

# Placebo effects of different therapies not identical

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Not all placebos are equal, and patients who respond to one placebo don't always respond to others, according to research published July 31 in the open access journal *PLOS ONE* by Jian Kong from Massachusetts General Hospital, Harvard Medical School and colleagues from other institutions.

The researchers tested the [analgesic effects](#) of genuine [acupuncture](#), sham acupuncture and a [placebo pill](#) on healthy participants' [pain sensitivity](#). Participants were not told what treatment they were receiving, but were informed that the pill was Tylenol, a well-known painkiller and different schools of acupuncture: electroacupuncture and manual acupuncture (sham acupuncture). A control group received no treatment at all. Shortly before and after each treatment, a warm electrode was placed on participants' forearms and the temperature gradually increased. They were asked to indicate when the heat first became painful and when it became too hot to tolerate to identify pain thresholds and tolerance.

No significant associations were found between participants' responses to the different treatments, suggesting that none of these individuals could be identified as placebo 'responders' or 'non-responders'. However, participants' expectations that the treatment would help relieve pain correlated with their pain thresholds and tolerance.

According to the authors, these and other parameters in their study suggest that responses to a placebo depend on diverse factors including

the route of administration (pills or acupuncture), environmental cues, and learning based on verbal suggestions or conditioning. Kong adds, "It implies that placebo responses may not be dependent on stable individual traits but rather are more a characteristic of the circumstances of individuals or a combination of both trait and state."

In addition, they also found subjects' responses to sham acupuncture correlated significantly with their response to genuine acupuncture. This suggest that people who responded to genuine acupuncture were significantly more likely to experience pain relief from [sham acupuncture](#), but the authors clarify that this does not indicate the two are the same. Instead, they suggest that acupuncture may have non-specific pain-relieving effects that may contribute to this observation.

**More information:** Kong J, Spaeth R, Cook A, Kirsch I, Claggett B, et al. (2013) Are All Placebo Effects Equal? Placebo Pills, Sham Acupuncture, Cue Conditioning and Their Association. *PLOS ONE* 8(7): e67485. [doi:10.1371/journal.pone.0067485](https://doi.org/10.1371/journal.pone.0067485)

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