



# What is the placebo effect?

KS3

KS4

Ages 11-18 🕒 4 min read

In a clinical trial, patients are divided into two groups. One group receives a new painkiller. The other group receives a sugar pill with no active ingredients — a placebo. The patients don't know which they've received. The result, consistently found across hundreds of trials: a significant portion of the placebo group reports genuine pain relief. Their pain actually decreases. How?

## It's not just imagination

The placebo effect is often dismissed as people "just thinking they feel better." But brain imaging studies show something more interesting: when people taking placebos report pain relief, their brains are actually releasing endorphins — the same natural painkillers that real analgesics stimulate. Their bodies are generating real biological responses to a fake treatment. The belief that you're being treated triggers measurable physiological changes.

🎬 Think about watching a scary film. Nothing threatening is actually happening — you're just sitting on a sofa looking at flickering images. But your heart races, your palms sweat, and your body releases adrenaline as if the danger were real. Your brain is so convinced by the experience that it produces a genuine physical response. The placebo effect works similarly: the expectation of treatment is convincing enough to trigger real healing mechanisms.

## What affects how strong it is?

Quite a lot. A larger pill produces a stronger placebo effect than a smaller one. An injection produces a stronger effect than a pill. Expensive-looking packaging beats cheap packaging. A confident, warm doctor amplifies the effect. Even the colour of the pill matters — red and orange placebos tend to work better as stimulants; blue ones work better as relaxants. The ritual and context of treatment are themselves part of the medicine.

## Is it dishonest to use it?

This is where it gets philosophically interesting. Doctors have traditionally assumed you must deceive patients for a placebo to work — if you know it's a sugar pill, surely the effect disappears? But trials of "open-label placebos" (where patients are explicitly told "this is a placebo, but research suggests it may still help") have found significant effects persist. Patients can know and still benefit. The implication is that some of the healing power lies in the ritual of treatment itself — not just deception. Several doctors now argue we dramatically underuse placebo-based and contextual healing, particularly for chronic pain and stress-related conditions.