

Incidence of Severe Joint Space Narrowing (JSN>0.5 mm) at the End of the 3-year Trials



Reginster JY et al, Lancet 2001; 357: 251-6



Pavelka K et al, Arch Intern Med. 2002; 162: 2113-23

Glucosamine Chondroitin Sulfate and the two in combination for painful knee OA

(NEJM 2006, 354, 795-808)

- 1583 Patients
- 1500mg Glucosamine
- 1200mg Chondroitin Sulfate
- Both
- 200 mg Celecoxib
- Placebo

Primary Outcome

- 20% decrease in knee pain from baseline to week 24

	Placebo	Gluc	CS	G+CS	CEL
% of patients	60	64	65.4	66.6	70.1

Glegg et al, 2006

Rates of Primary Response in the Five Groups at 4 & 24 weeks

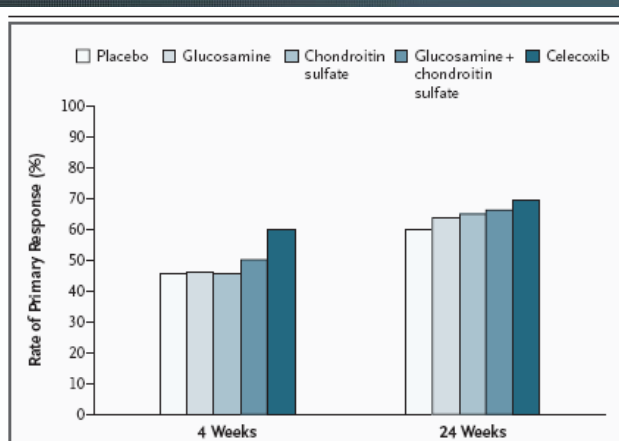


Figure 3. Rates of a Primary Response in the Five Groups at 4 and 24 Weeks.

A primary response was defined as a 20 percent decrease in the summed score for the pain subscale of the Western Ontario and McMaster Universities Osteoarthritis Index.

Clegg et al, New England Journal of Medicine, 2006, 806

Acupuncture

- Used for at least 50 centuries
- More than “needles”
- Influence on substance P and other neurotransmitters
- Influence of spinal cord and on blood flow

Acupuncture in Patients with OA Knee

- Acupuncture
- Minimal Acupuncture
- Waiting List

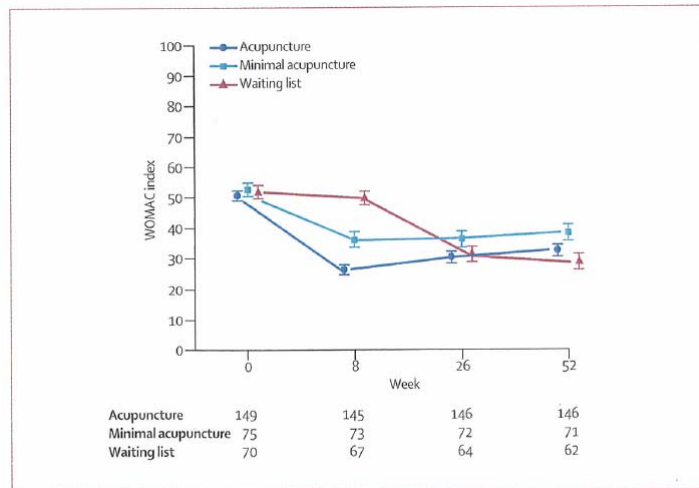
294

End Point

Womac at 8 weeks

52 week follow-up

Witt et al, 2005



Development of the mean WOMAC Index in the three treatment groups

- Evidence base
- Basic scientific principles

In God we trust – all others must show data!