

## Lies, damn lies and Professor Ernst's new book.....



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There is no doubt that Professor Ernst is right in saying, in his editorial in the BMJ online, that “Patients are the real losers in the complementary medicine debate”, though not necessarily in the way, or for the reasons, that he describes. The main winner from this editorial, and from his other appearances in the media this week would appear to be Ernst himself, getting a lot of free publicity for his forthcoming book (publicity to which I shall not add here).

The frankly shocking thing about so much of the debate on complementary medicine is how unscientific those who claim to speak for science can be — though Ernst is not the worst offender in this. Spokespersons for the Science Media Centre, for instance, are frequently on TV and radio currently, saying that homeopathy is “scientific junk”; nobody seems to have noted how deeply unscientific this is. The scientific method “consists of the collection of data through observation and experimentation, and the formulation and testing of hypotheses” (Wikipedia) — not of unsubstantiated dogmatic statements. Science has no room for dogma.

So how does the research stand in relation to homeopathy? The National Library for Health ([www.library.nhs.uk](http://www.library.nhs.uk), accessed 18/04/2008) section on homeopathy currently contains 32 systematic reviews and meta-analyses of its use in a wide range of disorders (plus some other studies and reports to a total of 46 items). Of the 32, 7 report a statistically significant clinical effect from homeopathy, 6 show a non-significant trend in its favour, and 3 show no effect; 16 concluded that there was “insufficient data” to draw a conclusion either way. So of those that felt able to draw a conclusion about homeopathy, 81% found it beneficial. On the other hand, 50% of the reviews found insufficient data to draw a conclusion. Of course it’s silly to pool systematic reviews in this way, but no sillier than many of the systematic reviews of this and other CAM modalities, which pool highly heterogeneous studies and use arbitrary, often unspecified, criteria to exclude those they don’t like.

What can we actually learn from this? One obvious conclusion would be that there still is not enough good evidence; another would be that what evidence there is points clearly in favour of homeopathy. But Ernst is saying the exact opposite; “yes, there is now plenty of evidence, and much of the recent research is reasonably sound, but by no means does all the evidence demonstrate that the treatment under investigation generates more good than harm” (said of studies on CAM in general, granted).

It seems likely that the Science Media Centre have realised that the cumulative trend is moving in favour of homeopathy, and have decided that the only way forward is to state as fact that homeopathy is unscientific, and hope that nobody mentions the evidence. Was it a Guinness advert in which it was said “I don’t like it ‘cos I’ve never tried it?”

Ernst, though, appears to have different axes to grind, first among which may be publicising his new book, and his own work in general. In his BMJ editorial, 3 of the 6 scientific references he gives have him as a co-author. This makes his argument somewhat cyclical;

There is good evidence on CAM.  
Who says so?  
I say so.  
On what evidence?  
On my evidence.

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Staying with homeopathy, because it is a good illustration of bias against non-conventional medicine, there is a good shibboleth available to us. A shibboleth is a simple test for sorting things, mainly people, into groups;

*Gilead then cut Ephraim off from the fords of the Jordan, and whenever Ephraimite fugitives said, 'Let me cross,' the men of Gilead would ask, 'Are you an Ephraimite?' If he said, 'No,' they then said, 'Very well, say Shibboleth.' If anyone said, 'Sibboleth', because he could not pronounce it, then they would seize him and kill him by the fords of the Jordan. Forty-two thousand Ephraimites fell on this occasion. Judges 12: 5-6.*

I have started collecting shibboleths; my first is the Andrew Wakefield case currently at the GMC. It is clear to me and to many (including Richard Horton, editor of *The Lancet*, it would seem) that Wakefield's original *Lancet* paper was straightforward good science, and more importantly that he had a moral and ethical obligation to bring his findings to the attention of medicine at large. But I have heard no doctor or scientist prepared to say this on the media; they all fail the shibboleth test. They are Ephraimites.

In homeopathy the shibboleth is another *Lancet* paper; in 2005 Shang et al published a meta-analysis titled "Are the clinical effects of homeopathy placebo effects?"[1] Their conclusion was that this was so; unsurprisingly the paper got lots of publicity, and its defects little or none. The biggest defect was that the authors identified 110 relevant studies and then excluded all but 8 of them from the final analysis (this has become a standard technique for getting the results you want from a meta-analysis; keep excluding studies until you get the desired result, then stop lest it turns the other way again). The paper also failed to mention that the institution from which it originates had expressed serious misgivings, and considered that the evidence did not support the findings. They even chose not to name the 8 papers they had selected, so researchers were unable to evaluate their methods of meta-analysis; they finally released this information four months later. When they did, it was pointed out that 3 key "higher-quality" studies had been omitted, which would have altered the results in favour of homeopathy.[2]

It is lamentable that *The Lancet* not only accepted this paper despite its problems, but actively publicised it. But equally, for anybody who seeks to be an authority of any sort on CAM or homeopathy to accept the paper's findings despite its gross flaws is, to me, evidence of their bias. It is a shibboleth. In his editorial Ernst says, of CAM supporters;

*Suffice to say that, after years of debate, I have reached the conclusion that those who hold such views are either deliberately trying to mislead, or are not fully informed as to what a clinical trial can and cannot achieve.*

Based on my shibboleth, and in fact on the sum of his writings and statements, I would say the same of him.

### References

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2. Rutten L, Stolper E. 'Proof' against homeopathy in fact supports Homeopathy. *Homeopathy*. 2006; 95(1): 57-61