

PLACEBO EFFECT

- The brain is more powerful than you may know.
 - The brain and the body are interconnected, and the brain can influence the body.
 - Placebo Effect:
 - when a person's physical or mental state improves after taking a placebo
 - Stems from people's belief in a benefit from the placebo and their expectation of feeling better, rather than the characteristics of the placebo itself.
 - The placebo effect is used to investigate the effectiveness of a drug. One group is given the actual drug, and the other group is given a placebo. Participants are unaware of which they were given, If both outcomes are the same at the conclusion of the study, it allows researchers to conclude that non-pharmacological options are available to treat such condition
 - The placebo effect releases endorphins and dopamine and influences regions in the brain that affects mood, emotions and self-awareness.
 - It provides a therapeutic effects and it influences perceptions perceived by the brain to provide healing effects
 - Most people associate taking a pill with healing and can tell the brain that they are healed
 - It is important to note that a placebo only treats symptoms but does not cure a disease
- Indications;
- Pain management
 - Insomnia caused by stress
 - Fatigue
 - Nausea
 - Depression

THE PLACEBO VS NOCEBO EFFECT

"P IS FOR POSITIVE, N IS FOR NEGATIVE"

The placebo effect happens when a person experiences a benefit from their belief that a medication or treatment can be helpful

vs

The nocebo effect happens when negative information, prior negative experiences, and social influences, negatively affect a response to medication or treatment.

•Factors which influence someone's attitude towards treatment:

- Healthcare beliefs
- Viewpoints on if medications are harmful
- People who prefer alternative medicines
- Sensitivity to the effects of medications
- Severity of someone's condition
- Co-morbidities
- Previous healthcare experiences
- Previous adverse reactions to treatment
- History of anxiety
- Interactions with a healthcare professional
- Exposure to information about their treatment such as medication handouts and leaflets, package inserts, websites
- Health literacy level and if they are able to interpret written or verbal adverse effect information
- Social media
- Experiences of family members and friends

There is a strong correlation between how strongly a person expects results and if results occur. The stronger the expectation, the more likely the effect to occur.

Communication is important!

Positive and effective clinician-patient communication is crucial to ensuring adequate patient satisfaction and adherence to medical advice. However, poor or limited clinician-patient encounters, negative information, the absence of warmth and the lack of clinician competence increases the likelihood for a nocebo reaction during treatment.

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https://www.health.harvard.edu/newsletter_article/the-power-of-the-placebo-effect

<https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/placebo-effect>

<https://pubmed.ncbi.nlm.nih.gov/articles/PMC3167012/>

<https://bpac.org.nz/2019/nocebo.aspx>

<https://www.annualreviews.org/content/journals/10.1146/annurev-pharmtox-022723-112425>

NOCEBO EFFECT

- The Nocebo effect is caused by negative expectations that arises from a clinical encounter which then creates negative outcomes for a patient.
 - The nocebo effect is when harmful expectations can negatively affect a response to medication or treatment. It can also be caused by factors such as labels or marketing.
 - During a clinical interaction, disclosing information about potential side effects can contribute to a person experiencing adverse effects. By telling a person adverse effects they might experience before starting treatment, they then are conditioned to expect for such adverse effects to happen to them
 - Examples of this can be pain or nausea that occur because a person was expecting to experience it
 - The nocebo effect can occur in persons taking an actual treatment and also in persons taking a placebo.
 - The nocebo effects are associated with activation of the descending modulatory systems involving areas such as prefrontal cortex, the brainstem, and spinal cord
- Nocebo effects are more common in people who:
- Are afraid of pain
 - Have a history of anxiety or depression
 - Have had a negative experience with a medication or treatment in the past
 - Are told that the treatment will cause unwanted side effects or be painful
 - Have the following personality traits:
 - Pessimistic
 - Neurotic
 - Type A (highly competitive, focused on outcomes)
 - The nocebo effect can be minimized for an individual by reducing negative expectations about a treatment and by having open and honest dialogue and discussions about not only the likelihood of adverse effects but the fact that overall, the treatment benefits are much greater than the chances of one getting an adverse effect