

NOCEBO EFFECT

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INTRODUCTION:

It is well-known that placebo is a substance without medical effects, which benefits the health status because of the patient's belief that the substance is effective and that the nocebo is defined as a substance without medical effects but which worsens the health status of the person taking it by the negative beliefs and expectations of the patient.¹ Starting with the history of the placebo effect and giving a review of the most significant studies reporting about the placebo effect from 1939-2013 it was our intention to give the all-around look on this phenomena discussing the neurobiological and other theories of its origin and concentrating especially on the field of psychiatry and finally coming to conclusions regarding the conductance of clinical trials and ethics. Regarding psychiatry, the placebo effect has a substantial role in most of psychiatric conditions including depression, anxiety, addictions, and contrary to what may have been expected, schizophrenia. Likewise, the nocebo effect is not to be neglected as the studies are being conducted to identify the factors causing it so it could be prevented.²

The nocebo effect, also known as the nocebo response, happens when a person's negative expectations of treatment lead to negative side effects. An example of a nocebo response would be a person expecting that the medication will cause negative side effects and then having those unpleasant side effects even though the medication that they are taking is actually an inert substance.³

Some examples of the nocebo effect that have been observed in research:

Headaches: One study found that nocebo effects were prevalent in studies focusing on headache treatment and prevention. Because participants who had a nocebo response were also more likely to dropout, it was more likely to also affect the interpretation of clinical trials.

Pain: The nocebo effect can also play a role in how people perceive pain. Clinical trials focus on the nocebo effect in pain treatment also showed that those who had negative nocebo responses were more likely to quit the trial.³

Drug Response: Another study found that a high number of people (including health consumers and medical professionals) have negative attitudes toward the efficacy of generic drugs. The study found that people may be more likely to experience more side effects in response to generic drugs due to these negative expectations.⁴

Patient expectations, beliefs and experiences influence their attitude towards treatments

A range of studies have identified that a patient's expectations about a treatment is a key factor in influencing rates of adverse effects and medicine adherence.² For example, clinical trial evidence shows that people report higher rates of muscle-related symptoms when they are aware they are taking a statin, than when they are blinded to whether they are taking a statin or placebo. In another example, 200 people in a study in the United Kingdom were given a sham (placebo) tablet and told that it was a well-known medicine and researchers were investigating the severity of its adverse effects.⁵ Almost half of the participants (47%) reported adverse effects from the tablet even though it had no active component. Patients who had more baseline symptoms, a higher expectation that symptoms would occur, worries about the health effects of modern medicines, belief that medicines cause harm and greater sensitivity to medicines were more likely to perceive that the tablet had caused adverse effects.⁶

Patients are more likely to report adverse effects that have specifically been discussed with them. Previous negative healthcare experience, e.g. an adverse medicine reaction, is associated with a higher likelihood of experiencing adverse outcomes with subsequent treatments.⁷

7 WAYS TO PREVENT NOCEBO EFFECT:

1. Emphasize positive drug effects and avoid over emphasizing adverse effects.
2. Explain the mechanisms of drug action.
3. Speak to the patient rather than just providing written material.
4. Manage expectations. Research shows those with negative expectations have a worse outcome.

5. Always tell the patient what they are taking. Unintentionally hiding information results in a significant lack of positive effects from the medication.
6. Be aware that patients' emotional burden while undertaking pain management treatments can interfere with the intervention's positive effects.
7. Treating pain adequately in early life as well as in non-communicative patients helps to avoid cued and contextual conditioning nocebo effects.⁸

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