How do placebos work?
- Social influences:
  - Role expectation: doctors' job is to help, patient's role is to get better
  - Classical conditioning: previous drugs have helped so new drug will help
  - Operant conditioning: doctor rewards signs of improvement
- Cognitive influence: have strong belief in medicine and doctor abilities
- Anxiety reduction brings about relief and lowers pain
- Endorphin release: inhibits pain signals so relief of being offered treatment can have a placebo effect

1. Studies suggest placebo response can be inhibited by administering an opioid antagonist (blocks opioid receptors); reversed placebo response
2. Melatonin blocks the body's own endorphins so increases pain levels

Central Role of Patients' Expectations in Placebo Effects
Ogden 2000

Expectations
- Doctors are associated with improvement

Patient Cognition
- 'I want to get better'

Expectancy Theory
- 'I expect to get better'

Reporting Error
- 'I attribute changes to my treatment'

Anxiety Theory
- 'I expect to improve so I am less anxious'