

## Homeopathy and Placebo – Synonym, Similar or Different?

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Despite some evidence for the effectiveness of homeopathy from large-scale observational studies [1–4], the question whether its clinical effects are completely due to placebo remains subject of scientific debate [5, 6]. The scepticism towards homeopathy mainly results from the lack of a generally accepted scientific rationale of its action [7]. If everything that exists beyond a clearly defined physiological mechanism, e.g. drug-receptor interaction, is considered to be a placebo, then, at present, this is true for homeopathy.

In contrast, Samuel Hahnemann, the founder of homeopathy, spoke of the vital force or ‘dynamis’ as target of action of homeopathic remedies [8]. Modern homeopaths might argue that the remedy transports some kind of ‘information’ [9] that is able to stimulate the ‘healing capacities’ of the organism [10]. As we will point out, these explanation models are pretty much in line with modern placebo theories.

Placebos are used as controls in pharmacological studies and therefore can be seen as the most extensively investigated medicines worldwide. There is consensus that placebo phenomena exist, and that they are able to produce remarkable effects in medicine. Although effect sizes have been questioned [11], there are still consistent results that treatment with placebos can produce beneficial effects across various medical fields such as pain [11], neurology [12], cardiology [13, 14], and surgery [15]. And these effects are by no means only psychological, subjective phenomena, but accompanied by measurable changes in endocrine [12, 16] and autonomic functions [17]. In addition, placebos often mimic the central effects of the active drug [12, 18].

As complex interventions, many therapies of complementary and alternative medicine (CAM) have strong unspecific effects. In randomised controlled trials, it is therefore often difficult to prove superiority to placebo – a phenomenon that has been called the ‘efficacy paradox’ [19]. This point is underlined by the fact that CAM therapies are mostly assumed (and expected) to have a smooth, gentle action with minimal side effects.

In the case of homeopathy, placebo effects hardly can be attributed to some characteristics of the drug itself known to enhance placebo answers (e.g., colour of drug [20], invasiveness of application modus [21], degree of active involvement of the patient [22]). Typically, homeopathic remedies are taken as *globuli*, small sucrose-based pills, in larger time intervals. However, instructions like ‘5 globuli three times a day’ might very well produce strong unspecific effects.

But classical homeopathy is more a holistic package of care, also comprising a special context of the homeopathic encounter. Recent placebo literature has emphasised the therapeutic relevance of factors like altruism, empathy, emotional care and subjective meaning of a treatment [23–26]. Specific features of homeopathy such as duration and method of case taking, or other characteristics of the doctor-patient relationship might therefore have a strong influence on health outcomes. 200 years ago, Hahnemann taught homeopaths to be unprejudiced observers, to listen to the patient without interrupting, remove obstacles of healing and to give advice regarding lifestyle changes [9]. Today, these principles are anchored in modern psychosomatic medicine.

With a few exceptions [27, 28], there is little systematic knowledge nowadays about homeopathic doctors’ attitudes, their personal beliefs or communication skills, nor about their patients’ expectations, suggestibility, or individual meaning of homeopathy as their therapy of choice.

There is little doubt that homeopathy, at least for a reasonable number of patients, can be beneficial. Whether its effects are produced by a specific action of the homeopathic remedy still has to be subject of basic and clinical research. For a more differentiated understanding which factors contribute to healing in homeopathy, observational research outside randomised controlled trials should look further for characteristics of the doctor-patient relationship in the context of homeopathy.

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