Lecture

OK, everyone, let’s get started. Today, we’re going to discuss the placebo effect. First, I’ll explain what the placebo effect is and how placebos have been used. Then, I’ll discuss some possible causes for this effect. Finally, we’ll look at some studies of the placebo effect and some questions that they’ve raised about the use of placebos in testing and treatment of illnesses.

So, what is a placebo? Well, basically, a placebo is a fake medical treatment, fake, not real. When most people think of placebos, they think of sugar pills—pills that don’t contain any actual active ingredients, just sugar, or some harmless substance. Does everyone get that? OK. But a placebo doesn’t have to be a pill. It can also be a medical therapy or even surgery. The main thing is that a placebo is always a sham treatment. What I mean is, a treatment that does not actively treat a patient’s illness. Let me write that for you. Sham treatment, OK? No actual medical benefit to it. Understand? OK.

Now, the placebo effect is the often positive response that patients receive from a placebo. In other words, it’s an improvement in a person’s health that is due to taking a placebo, not due to any real treatment. Let me repeat that because it’s a very important point. It’s not medicine that is helping someone, but their belief that they are taking medicine that is helping them.

And this is a real phenomenon. Doctors have known about the placebo effect for a long time. They even use it to their advantage. In the 1930s and 1940s it was common for doctors to give patients placebos for aches and pains and other minor complaints, you know, just to give them something. Of course, they didn’t tell their patients that the pills weren’t real medicine. But the surprising part is that patients would often claim to feel better, even though they hadn’t taken any active drug. Just the act of taking the pill often seemed to have a positive effect.

Doctors don’t do that anymore, of course, but let’s talk now about how placebos are currently being used. Now, have you heard the term, “clinical trial”? You know, the way researchers test new drugs? Yes? OK? Good. So, placebos are still very much in use in clinical trials of new drugs and other treatments. I’ll explain.

In a blind clinical trial, volunteer patients, who all suffer from the same illness, are split into two groups. One group of volunteers receives the new drug or treatment that is being used. The other group receives a placebo, like a sugar pill or a dummy injection. Now, the researchers know which is getting... which group is getting the placebo and which one the real drug, but none of the people in either group knows. The purpose, of course, is to compare the experiences of the volunteers to see whether the group getting the real drug is actually getting the desired reaction.

Now, in a double-blind trial, even the researchers and their assistants don’t know who is getting the real drug and who is getting the placebo. This is to make sure that they have no bias when analyzing the results. To make sure that their expectations don’t influence the results of the trial.

In either case, the placebo shouldn’t have any effect at all. But, it turns out that the placebo effect is also very common in clinical trials. In fact, in a number of studies, 30-40% of the volunteers given placebos have shown some improvement. And in a few trials, placebos have shown up to 70% effectiveness.

So why does a placebo work at all? What might be causing this phenomenon? Well, no one knows for sure, but there are a few explanations. Some believe that at least part of the placebo effect is due to an illness or an injury taking its natural course. We often will feel better if we do nothing to treat an illness or injury. It might just be that,... excuse me,... that the placebo was given during a natural improvement in the health problem.

Now, but this couldn’t explain all of the improvement that takes place with placebos. There must be some, or another reason for the placebo effect, another explanation. One theory is that the
placebo effect is purely psychological. It's all in the patient's mind. If patients expect to improve, they improve. They expect that the treatment will help them, and, hey, look at that, it does.

Now, this idea is supported by studies that have shown that when doctors tell their patients they expect the treatment to work, the placebo effect increases and some patients improve. But, on the other hand, if a doctor said that the treatment might not be effective, the placebo is much less likely to work again. So, again, that expectation of improvement leads to actual improvement.

Another reason that some patients improve on placebos may just be that the process of going through treatment is therapeutic. You know, that seeing a doctor who seems professional, and caring, and attentive, you know, just being treated, may make a patient feel encouraged and hopeful, which makes them feel better. OK, but even though the cause of the placebo effect may be psychological, there is empirical evidence that placebos can result in actual physiological changes, or signs of improvements in patients.

One study to document this was a study done at UCLA that involved 51 patients who were suffering from depression. One group was given a placebo. The other group was given an actual anti-depressant drug. Well, researchers weren't surprised to find that 52% of the patients taking the anti-depressant drug began to feel better, and 38% of the patients taking the placebo also began to feel better. Now, that's a pretty normal response. But what was surprising was that the researchers were able to detect an actual increase in the brain activity of the patients who improved on the placebo, which meant that their depression had actually improved.

These results have been repeated in studies treating a variety of illnesses, including heart disease, and even the common cold. So, this points to a chemical change in the brain associated with the placebo effect—associated with the belief that you're getting real medical treatment.

So why is this significant? Why does it matter? How can we use this knowledge to actually help people? Well, some researchers suggest that, since placebos do no harm and may actually help patients, doctors should be able to prescribe them. They should be able to give them a try and see whether a patient responds to them. But most doctors don't want... don't want to do this. They feel that prescribing placebos is dishonest. But this is a real debate in the medical community.

I'm curious to see what you think of this, so let's go ahead and break into discussion groups now. I'll hand out some questions to get you started.