**Lecture Ready 3 Transcript**
**Chapter 5 Lecture: The Placebo Effect**

*The **bold font** indicates stressed syllables and stressed one-syllable words. Listen carefully to the speaker and then read the text aloud with the same stress pattern used by the speaker. Most of the unstressed vowels are pronounced like the weak vowel sound /ə/.*

O**kay**, **e**veryone, **let's** get **star**ted. To**day** we're **go**ing to dis**cuss** the pla**ce**bo ef**fect**. **First**, I'll ex**plain** **what** the pla**ce**bo ef**fect is** and **how** pla**ce**bos have been **used**. **Then**, I'll dis**cuss** some **pos**sible **cau**ses for this ef**fect**. **Fi**nally, we'll **look** at some **stu**dies of the pla**ce**bo e**ffect** and some **ques**tions that they've **raised** a**bout** the **use** of pla**ce**bos in **tes**ting and **treat**ment of **ill**nesses.

So, **what** is a pla**ce**bo? Well, **ba**sically, a pla**ce**bo is a **fake me**dical **treat**ment, **fake**, **not real**. When most **peo**ple **think** of pla**ce**bos, they **think** of **su**gar pills—**pills** that **don't** con**tain a**ny **ac**tual **ac**tive in**gre**dients, just **su**gar, or some **harm**less **sub**stance. Does **e**veryone **get** that? O**K**. But a pla**ce**bo **does**n't **have** to **be** a **pill**. It can **al**so be a **me**dical **the**rapy or **e**ven **sur**gery. The **main** thing is that a pla**ce**bo is **al**ways a **sham treat**ment. What I **mean** is, a **trea**tment that **does not ac**tively **treat** a **pa**tient's **ill**ness. **Let** me **write that** for you. **Sham treat**ment. OK? **No ac**tual **me**dical **be**nefit to it. **Un**derstand?

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. 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 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. Now, we often will feel better if we do nothing to treat an illness or injury. It might just be that—um, excuse me—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 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.

**Chapter 5 – The Placebo Effect Notes and Transcript**

***When you make a speech or presentation, you want to know the material very well, even if you have notes and a transcript to look at. You can learn the material by practicing with different variations of notes. Start with the long notes, then practice with the short notes, and finally practice with the very short notes. You might even be able to make the speech with no notes at all after rehearsing with this method.***

**Very Short Notes**

1 definition: placebo

2 definition: placebo effect

3 history of the use of placebos

4 present uses of placebos

5 explanations of the placebo effect

6 empirical evidence for the placebo effect

7 questions about the use of placebos

**Short Notes**

1 placebo definition

2 placebo effect definition

3 history of use

4 present uses

- 4.1 clinical trials
- 4.2 blind
- 4.3 double blind, remove researchers' bias

5 explanations of placebo effect

- 5.1 natural recovery
- 5.2 patient's expectation
- 5.3 doctor's influence on patient
- 5.4 emotional response to going through treatment

6 empirical evidence for the placebo effect

7 questions about use of placebos

**Long Notes** **Add notes while you listen to the lecture.**

1) placebo definition

2) placebo effect definition

3) placebos in the 1930s ~ 40s

4) use of placebos now

5) why do placebos work?

6) empirical evidence of placebo effect

7) ethical question

**Long Notes**

Introduction: Today, I will talk about…

1. placebo definition
    a. fake, sham treatment
    b. pill, therapy, surgery
    c. not actively treat a condition

2. placebo effect definition
    a. positive response from placebo
    b. response not due to real treatment
    c. belief causes the response

3. placebos in the 1930s ~ 40s
    a. placebos given by doctors
    b. patients not told
    c. considered unethical now

4. use of placebos now
    a. clinical trials of new treatments
    b. blind trial – patients don't know: placebo or treatment being tested
    c. double blind trial – patients and researchers don't know, removes bias
    d. placebo effect commonly observed in 30-40% of people who get placebo
    e. extra note (not in lecture): assignment to groups randomized

5. why do placebos work?
    a. natural recovery occurs
    b. patients expect to recover, so they recover
    c. patients respond to doctor's belief in the treatment
    d. process of treatment beneficial – positive emotional response to doctors and researchers and to participation in research

6. empirical evidence of placebo effect
    a. not only psychological or subjective experience - placebos produce physiological changes
    b. in one trial: 38% of patients improved brain activity on a placebo
    c. same effect in treatment of heart disease and colds
    d. extra note (not in the lecture): placebo effect in group that got real treatment? 52% improved taking real drug, 38% improved in placebo group, so real effect of drug: 52-38=14%--not very high

7. ethical question: prescribe placebos?

**Questions**

1. Is there a placebo effect in the group that gets the treatment being tested?
2. How are research subjects put into the two groups in a double blind trial? Is the selection random?
3. How do the researchers choose blind or double blind in doing the trial?
4. People know that medicine usually has side effects. Do subjects in the placebo group ever experience imaginary side-effects?
5. Do the subjects in the two groups have a chance to speak to each other?
6. Do you think doctors should be allowed to prescribe placebos?
7. Do the patients in the placebo group become suspicious when they don't experience any side-effects? What do doctors do when patients notice they have received the placebo?
8. Is the placebo effect teaching us that emotions are important in maintaining health and recovering from illness?
9. Do you think every clinical trial needs to be double blind? What about observational studies that don't have a placebo group? Are they useful and reliable?