

Placebo effective despite intellectual disability

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Karin Jensen. Photo: Bildmakarna

Contrary to earlier beliefs, people with severe congenital intellectual disability are sensitive to placebo-like effects, new research from Karolinska Institutet shows, published in the scientific journal *Neurology*. The results suggest that the influence of implicit social signals on expectancy effects has been underestimated.

The placebo effect is an example of how the power of the mind may influence the functions of the body, such as when a simple sugar pill alleviates pain when the taker believes it to be a real analgesic. But placebo-like effects also occur when expectations influence the efficacy of real drugs. Until now, placebo researchers have presumed that this type of expectancy effect requires higher-order intellectual functions, such as reasoning, abstract thinking and predicting the future. But it now turns out to be more complex than that.

"Our results challenge the existing ideas of how treatment expectations are formed and we can now propose other more intuitive processes as a possible basis of the placebo effect, such as the ability to internalise the expectations of the people around you," says Karin Jensen, assistant professor at Karolinska Institutet's Department of Clinical Neuroscience.

Analysis of 24 medical studies

She and her colleagues at Karolinska Institutet and Harvard Medical School analysed 24 published [medical studies](#) involving people with congenital intellectual disability (an IQ below 70), including diagnoses such as Down's, fragile x or Prader-Willi syndrome. Half of the studies were so-called open-label, in which all participants received active drugs. The other type were placebo-controlled, in which the participants did not know whether they were being given a placebo or active [drug](#).

"We only compared the results from those who received real drugs, and found significant differences in treatment outcomes between the two

groups – despite the fact that the patients had received exactly the same drugs," says Dr Jensen. "The only difference between the groups was the likelihood of getting an active drug."

Subtle social cues could be important

The conclusion is that implicit expectations conveyed by the people who administer the drugs, or who are otherwise involved in the treatment, are likely to influence the patients' neurobiology and, ultimately, their response to treatment. In that sense, expectancy effects are not only the result of facts and suggestions but also the subtle social cues the patients pick up from the people around them.

"This aspect of the [placebo effect](#) has been underestimated," says Dr Jensen. "This means that the models we've created of how the [placebo effect](#) works should be revised so that the focus isn't just on advanced cognitive functions, such as the patient's ability to create abstract future scenarios."

More information: Karin B. Jensen et al. Certainty of genuine treatment increases drug responses among intellectually disabled patients, *Neurology* (2017). [DOI: 10.1212/WNL.0000000000003934](https://doi.org/10.1212/WNL.0000000000003934)

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