

Harnessing the Power of the Placebo Effect and Renaming It “Remembered Wellness”

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ABSTRACT

The placebo effect yields beneficial clinical results in 60–90% of diseases that include angina pectoris, bronchial asthma, herpes simplex, and duodenal ulcer. Three components bring forth the placebo effect: (a) positive beliefs and expectations on the part of the patient; (b) positive beliefs and expectations on the part of the physician or health care professional; and (c) a good relationship between the two parties. Because of the heavily negative connotations of the very words “placebo effect,” the term should be replaced by “remembered wellness.” Remembered wellness has been one of medicine’s most potent assets and it should not be belittled or ridiculed. Unlike most other treatments, it is safe and inexpensive and has withstood the test of time.

Introduction

Throughout history, medicine has relied on nonspecific factors that evoke the placebo effect (1). Because almost all treatments prior to 150 years ago were, we now know, without scientifically proven specificity (2), the history of

medicine could be considered the history of the placebo effect. Current levels of clinical efficacy and efficiency could be increased if the placebo effect were reintegrated into routine medical care and reconceptualized as “remembered wellness.”

To appreciate the importance of the placebo effect in medicine, a distinction should be made between a placebo and the placebo effect. According to Brody (3), a placebo is a treatment believed not to have a specific effect on the illness or condition to which it is being applied. The placebo effect, on the other hand, is the symbolic significance of a treatment in changing a patient’s illness. The placebo effect is that aspect of treatment not attributable to specific pharmacologic or physiologic properties.

Physicians were aware of placebos and the placebo effect and utilized them well into the late nineteenth century (4). Charles Rosenberg wrote, “No mid-century physician doubted the efficacy of placebos (as little as he doubted that the effectiveness of a drug could depend on his manner and attitude)” (4a). Harvard Medical School’s Richard Cabot wrote, “I was brought up as I suppose every physician is, to use placebos, bread pills, water subcutaneously and other devices acting upon a patients’ symptoms through his mind” (4b). Medical practice changed in the mid-1800s after Robert Koch and Louis Pasteur demonstrated that specific bacteria could cause specific diseases. Thereafter, the practice of medicine increasingly disregarded the importance of placebos and beliefs and their mind/body interactions. It became routine medical practice to identify specific causes with specific diseases and to treat diseases with focused specific remedies. For example, insulin and antibiotics took the place of the nonspecific placebo effect. These specific remedies were so dramatically effective that they became the sole treatments utilized in modern scientific medicine and changed attitudes toward the nature of healing. Medicine began to value and rely exclusively on the specific effects of pharmacologic and surgical interventions rather than on combinations of specific and nonspecific therapies.

These changes in the awareness and use of the placebo effect were reflected in *Index Medicus*. For example, in the 1930s, the *Index* did not list a single article that discussed the effect of mental state on physiology. This was not due to a change in classification but rather to a rejection of the notion that the mind could affect the body. By the 1950s, the existence of the placebo effect was gradually reacknowledged. Placebos were utilized in randomized drug efficacy investigations to control for nonspecific effects. The placebo effect was recognized, however, only in so far as it became necessary to screen it out. The placebo effect was a problem to be eliminated rather than an important aspect of clinical care.

It is important to emphasize that the administration of a placebo is not necessary to evoke the placebo response. Three components, however, are

necessary: (a) positive beliefs and expectations on the part of the patient; (b) positive beliefs and expectations on the part of the physician or health care professional; and (c) a good relationship between both parties (5).

Recently, Turner and her colleagues (6), in a review of the placebo effect and pain, noted that reduced anxiety and conditioning processes also have been suggested as alternative explanations for the placebo effect. The placebo effect does appear to be more pronounced among highly anxious subjects. Since stress affects physiologic processes and can influence symptom reporting, decreased anxiety could account for the effect in some patients. But environmental factors, such as the treatment room or the procedure, may also influence the placebo effect if these factors have been associated with previously successful treatments. Even neutral stimuli through association with reliable medical treatments can contribute to the alleviation of symptoms and to reductions in anxiety, which suggests that learning can influence the placebo effect. Unfortunately, conditioning can also work negatively. Just as the positive expectations of the physician and patient can lead to positive outcomes, negative expectations may reduce the power of nonspecific effects. Prior experience with unsuccessful treatments can possibly influence the outcome of a procedure, which could be one reason why repeated back surgeries often lead to progressively poorer results.

Components such as expectations, anxiety reduction, and learning fit poorly with the accepted rationale that specific diseases are the result of specific causes and can be effectively treated by specific interventions. Beliefs and psychologic factors have little importance in a medical environment that emphasizes only focused pharmacologic and surgical interventions as valid treatments. In fact, the terms placebo and placebo effect have become pejorative. Placebos are called "dummy pills" and statements like "Oh, that is nothing but the placebo effect" are common.

Relying exclusively on specific treatments could be an acceptable strategy were it not for the fact that specific interventions such as drugs and surgery are not effective in treating many diseases and do not address the reasons why most people seek health care. For example, one study found that 60–90% of visits to physicians are prompted by conditions related to stress and other mind/body interactions, problems not effectively treated by drugs and surgery (7). Kroenke & Mangelsdorff (8) reviewed the records from an internal medicine clinic of more than 1000 patients over a three-year period. They found that in fewer than 16% of cases was the origin of the most common somatic complaints identified as being organic. They concluded that over 70% of the symptoms reported were related to psychosocial factors. These psychosocial factors, which are highly relevant aspects of medical care and utilization, are often refractory to specific somatic therapies but are highly responsive to the placebo effect.

Evidence of the Placebo Effect's Power

Since Beecher's pioneering work of 1955, citing the effectiveness of the placebo effect in approximately 35% of cases of pain, cough, drug-induced mood changes, headaches, seasickness, and the common cold (9), it has been recognized as a powerful treatment. Even more recently, the effectiveness of the placebo effect has been documented in a wide variety of diverse conditions that include angina pectoris (2), asthma (10), congestive heart failure (11), and mortality in coronary artery disease (12, 13). The power of the placebo effect has been shown to be even much greater than the 35% Beecher in some cases noted. In fact, it is effective in approximately 70% of cases of angina pectoris (2), bronchial asthma (14), herpes simplex (14), and duodenal ulcer (14).

In angina pectoris, the diagnosis of which has not changed since Heberden's description in 1772 (2), numerous treatments embraced over the centuries were found to be no better than placebos. Five such treatments—use of xanthines, khellin, vitamin E, ligation of the internal mammary artery, and implantation of the internal mammary artery—were 70–90% effective in relieving the angina pectoris when the therapies were believed in. When skepticism ensued, however, their effectiveness decreased to 30–40%. Belief in such treatments not only caused relief of chest pain, it also resulted in objective changes: The placebo effect reduced nitroglycerine usage, improved the electrocardiogram, and increased exercise tolerance.

Nor was the placebo effect in angina pectoris of limited duration. In several cases, the beneficial effects of these interventions lasted up to a year or more. Such results demonstrate the point that the placebo effect can be harnessed as long as the conditions that evoked it are maintained: belief and expectancy on the part of the patient; belief and expectancy on the part of the health care professional; and a good relationship between them both.

In another study placebos were shown to affect treatment among heart patients. Archer & Leier (11) studied 24 patients who suffered from moderate to severe congestive heart failure. Patients were randomized into an experiment group, which received a placebo plus standard treatment, and a control group, which received standard treatment alone. At the end of the trial period, those receiving the placebo treatment showed a significant 81-sec improvement in mean duration on an exercise treadmill compared with the nonplacebo group.

Among a group of asthmatic patients, the placebo effect was found to both cause and block bronchoconstriction (10). In all cases, the patients inhaled inert distilled water. First, patients were told they were inhaling a chest-constricting chemical and bronchial spasm ensued. Patients were then told they would be testing the effectiveness of a bronchodilator, which again was distilled water; it prevented the bronchospasm from occurring.

Roberts and his colleagues analyzed the placebo effect in uncontrolled clinical trials using a meta-analytic procedure (14, 15). They reported on the results of studies that investigated five procedures that have since been shown to be ineffective. Glomectomy, a surgical procedure that dissects the carotid body from the external carotid artery, produced reported improvements among 66% of bronchial asthma patients studied. Similarly, three treatments that have been proved ineffective for herpes simplex virus (levamisole, an immunomodulating drug; photodynamic activation, a procedure that uses florescent lights to allegedly integrate heterocyclic dyes into the DNA of the virus during replication; and organic solvents, such as ether and chloroform) produced improvement rates (excellent or good) in greater than 80% of subjects. Roberts et al (14) also found that among duodenal ulcer patients gastric freezing, a procedure in which ethyl alcohol is circulated in a stomach-shaped balloon within the patient's stomach, produced 65% improvement rates in the good to excellent range.

An area of recent interest relates to the interaction of the placebo effect and adherence to medical regimens. One study testing the efficacy of clofibrate, a lipid-lowering drug, among coronary heart disease patients found that those who were given a placebo and who were less compliant—as measured by the ingestion of less than 80% of the placebo pills—had a 28.3% mortality rate after five years, which was significantly higher than the 15.1% mortality rate of the subjects who complied in taking their placebos (12). In another investigation of patients with coronary artery disease, the death rate of the patients who did not take their placebos was more than two times that of those who did (13).

These studies reinforce the point that important clinical efficacy can occur if “ineffective” treatments are believed in. Given current health care trends, it is important to consider the clinical implications of these results. If beliefs can so profoundly influence clinical outcome, shouldn't we be attempting to utilize this effect and more precisely determine its efficacy? Shouldn't we be more interested in developing strategies to maximize the placebo effect in clinical practice in an ethical and safe fashion?

Alternative Medicine

The placebo effect is of particular relevance to the growing interest in alternative medicine. Since surgical procedures and pharmaceutical agents are of limited therapeutic use in 60–90% of visits to physicians, it is not surprising that patients have turned to alternative methods of treatments. The therapeutic value of these alternative approaches could well be those of the placebo effect rather than of the specific physiologic effects of the approaches themselves, because most alternative therapies embrace the essential components of the placebo effect, positive expectancy and good relationships. Homeopathy, for

example, has no scientific basis: Many of its administered treatments contain no molecules of the alleged active agent. The magnitude of effectiveness for such treatments may be enhanced by factors such as empathy (16) and time spent with the patient (17).

The Placebo Effect Revisited

The trend toward decreasing doctor-patient contact in managed care situations should be viewed critically because doctor-patient contact is an important factor in evoking the placebo effect. For optimal care of patients, the placebo effect should be maximized. That is not to say the use of placebo pills or procedures is advocated. They cannot be utilized without deception, which undermines beliefs and relationships. But the importance of a warm, sympathetic relationship between the health care professional and the patient, as well as the fostering of positive beliefs in both, should be encouraged.

Remembered Wellness

The very words placebo effect have heavily negative connotations because beliefs and psychologic factors have little importance in a medical environment that emphasizes pharmacologic and surgical interventions as the primary, if not the only, valid forms of treatment. To better describe its power, the term placebo effect should be replaced by “remembered wellness” (1, 18), a term chosen because ultimately the evocation of the placebo effect depends on central nervous system events that result in feelings of well-being. Remembered wellness has always been one of the physician’s most potent therapeutic assets and its remarkable potency should not be ridiculed or disregarded. Unlike most other forms of therapy, remembered wellness has withstood the test of time and continues to be safe and inexpensive. Furthermore, its use can easily be incorporated into standard pharmacologic and surgical treatments to act synergistically with them.

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