



Paths of Medicine

by Norman Sartorius

Praised Be Placebo, May Its Glory Shine

Placebo was first used to describe a commonplace treatment, then a treatment intended to “please, not cure,” and today to label a substance without a specific effect – at best to describe the inactive control substance in clinical trials, and at worst to describe a tool in a charlatan’s arsenal. In clinical trials placebo is the substance that does not have a specific treatment effect on the disease for which the new treatment method is being developed and can, therefore, serve as a control. In clinical practice, however, administering placebo is an active treatment if doctors or others use it believing that its non-specific physical or psychological effects will help the patient to feel better.

What modern science and medicine now want is to rely on treatments shown to have a “true” effect: non-specific aspects of treatment and placebo effects are nuisances that have to be controlled and excluded from the evaluation of therapeutic interventions. Randomized controlled trials must be conducted

to ensure that a substance has the effects it is supposed to have if it is to be registered for the treatment of a specific illness. Control groups can be given a drug of known efficacy or placebo. The placebo is preferred by all those who are in a hurry to obtain results: comparing a new drug to another of known efficacy usually requires larger groups of patients and controls because the differences between the old and the new drug are usually small and certainly much smaller than the differences between the drug and placebo substances. Randomized control trials can be performed when evaluating a new medication; when evaluating psychotherapy or other techniques of treatment, they are often difficult to design. Expensive and complex operations and similar interventions are rarely evaluated in randomized double-blind trials, because of huge costs that such trials would incur and because of methodological and ethical problems.

As time went by, the importance given to the assessment of

medications and the growing insistence of governments and industry to regulate the production and distribution of medications gradually increased and the undoubted usefulness of the placebo effect became less and less emphasized. Medical students today are taught – and physicians ordered – to use only medications of proven specific value for the treatment of conditions for which they have been marketed. The use of evil smelling concoctions with little specific action but a huge placebo power all but stopped. The fact that as much as 40% or even more of the effects of “active” drugs are due to non-specific effects of treatment and of placebo effects is conveniently forgotten. Patients told by their physicians that there is no treatment of proven efficacy for their condition leave in distress only to find relief in treatment given by traditional and other alternative healers who do not shun the use of placebo treatments. Physicians who use placebo are in danger to be designated as quacks (1). Re-

liance on evidence-based medicine seems to be then prevailing.

Yet, this is in many ways a pyrrhic victory. Health care is basically a human transaction. A person who is not well comes to another who has been trained in ways that might help to remove the disease, pain, and fear of death. The encounter is sometimes complicated by painful examinations with complex tools, and blood is drawn as a price of knowing what could be wrong: yet the visit to a physician remains an encounter between two human beings. An order to swallow some pills, to behave in a certain way, or to avoid some foodstuffs may follow, but the essence of healing are neither the examinations nor the prescriptions alone – it is the mixture of all the components of medical encounter that is the ghost in the machine. Diseases that will be cured by a specific treatment, even if it is provided by a drug dispenser, are rare, but even there the belief of

the patient that the medication that the machine has produced will help him plays an enormously important role in defining its effects.

Placebo effects and non-specific effects of treatment setting cannot be separated from the pharmacological effects of a medication or from biological effects of other therapeutic interventions. Nor are the physicians and healers dispensing machines: their behavior, the words they say, their beliefs and opinions about the treatment and the patient are the component factors of the healing process. The influence of all these factors – those related to the patient, physician, medication, and treatment setting – will determine the outcome of therapy. From one case to another and from one socio-cultural setting to another, the relative importance of these four groups of factors may change, but in all instances, all of them play a role.

Consequently I believe that medical education and medical practice should pay as much attention to the use and abuse of the placebo effects and of the behavior of health workers (and of other non-specific aspects of treatment, ref. 2) as they pay to the use of medications or other biological or psychological interventions. The word placebo should perhaps be banned from use in practical medicine and reserved for research on the effects of medications; alternatively, or in addition, we should sing songs of praise for it and make the placebo effect a true ally rather than an enemy in the treatment process.

References

- 1 Zubieta JK, Bueller JA, Jackson LR, Scott DJ, Xu Y, Koeppe RA, et al. Placebo effects mediated by endogenous opioid activity on mu-opioid receptors. *J Neurosci.* 2005;25:7754-62. [Medline:16120776](#)
- 2 Shepherd M, Sartorius N, editors. *Non-specific aspects of treatment.* Toronto-Lewiston, NY, Bern and Stuttgart: Hans Huber Publishers; 1989.