



## **Press Release**

Monday, 19 November 2007

### **Statement on the articles published in The Lancet of 17 November 2007**

The European Committee for Homeopathy (ECH) and the International Homeopathic Medical League (LMHI), jointly representing all homeopathic doctors in 58 countries all over the world, welcomes balanced reporting and discussion of homeopathy. However, the article 'Pressure grows against homeopathy in the UK' and the accompanying Commentary in this week's Lancet (16 November) are good examples of how those opposed to homeopathy are creating a climate that stifles the very discussion and debate they claim to want. It is outrageous that The Lancet that considers itself as an authoritative scientific journal publishes biased comments from ill-informed journalists without giving the opportunity to the other side of the argument.

Patients around the world experience tangible benefit from homeopathic treatment and have done so for over 200 years. The peer-reviewed research literature offers evidence that homeopathy can be effective in certain medical conditions and the volume of positive clinical research evidence in homeopathy is too large to dismiss as chance findings.

In common with many other forms of CAM, homeopathy is very under-researched and lacks research funding and infrastructure. Given the increasing demand among the public for homeopathy it should be thoroughly researched and therefore needs funding in order to reach proper conclusions about the effectiveness of the homeopathic approach.

Journalists and other readers who would like to learn the facts and form their own opinion rather than taking the Lancet articles at face value, may want to read the annex.

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## **ANNEX – The real facts and the view of the community of homeopathic doctors.**

Both the Lancet article “Pressure grows against homeopathy in the UK” and the comment “Benefits and risks of homeopathy” assert that 5 large meta-analyses of homeopathy trials have been done and that all “have had the same result: after excluding methodologically inadequate trials and accounting for publication bias, homeopathy produced no statistically significant benefit over placebo.” The Guardian journalist Ben Goldacre, who is highly skeptical towards homeopathy, is, unsurprisingly, heavily biased. A more complete and unbiased assessment of the research evidence gives a very different perspective:

Three of the 5 meta-analyses that Goldacre cites did not reach the negative conclusion he implies, while the other 2 reports have limited interpretation. The first paper assessed 105 trials, 81 of them positive [1]. The authors concluded: “Based on this evidence we would be ready to accept that homeopathy can be efficacious, if only the mechanism of action were more plausible”, “the evidence presented in this review would probably be sufficient for establishing homeopathy as a regular treatment for certain indications”, and “the evidence of clinical trials is positive but not sufficient to draw definite conclusions”. The review for the European Commission [2], later published in a scientific journal [3], included 16 out of 118 randomised trials and concluded that homeopathy was more effective than placebo ( $P < 0.001$ ) though “the strength of this evidence is low because of the low methodological quality of the trials” ( $P = 0.082$  for the highest quality sub-group of just 5 trials). The fourth analysis focused on trials of individualised homeopathy only, and thus did not represent the entire research evidence [4].

The most recent review, conducted by Shang et al, a group of scientists under the direction of Professor Matthias Egger, well known for his anti-homeopathy standpoint, found “weak evidence for a specific effect of homeopathic remedies, but strong evidence for specific effects of conventional interventions. This finding is compatible with the notion that the clinical effects of homeopathy are placebo effects”[5]. This review restricted its analysis to a subset of 21 homeopathic trials which were of high methodological quality – higher even than the included conventional-medicine trials. Shang’s analysis has been criticised to be prone to selection bias, especially when the set of 21 high quality trials was reduced to 8 trials with large patient numbers. Obviously, the results depend on how the threshold for “large” studies was defined from these 21 studies. The overall results – and the conclusions drawn from them – change depending on which subset of homeopathic trials is analysed. The choice of other meaningful subsets could lead to the opposite conclusion [6]. For example, four of the 21 trials dealt with preventing or treating muscle soreness and an earlier systematic review [7] already showed that homeopathic medicines are probably not helpful in this condition. When restricting the analysis to the remaining 17 trials an overall statistically significant effect can be found [6]. In addition, there is no external criterion why a “large” trial should have  $N=98$  or more patients as defined by Shang. For example, if the data set was split at a threshold of  $N=66$ , the median sample size of all 110 homeopathic trials, there had been a significant effect in favour of homeopathy. Shang’s conclusions are not so definite as they have been reported and discussed.

Accidentally (?), Goldacre failed to cite one of the largest meta-analyses, which showed homeopathy can produce significant benefit over placebo. Published in *The Lancet* 10 years ago, Linde and colleagues analysed 89 trials and found a mean odds ratio of 2.45 (95% confidence interval, 2.05–2.93), in favour of homeopathy [8]. When considering just those trials of “high quality” and after correcting for publication bias, the findings actually remained statistically significant. The main conclusion was that the results “were not compatible with the hypothesis that the effects of homeopathy are completely due to placebo”. In further analysis, the authors clarified that higher quality trials were less likely to be positive than those of lower quality – which is comparable to the conclusion from similar analyses in conventional medicine [9] –, though the difference from placebo remained statistically significant until analysis was restricted to just five trials [10]. There was insufficient volume of evidence to enable conclusions to be drawn about what homeopathic treatment is effective in which diagnosis.

The fact that some meta-analyses showed some positive evidence for homeopathy is remarkable because meta-analyses are far from appropriate when trials are extremely heterogeneous (as in homeopathy) not only in results but also in the interventions and health conditions under study and when a therapeutic system works in some but not all indications [11]. The Cochrane Handbook for Systematic Reviews recommends “Meta-analysis should only be considered when a group of trials is sufficiently homogeneous in terms of participants, interventions and outcomes to provide a meaningful summary” [12].

The problem of heterogeneity of medical condition has been avoided in 17 systematic reviews focused on RCTs of homeopathy in 15 specific areas. The positive evidence for homeopathy is here more obvious. Seven of 17 such reports to date have been positive for homeopathy: childhood diarrhoea [13]; influenza [14]; post-operative ileus [15]; seasonal allergic rhinitis [16,17,18]; vertigo [19]. Eight of the other 10 reviews were non-conclusive [7, 20-26]; 2 were negative [27,28]. Unsurprisingly again, Goldacre chooses not to report findings of these systematic reviews.

For other medical conditions, the published evidence is fragmentary: there are some non-replicated RCTs showing positive effects for homeopathy and, on the other hand, there are some conditions for which trial evidence has been non-conclusive or negative. More detailed information can be obtained from the ECH secretariat.

This is a frank summary of the evidence available in peer-reviewed publications, which means that the research literature offers some evidence that homeopathy can be effective in certain medical conditions. This is not “cherry-picking positive studies”, as Goldacre views homeopaths’ approach to the research literature.

### **Anti-homeopathy campaign**

Lancet Press Officer Udani Samarasekera reports extensively about the anti-homeopathy campaign by some journalists, doctors, and scientists in the United Kingdom. He cites Michael Baum who thinks that homeopaths are getting over-confident when promoting homeopathy for HIV/AIDS. It seems he is implying that homeopaths believe that homeopathy can cure HIV/AIDS. That is not the case. The ECH/LMHI maintain that homeopathy should not replace the disease-specific conventional treatments, but that patients with such a serious and often debilitating condition can benefit from homeopathic treatment in addition to their conventional treatments, especially with regard to enhancing their recovery, stimulating their well-being and helping them to cope with the long term chronic consequences of their disease.

He also cites David Colquhoun who accuses homeopaths of making false claims about malaria in the sense that it may prevent this disease. The ECH/LMHI emphatically do not think there is a role for homeopathy in the prevention of malaria because there is no scientific evidence at all for this.

The main cause of scientific scepticism surrounding homeopathy is its use of very high dilutions, including ‘ultra-molecular dilutions’ that are diluted beyond the point ( $10^{-24}$  M) at which any molecule of the starting substance is likely to be present. Plainly, ultra-molecular dilutions cannot have any classical pharmacological effect; their potential site or sites of action in the body is unknown though under investigation in a number of laboratories. It should be noted that some homeopathic medicines used in practice lie in the same range of concentrations as those used in conventional medicine ( $10^{-6}$  to  $10^{-22}$  M). Research indicates that concentrations as low as  $10^{-22}$  M might be pharmacologically active [29].

Especially the claim that water may retain information about homeopathically prepared solutes is unacceptable to Michael Baum. Still, many scientists around the world have found evidence for this phenomenon. According to Martin F Chaplin, a Professor of Applied Science (Water and Aqueous Systems Research, London South Bank University, London) there is strong evidence concerning many ways in which the mechanism of this ‘memory’ may come about [30]. Many experiments on biological systems in-vivo and in-vitro, gathered in the Homeopathy Basic Research Experiments (‘HomBRex’) Database (available at <http://www.carstens-stiftung.de/hombrex/index.php>) show that ultra-molecular dilutions can have a demonstrable effect.

The reason that this campaign was started was “out of a sense of despair over a malaise in society, a flight from rationalism”. Baum cannot understand how anyone with scientific training, can believe in the principles and theories behind homeopathy. “They seem to be able to divide their brain into two parts—rational and irrational”, he says. As a response, the ECH/LMHI take the position that, unless a new theory is conventional and represents a small addition to current knowledge, new theories must usually fight an uphill battle for acceptance. Their proposers are often ridiculed, and they risk their careers by sticking by their guns. There have been several instances where the scientific establishment refused to accept the evidence for a long time because the theory was “ridiculous” (Semmelweis, Chladni, Pasteur, Edison, Tesla, Galileo and many more, as listed at the ‘Closeminded Science’ website <http://amasci.com/weird/wclose.html>).

Goldacre in his comment “Benefits and risks of homeopathy” also criticizes homeopathy for having unexpected

side effects. He mentions “The very act of prescribing a pill carries its own risks: medicalisation, reinforcement of counterproductive illness behaviours, and promotion of the idea that a pill is an appropriate response to a social problem, or a modest viral illness”. This is general medical issue, and not specific for homeopathy.

Goldacre asserts that there have been “cases of patients who died after medically trained homeopaths advised them to stop medical treatments for serious medical conditions”. If this happens, the ECH/LMHI deplore that. The ECH/LMHI are of the opinion that regardless of whether doctors are using conventional treatments or homeopathy in their practices, they are responsible for practising good medicine by complying with professional standards and regulatory mandates. Any homeopathic treatment always needs to be prescribed within a broader care plan including an awareness of the need for conventional medical diagnosis, prognosis and treatments. This means homeopathy can be used as an alternative (for example, when the conventional options have been exhausted or are unacceptable to the patient) or as a complement to conventional treatment (for example, to help an MS patient taking interferon with aspects of symptom control that can lead to better quality of life and enhanced well-being). Homeopathic doctors as any other doctors comply with the World Medical Association International Code of Medical Ethics.

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