Introduction to placebo effects in medicine: mechanisms and clinical implications.

The field of placebo research has made considerable progress in the last years and it has become a major focus of interest. We know now that the placebo effect is a real neurobiological phenomenon and that the brain’s ‘inner pharmacy’ is a critical determinant for the occurrence of psychobiological and behavioural changes relevant to healing processes and well-being. However, harnessing the advantages of placebo effects in healthcare is still a challenge. The first part of the theme issue summarizes and discusses the various kinds of placebo mechanisms across medical fields, thereby not only focusing on two main explanatory models—expectation and conditioning theory—but also taking into account empathy and social learning, emotion and motivation, spirituality and the healing ritual. The second part of the issue focuses on questions related to transferring knowledge from placebo research into clinical practice and discusses implications for the design and interpretation of clinical trials, for the therapeutic settings in daily patient care, and for future translational placebo research.