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## Doctors have a placebo effect

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OPINIONS

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### Doctors underestimate the placebo effect they may have on patients who are in a difficult life situation.

The article entitled 'Paradoxical placebo' by Richard Monvoison and Nicholas Pinsault in *Le Monde Diplomatique* provides some interesting medical perspectives from a non-medical vantage point (1). Alternative therapies with no evidence of any clinical effect make successful use of the placebo effect. According to the authors, the health authorities have a lot to learn from alternative practitioners when it comes to consultations with patients who are in a difficult life situation.

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### Red is better than blue

Placebo does not cure, but it changes our physiology by reducing or intensifying symptoms such as perceived pain, discomfort and the feeling of being in control of the situation. An experiment by Aslaksen and co-authors in 2008 showed that placebo had an impact on pain intensity, brain activity and subjective stress (2). Intake of placebo mobilises the same areas of the brain as morphine and stimulates the production of endorphins, which have the same analgesic effect as synthetic opioids. A number of contiguous effects that intensify the physiological response are fairly well known, for example that the remedies are rare, difficult to obtain or costly, that a red pill instils more confidence in its effect than a blue pill, and that an injection has a stronger effect than a cream (1).

One consequence of these factors is that such contiguous effects pay dividends for so-called alternative medicine. This form of therapy dresses up in everything that may help maximise the symbolic stimulation. Therapists take ample time to talk, adapt their method to the patient and thoroughly present both the treatment and their own diplomas. The clients (not patients!) are often lauded for having successfully freed themselves from conventional medicine.

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## Placebo and nocebo

Many factors help produce the placebo effect. *Association* is important: for those who have previously had a good effect from a particular analgesic pill, the association can be produced by a placebo pill that resembles the analgesic. *Expectation* is also a key element of the placebo effect: worried patients are impressionable and have a tendency to conform to the treatment goal. Many studies have also shown a clear improvement in outcome when placebo is supplemented by verbally induced expectations ('Everything will be OK!'), when compared to verbally induced expectations alone (3–5).

**«The doctor can create positive effects through reassurance, encouragement and understanding»**

The opposite of the placebo effect is the nocebo effect, which occurs when a negative expectation causes a phenomenon to have a more negative effect than it otherwise would have. The effect of both placebo and nocebo on pain involves the endogenous opioid system. This has been demonstrated in experiments where the opioid antagonist naloxone has reduced a placebo effect on pain-modulating corticoid structures. This indicates that opioid signals in pain-modulating areas and the descending pain system are essential for the placebo effect (6). A comparative trial showed that placebo and nocebo have opposite effects on dopaminergic transmission and endogenous opioid neurotransmission (7).

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## Regional differences

A key question in this context is whether the placebo and nocebo responses are linked to special types of people. Clinically, an association has been found between an optimistic personality type and a positive effect of placebo, while a more negative and critical personality would tend more towards the nocebo effect. However, attempts to describe placebo and nocebo responders with the aid of a normal clinical examination have been unsuccessful (8). An interesting question in this regard is whether culture and tradition may have an effect on the use of alternative medicine. A study showed that 20 % of cancer patients used alternative medicine, but the regional differences within Norway varied

from 15 % to 30 % (9). Spiritual methods were more prominent in Western and Northern Norway, while diets, injections and the like predominated in the east and south.

Medical practice is governed by formal laws. Only the treatment that has the best evidence of effect should be offered. Administering placebo is quackery, but *being* placebo, in the sense that as a therapist one makes use of the above effect to intensify a physiological response in the patient, is not illegal, but quite the reverse. The doctor can create positive effects through reassurance, encouragement and understanding. Patients listen to their doctor, and great importance is attached to the doctor's statements.

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## Always console

Doctors have a far greater responsibility than alternative practitioners to communicate the real prognosis to the patient. Communicating a poor prognosis without depriving the patient of all hope and helping the patient overcome hopelessness places considerable demands on the doctor. The choice of words and the communication of the message must be carefully considered. In reality, a glass *half full* is the same as a glass *half empty*, but the descriptions account for different perceptions. The patient's fantasies may often be worse than the reality. The doctor should both console and alleviate, and it is essential to keep in mind that consolation in itself has a measurable, positive physiological effect.

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