

## Clinical Trials to Test the Effectiveness of Treatments

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### Description

In general, placebos can affect how patients perceive their condition and encourage the body's chemical processes for relieving pain and a few other symptoms,[5] but have no impact on the disease itself. Improvements that patients experience after being treated with a placebo can also be due to unrelated factors, such as regression to the mean (a natural recovery from the illness). The use of placebos in clinical medicine raises ethical concerns, especially if they are disguised as an active treatment, as this introduces dishonesty into the doctor-patient relationship and bypasses informed consent. While it was once assumed that this deception was necessary for placebos to have any effect, there is now evidence that placebos can have effects even when the patient is aware that the treatment is a placebo.

Placebo is Latin for I shall be pleasing. It was used as a name for the Vespers in the Office of the Dead, taken from a phrase used in it, a quote from the Vulgate's Psalm 116:9, placebo Domino in regione vivorum, "I shall please the Lord in the land of the living". From that, a singer of placebo became associated with someone who falsely claimed a connection to the deceased to get a share of the funeral meal, and hence a flatterer, and so a deceptive act to please.

Placebos can improve patient-reported outcomes such as pain and nausea. This effect is unpredictable and hard to measure, even in the best conducted trials. For example, if used to treat insomnia, placebos can cause patients to perceive that they are sleeping better, but do not improve objective measurements of sleep onset latency. A 2001 Cochrane Collaboration meta-

analysis of the placebo effect looked at trials in 40 different medical conditions, and concluded the only one where it had been shown to have a significant effect was for pain.

One way in which the magnitude of placebo analgesia can be measured is by conducting "open/hidden" studies, in which some patients receive an analgesic and are informed that they will be receiving it (open), while others are administered the same drug without their knowledge (hidden). Such studies have found that analgesics are considerably more effective when the patient knows they are receiving them.

A phenomenon opposite to the placebo effect has also been observed. When an inactive substance or treatment is administered to a recipient who has an expectation of it having a negative impact, this intervention is known as a nocebo (Latin nocebo = I shall harm"). A nocebo effect occurs when the recipient of an inert substance reports a negative effect or a worsening of symptoms, with the outcome resulting not from the substance itself, but from negative expectations about the treatment.

Knowingly giving a person a placebo when there is an effective treatment available is a bioethically complex issue. While placebo-controlled trials might provide information about the effectiveness of a treatment, it denies some patients what could be the best available (if unproven) treatment. Informed consent is usually required for a study to be considered ethical, including the disclosure that some test subjects will receive placebo treatments.