

# The roles of placebo and empathy in the clinical encounter

*When evidence meets experience*

@jeremyhowick

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## Are Treatments More Effective than Placebos? A Systematic Review and Meta-Analysis

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**The Philosophy of Evidence-based Medicine**  
JEREMY HOWICK  
Oxford University

**Questioning Superiority**  
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Jan

**DOCTOR YOU**  
INTRODUCING THE FIELD SCIENCE OF SELF-HEALING

**Placebos: Who Knows?**  
Laura C. Gibbons, BS; Sabrina Kiperoff, BS; Deanna Sack, BS; Murray Etkin, MD; and Jeremy Howick, PhD

## **What you will learn**

- About the relationship between expertise and evidence
- About a sham clinical conundrum
- Why every healthcare consultation needs a dose of empathy
- *And why these are all related*

## **Evidence versus experience**

## Sackett on the 'sins' of expertness

Experts commit two sins that retard the advance of science ...

1. Adding our prestige to our opinions gives the latter far greater persuasive power than they deserve ...
2. On grant applications and manuscripts that challenge the current expert consensus, reviewers face the unavoidable temptation to accept or reject new evidence ... on the extent to which they agree or disagree with the public positions taken by experts on these matters. (Sackett, *BMJ* 2000;320:1283 )



## *Expert judgment was taken as authoritative before EBM*

### NIH Report (1990)

**Group judgment methods are perhaps the most widely used means of assessment of medical technologies in many countries.** The consensus development conference is a relatively inexpensive and rapid mechanism for the consideration and evaluation of different attributes of a medical technology including, for example, **safety, efficacy, and efficiency, among many others** (Goodman and Baratz 1990, p. 1).

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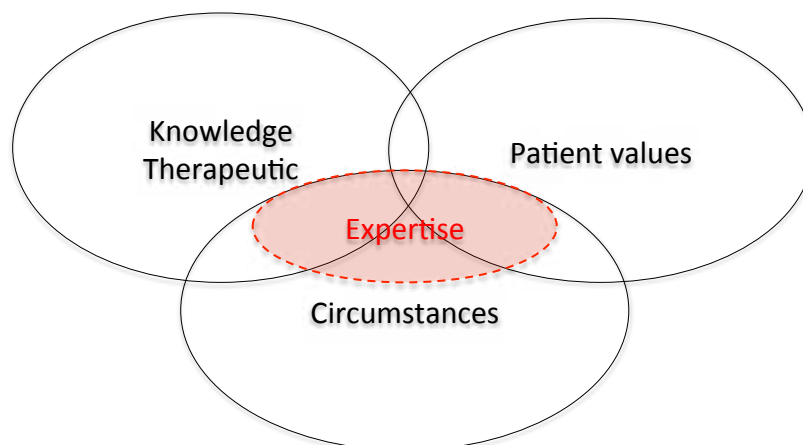
## **GOBSAT Arrogance at work**

“... particularly in the UK, they felt, ‘Nothing good could come from the colonies,’ ... The other thing ... was they felt that in many places the paediatricians were the people who were discouraging use ... It was actually paediatric versus obstetric issues” (Pat Crowley).

## **EBM (*JAMA*, 1992)**

A NEW paradigm for medical practice is emerging. Evidence-based medicine de-emphasizes intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stresses the examination of evidence from clinical research. Evidence-based medicine re-

## What is evidence-based medicine?



**But we still need evidence...**

**What is the evidence for the effectiveness of osteopathy?**

### **Cochrane review of osteopathy**

- Cochrane review (Rubinstein et al 2011), which is 'best' evidence.
- 26 randomised trials (6070 patients)
- Concludes: "In summary, SMT appears to be no better or worse than other existing therapies for patients with chronic low-back pain."
- If that were a new drug, it would be considered a very good result.

## **Evidence and Osteopathy (general)**

- Systematic reviews suggest that for some ailments, especially back pain,
- Better than no treatment
- Osteopathy has similar benefits to other options
- Similar benefits to sham osteopathy

## **Is this a placebo?**

Sham manipulation subjects received “treatments” according to the same protocol guidelines and timetable described previously for OMT subjects. These sham treatments included range of motion activities, light touch, and simulated OMT techniques. The latter consisted of manually applied forces of diminished magnitude aimed purposely to avoid treatable areas of somatic dysfunction and to provide minimal likelihood of therapeutic effect. The third group received no trial interven-

Licciardone et al. 2003. SPINE Volume 28, Number 13, pp 1355–1362

## Sham osteopathy

- ROM activities
- Touch
- Simulated ROM activities
- *...and presumably: communication*

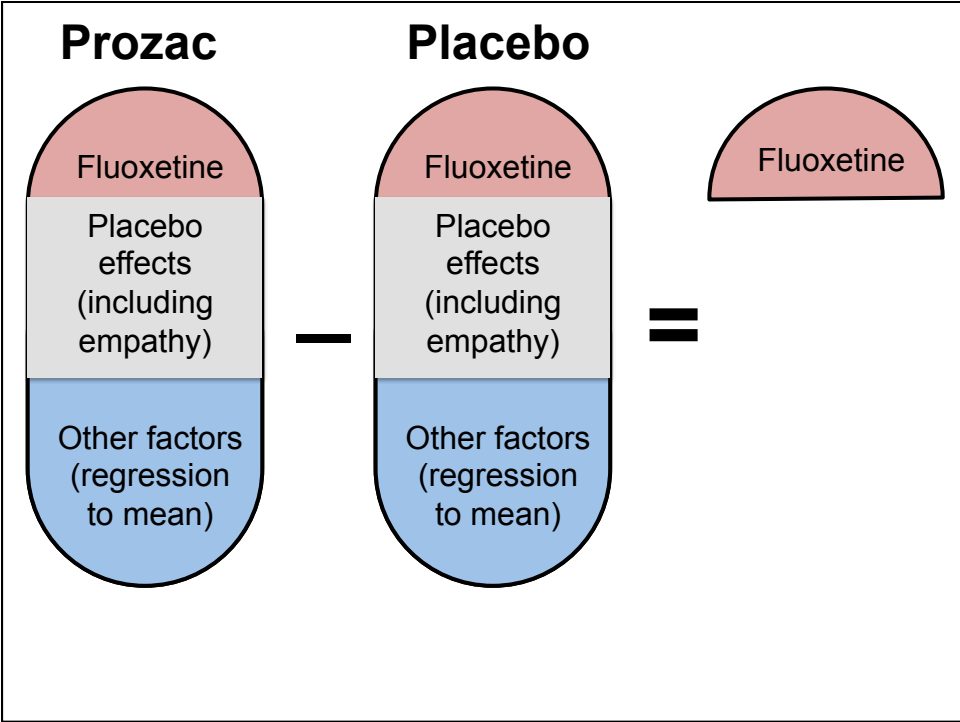


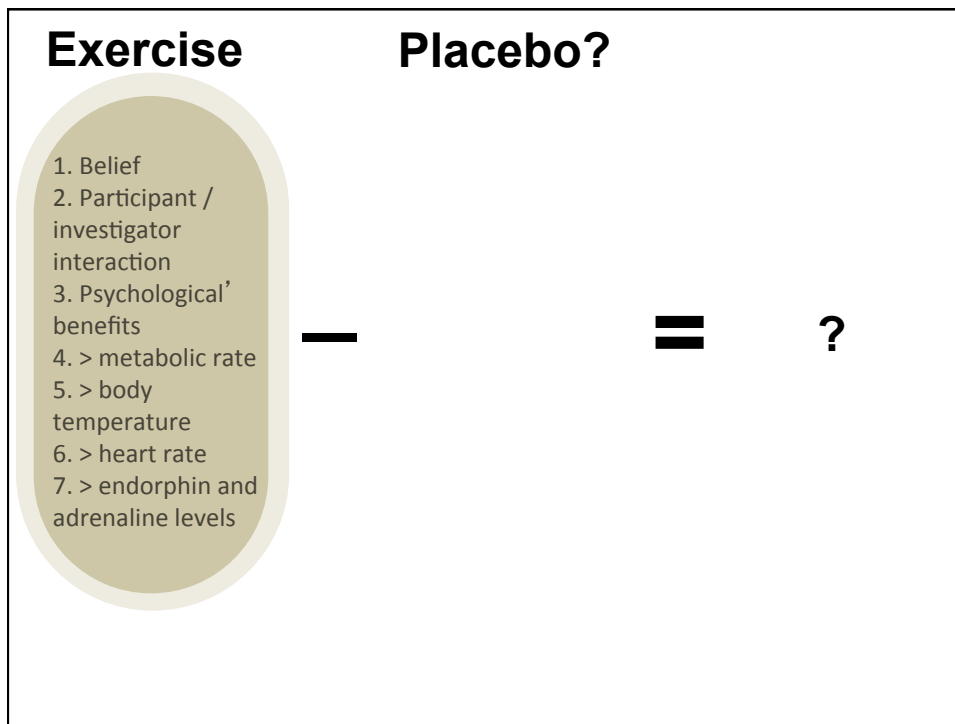
## What you will learn

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**Conundrum: Is sham osteopathy like a placebo pill? Or is it like exercise?**





**Giveaway: I don't know the answer to the conundrum**

**However I do know that one component of osteopathy: empathy, has benefits**

**And I can *solve* the conundrum**

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Research

 THE ROYAL SOCIETY OF MEDICINE

Journal of the Royal Society of Medicine, 102, 1-12  
DOI: 10.1177/1473187518792947

## Effects of empathic and positive communication in healthcare consultations: a systematic review and meta-analysis

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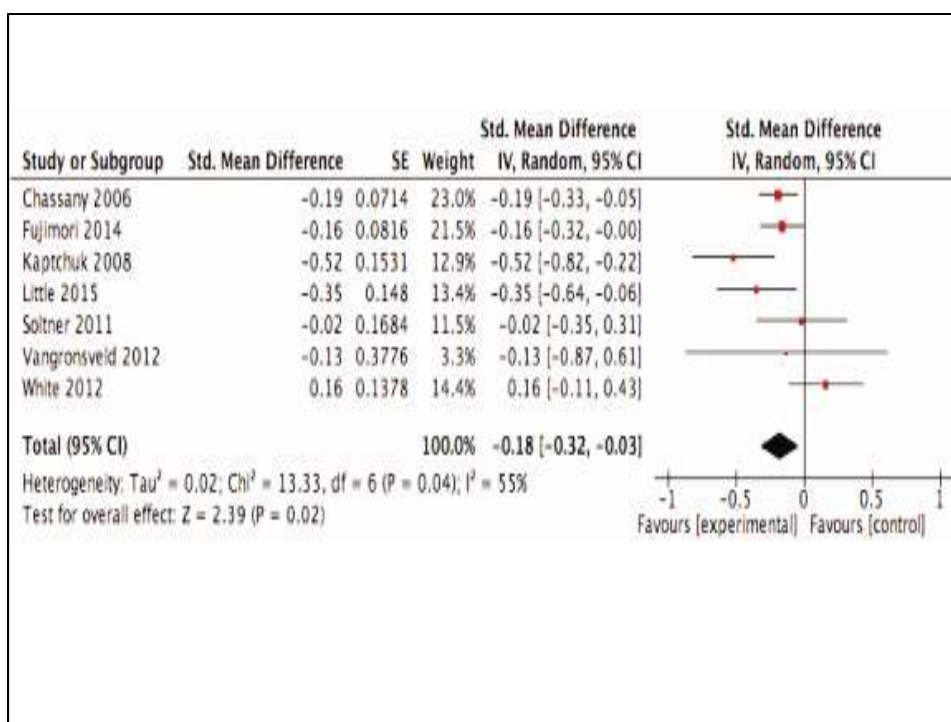
## Types of trials

**Empathy intervention trials:** Those that randomized participants to enhanced practitioner empathy.

**Expectation intervention trials:** Those that randomized participants to enhanced positive messages aimed at promoting positive expectations.

Control group was always usual care.

To minimize the risk of bias, we only included properly randomised trials.



## Empathy Study Example

### Effects of Training on General Practitioners' Management of Pain in Osteoarthritis: A Randomized Multicenter Study

OLIVIER CHASSANY, FRANÇOIS BOUREAU, FRANÇOIS LIARD, PHILIPPE BERTIN, ALAIN SERRIE, PIERRE FERRAN, KARIM KEDDAD, ISABELLE JOLIVET-LANDREAU, and SERGE MARCHAND

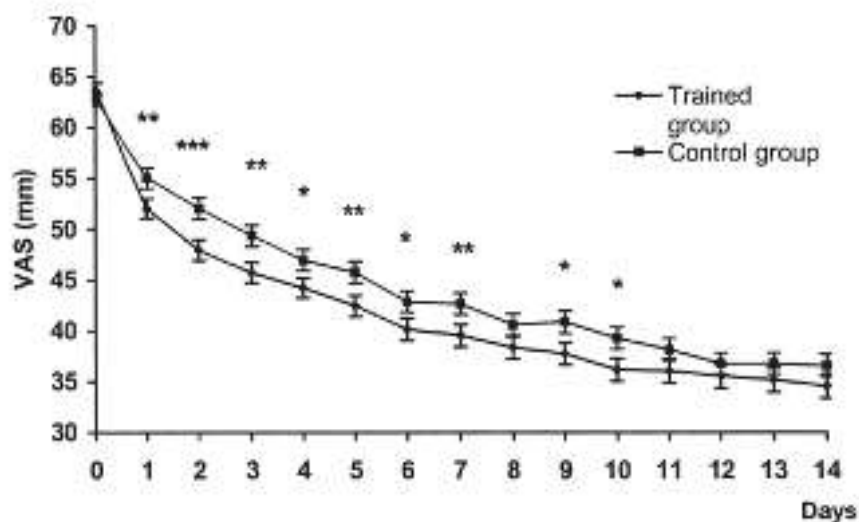


Figure 2. Pain intensity (mean VAS scores) over the 2 weeks of the e.Dol study. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . Bars represent standard deviations.

## Positive messages study example

Rief et al. *BMC Medicine* (2017) 15:4  
DOI: 10.1186/s12916-016-0767-3

BMC Medicine

RESEARCH ARTICLE

Open Access

### Preoperative optimization of patient expectations improves long-term outcome in heart surgery patients: results of the randomized controlled PSY-HEART trial

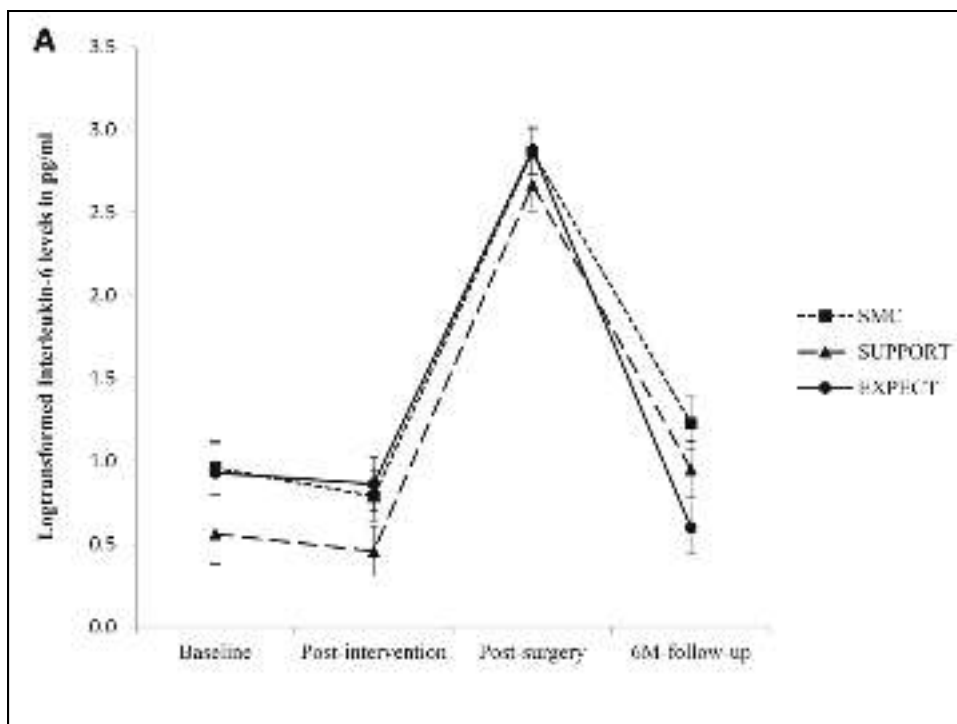
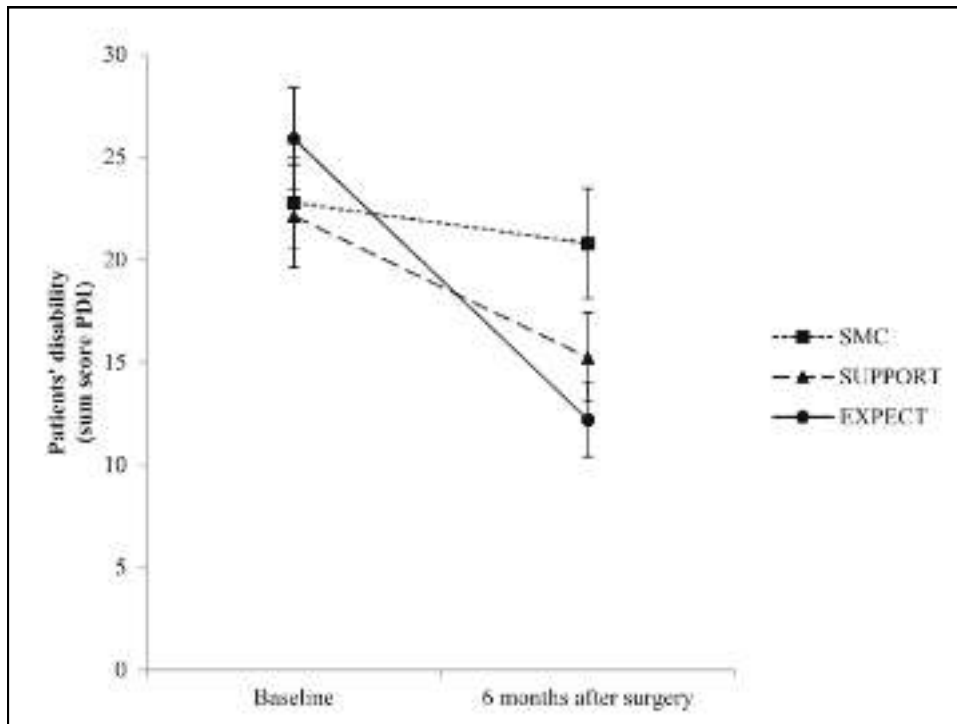


Winfried Rief<sup>1\*</sup>, Meike C. Shedden-Mora<sup>2</sup>, Johannes A. C. Laferton<sup>1</sup>, Charlotte Auer<sup>1</sup>, Keith J. Petrie<sup>3</sup>, Stefan Salzmann<sup>1</sup>, Manfred Schedlowski<sup>4</sup> and Rainer Moosdorf<sup>5</sup>

## Example expectations study summary methods

- 124 patients scheduled for coronary artery bypass graft (CABG) randomized to :
  - Intervention to optimize outcome expectations (EXPECT); or
  - a psychological control intervention (SUPPORT); or
  - to standard medical care (SMC).
- Primary outcome: disability 6 months after surgery (using pain disability score, 0-70); and interleukin 6, 8.





## **How empathy works**

- Empathic practitioners can reduce stress.
- Empathic practitioners can make more accurate diagnoses.
- And more appropriate, personalised treatments.

## **How expectations work**

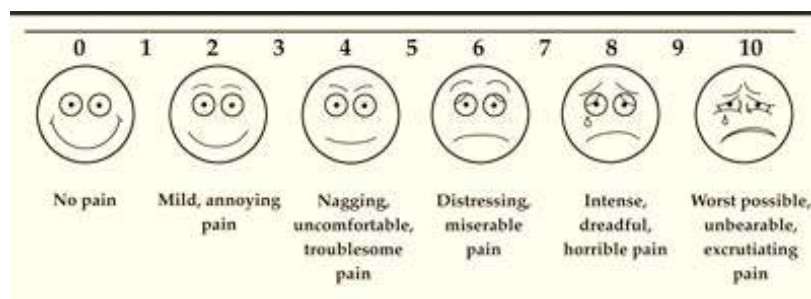
- Activate the brain's reward mechanisms (increased dopamine activity in the nucleus accumbens), and the endogenous opioid system.
- Reduce stress, which in turn appears to reduce pain, anxiety, depression, and a variety of other conditions.

## Limitations

- Hard to isolate these types of studies.
- Heterogeneity.
- Lack of blinding.
- Insufficient data about empathy training.
- Did not report potential harms to practitioners, for example due to additional emotional demands.

## Limitations II

Small effect size (about 1 or 2 points on a 10-point visual analog scale)

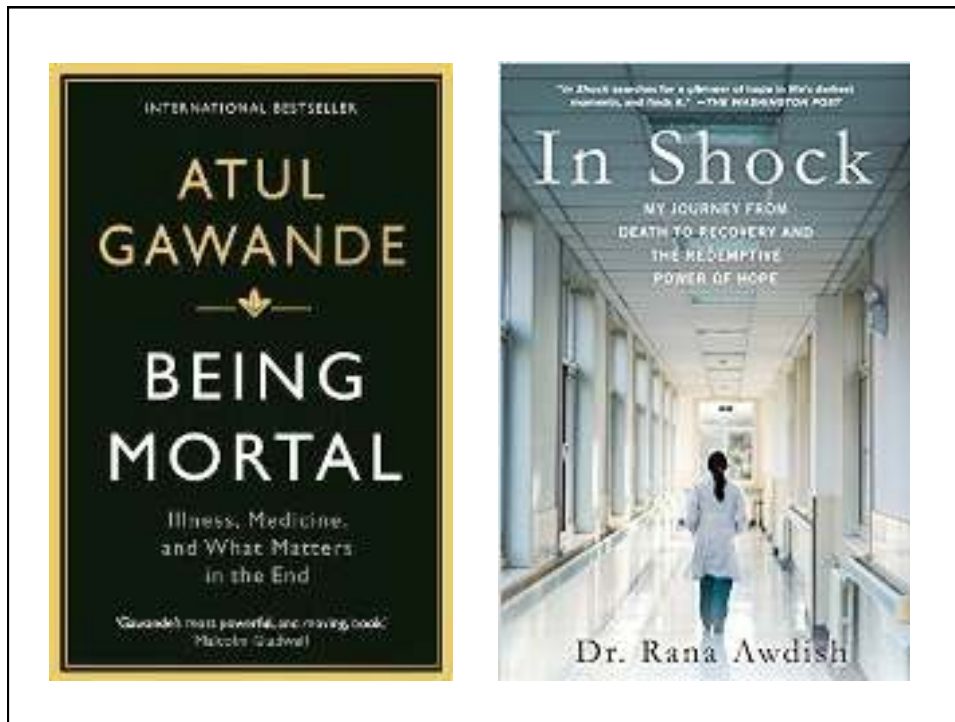


## **Response to limitations**

- Cost effectiveness not known but marginal cost approaches 0
- Global benefits
- As good as drugs

## **What about serious illness**

- The review only contains trials treating very common conditions.
- In some cases the prognosis is very bad, and neither empathy nor expectations will cure.
- There is no hope of any recovery.
- What do we do in these situations?



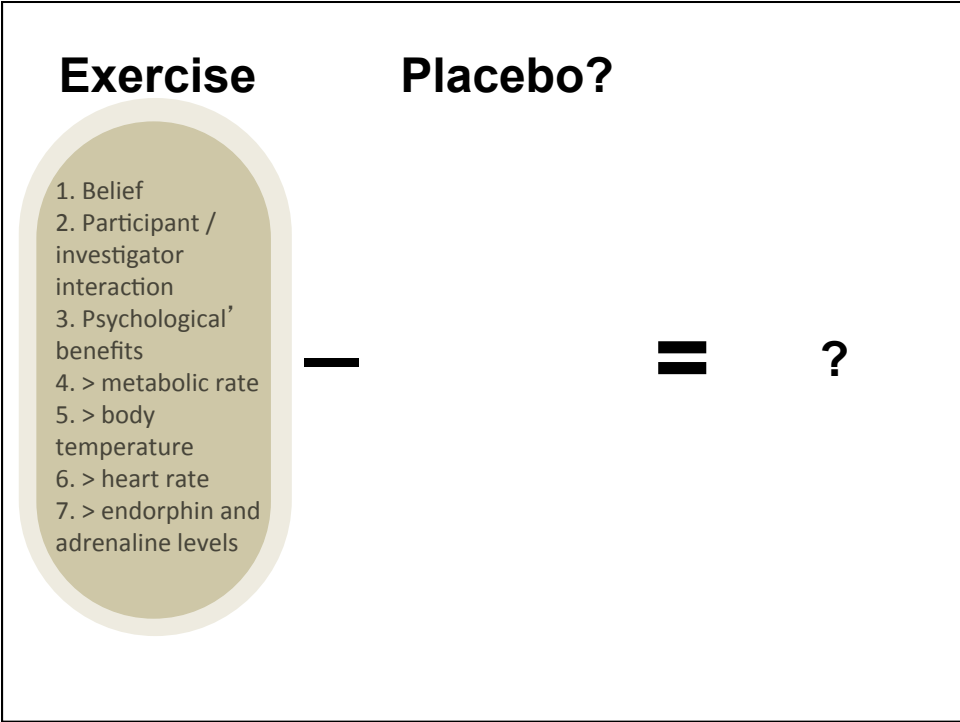
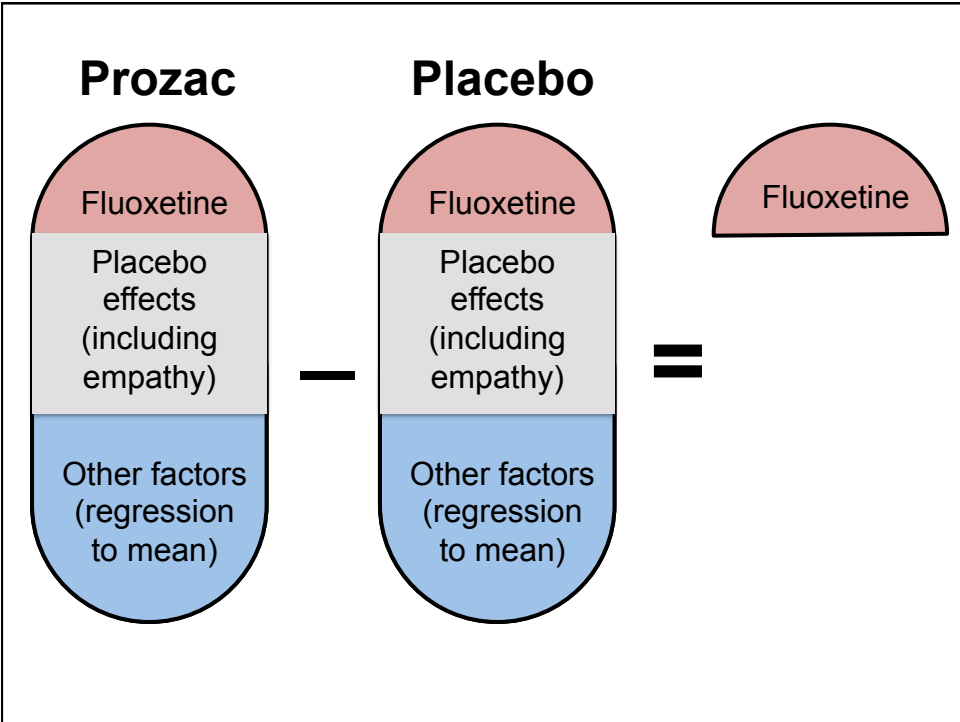
**In short: empathic positive communication 'works'**

## Outline

- A note about evidence and expertise
- A sham clinical conundrum
- **Solving the conundrum**

## Back to the conundrum





## Questions about osteopathy sham

- Was the simulated ROM actually simulated?
- What is the difference between simulated and real ROM?
- Was the communication the same in both groups?

*I don't know*



Contents lists available at ScienceDirect

**Musculoskeletal Science and Practice**

ELSEVIER journal homepage: [www.elsevier.com/locate/jmsp](http://www.elsevier.com/locate/jmsp)

Review article

**Osteopathic manipulative treatment: A systematic review and critical appraisal of comparative effectiveness and health economics research**

Annie Steel <sup>a,b,\*</sup>, Tobias Sundberg <sup>a,c</sup>, Rebecca Reid <sup>c</sup>, Lesley Ward <sup>a,d</sup>, Felicity L. Bishop <sup>a,e</sup>, Matthew Leach <sup>a,f</sup>, Holger Cramer <sup>a,g</sup>, Jon Wardle <sup>c</sup>, Jon Adams <sup>d</sup>

Conclusion: High quality, well-designed, research that aligns with international best practice is greatly needed to build a pragmatic evidence base for OMT





## What you will learn

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## Takeaways

- Evidence and expertise are both part of evidence-based medicine
- Expert *communication* is an evidence-based intervention
- Combine your expertise to avoid shams and do comparative effectiveness studies

## Where to find out more

- @jeremyhowick
- LinkedIn
- Instagram
- Facebook



**Thank you**

@jeremyhowick