

False No Hope: What's Wrong with Placebo?

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A doctor told a patient he had six months to live. The patient couldn't pay his bill, so the doctor gave him another six months. - Henny Youngman

The first year of my practice I had a young woman come to my office who had become a paraplegic from an auto accident three months previously. She was a junior in high school when the accident had occurred and her doctors had told her that she should prepare herself for being in a wheelchair for the rest of her life. The doctors had stopped her physical therapy because they had determined that her condition would not improve. This young woman was of the mind that her doctors were wrong and that she would once again walk. She was determined to walk again. I decided to keep an open mind and told her, and her father, (her mother was out of the picture) that I would work with her and we would see if the treatments would be of any benefit. After putting one needle in her leg, there was a small, yet perceptible, contraction. There was clearly a response in her lower extremities to the needle and this was an encouraging sign.

Three months later, she was able to contract her quadriceps enough that her medical team decided to give her an aggressive physical therapy regime. By the end of one year, with both acupuncture and the physical therapy, she was able to walk with leg braces and crutches. What happened here?

Her determination was fierce. She was an exceptional individual. The fall of her senior year of high school, at a high powered prep school, she became senior class president, applied to colleges, maintained a stellar academic record, maintained a social life and was accepted to Stanford in the spring. She did this while dealing with the trauma of becoming paralyzed at age 17. I had decided at that first appointment with her, to not get in her way of realizing her goal of being able to walk. I would not tell her that her odds were slim. I did not want to interfere with what I felt was her most powerful asset towards her progress- her absolute belief that she would walk. Perhaps she was naive. However, if she had accepted her doctor's original prognosis, she would have not pursued the path she did, which was to seek another way. She would not have worked as hard as she did. She would have been wheelchair bound. The doctors would have been "right."

Our medical/legal system is incentivized towards giving individuals a poor prognosis. If a prognosis is poor and the patient does better, then everyone is happy. If the prognosis is good and the patient does not do well, the doctor gets sued. Our medical culture is fearful of creating false hope. Instead, what is created is false no hope, or a nocebo. Nocebo is the opposite of placebo, where the expectation is negative and the outcome becomes worse than the current condition.

Ted Kaptchuk has recently become the director of Harvard's Program in Placebo Studies and the Therapeutic Encounter based at Beth Israel Deaconess Medical Center. The concept of the program is to explore the possibility of having placebos become a valid medical therapy. The idea is to apply rigorous scientific method to the concept of placebo as a therapy. An article by Michael Specter, "*The Power of Nothing*," in the December 12, 2011 issue of *The New Yorker*, thoroughly explores this venture.

The project is, of course, controversial. Medicine loves precision and the art of placebo is by nature unpredictable. There are too many variables. Not everyone responds the same way to a given suggestion. Not every practitioner can create the same level of expectation for the patient. Placebo is as much a relationship as well as an environment that combines to generate a certain response in the patient's body/mind to produce an outcome. Fundamental to this process is a belief, held by both the practitioner as well as the patient, that there is value to the interaction. These beliefs can be conscious, as well as unconscious. What Kaptchuk is setting out to achieve, is how to study an art form using scientific method.

How Kaptchuk came to this position is an interesting story. Early in his career as an acupuncturist, a woman came to him with chronic bronchitis. He treated her once, and then sometime later the woman contacted him, and with deep gratitude explained that she also had ovarian pain and was going to have surgery for that, but his treatment had cured her. Kaptchuk was incredulous about his acupuncture affecting her ovaries to that extent. This was the beginning of his serious inquest into what really transpired.

Kaptchuk stopped practicing acupuncture about 20 years ago. He had already affiliated with Harvard, and according to Specter, "Kaptchuk is the first prominent professor at Harvard Medical School since Erik Erikson with neither a medical degree nor a doctorate." He basically self-taught and apprenticed his way into becoming one of the world's foremost experts on the topic of placebo. In addition to his research skills, Kaptchuk believes that he was, "a damn good healer."

Kaptchuk noted ".if you needed help and you came to me, you would get better. Thousands of people have. Because, in the end, it isn't really about the needles. It's about the man."

Now this is really an interesting sentiment. When he was working as an acupuncturist, did he actually believe in the efficacy of his modality, or did he believe he was creating a powerful placebo affect? If he didn't believe in the modality, how did he create the placebo affect? Was his belief necessary in being able to be an effective healer?

A study done at UCSF in 1978 showed that the placebo affect, when applied to perception of pain, most likely is mediated by endogenous endorphins. Levine, Gordon and Fields used naloxone, a drug that blocks the opiate receptors in the central nervous system, to block the placebo response in a group of dental surgery patients who previously demonstrated a placebo response. This was a particularly powerful study that was one of the first to show a possible biochemical mechanism of how perception of pain can be mediated by one's own expectations.

It has been reported that Alzheimer's patients do not respond to placebos, which may have to do with the loss of pre-frontal lobe function, an indication that rational thought must be a contributing factor toward creating a placebo effect. Men have been known to respond differently than women to placebos. Different conditions have different percentages of placebo response. Motivation is a factor in whether or not someone responds to suggestion. All of these factors lead to a muddy picture. Nevertheless, the fact that the power of the mind can create a healing response, whether consciously or not, has to be taken seriously and is certainly a worthwhile endeavor of study. It is heartening to know that an institution such as Harvard is willing to be the bellwether for such a controversial topic.

Today there are many more studies, especially using functional MRI to demonstrate brain response to different thought processes, feelings and emotions, that have validated the power of the mind. Still placebo is generally thought of in a negative light. It seems as if there are parallel universes when it comes to what the purpose of medicine is all about. There are those who feel that objectifiable, measurable outcomes are the only meaningful ways to judge outcome. There are

others who are willing to cast a wider net and accept the patient's own perception of well being as a legitimate evaluation of the treatment. If someone feels better, reports less pain, experiences fewer symptoms, are they not better off? And here we have the "Republicans" and "Democrats" of the medical world.

Objective signs can often be misleading. For example, a patient can show up to the ER with acute back pain. An X-ray can reveal "degenerative disc disease" in the lower lumbar. Given that the same degenerative condition would have been present a day earlier when there was no pain, and the X-ray, if taken a day earlier, would have shown the same condition; why is there pain today and not yesterday? The objective data, in this case the X-ray, is not able to explain this essential question, which is, what is the real cause of the pain? It is merely a piece of the puzzle. It could also be a puzzle piece that sends the clinician off track. Imagine how differently this patient would be treated if the X-ray had shown nothing. Taking into account signs, which are objective and symptoms, which are subjective, is what a holistic physician would do.

A question for any practitioner is not so much whether or not placebo exists, but how best to take advantage of it. One must at least, according to the Hippocratic principle of not creating harm, avoid creating a nocebo effect. Hopefully, the research that Harvard's Program in Placebo Studies and the Therapeutic Encounter can reveal is that medicine needs to start leaning back toward its artistic side, not at the cost of science, but because of the it.

APRIL 2012