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Abstract

Expectations matter:

How to use placebo effects in research and clinical practice

Placebo and nocebo studies have evolved from predominantly methodological research into a far-reaching interdisciplinary field that is unraveling the neurobiological, behavioral and clinical underpinnings of these phenomena in a broad variety of conditions. For example, physical complaints, such as itch or pain, can be effectively altered by placebo effects, due to induction of expectations of a possible beneficial treatment outcome (“Pain already reduces when seeing the painkiller”). The same is true for nocebo effects which are induced by expectations of a possible unfavorable treatment outcome or side effects. In addition, placebo mechanisms also play a role for immune functioning through pharmacological conditioning. The results have direct implications for the treatment of many patients. Treatment outcomes might be optimized by using both conscious and automatic strategies of optimizing expectancy effects, for example, by applying conditioning principles for therapy adherence, adding environmental cues to the preferred outcome strategies or replacing regular pharmacological treatments partly by expectancy interventions. Moreover, there is an increasing demand from health professionals to develop expert recommendations about evidence-based and ethical use of placebo and nocebo effects for clinical practice.