**CRITICAL THINKING**

**Do Antidepressants Work Better Than Placebos?**

Are antidepressants just fancy placebos? Consider this statement by psychologist Irving Kirsch on a 2012 episode of the TV news show 60 Minutes: “The difference between the effect of the placebo and the effect of an antidepressant is minimal for most people.” Interviewer Lesley Stahl was astounded: “So, you’re saying if they took a sugar pill, they’d have the same effect?”

Kirsch’s surprising statement is based on meta-analyses (Fournier & others, 2010; Kirsch & others, 2008). As discussed in Chapter 1, a meta-analysis combines the results of many studies into a single analysis. The meta-analyses to which Kirsch referred included all studies, published and unpublished, that had been submitted to the U.S. Food and Drug Administration during the process of approval for new antidepressants. It is important that they included unpublished studies because unpublished studies are more likely than published studies to have found no difference between the placebo and the antidepressant. This is because journal editors tend to prefer publishing articles that found some difference rather than articles that found no difference (Turner, 2013).

Kirsch and his colleagues found that most patients improved with either antidepressants or placebos (see graph on next page). Antidepressants were found to work better than placebos for some patients—but only those with very high levels of depression, the area shown in blue. Except in that area, the difference between the lines could have simply occurred by chance. Overall, according to Kirsch and his colleagues, about 80 percent of the improvement from antidepressants seems to be due to a placebo effect.

The placebo effect, as discussed in Chapter 1 on page 29 and Chapter 12 on page 512, has been well documented and is not limited to psychological disorders. Placebos have been demonstrated to lead to improvements in a range of health problems, including the management of pain and the treatment of symptoms related to the gastrointestinal, endocrine, cardiovascular, respiratory, and immune systems (Price & others, 2008). For example, in one study, patients with Parkinson’s disease experienced improved movement after taking a placebo. In another study, people who simply held a bottle of ibuprofen reported lower levels of pain than people who did not hold the bottle (Price & others, 2008; Rutitch & Sleipian, 2013).

You may now be thinking that the placebo effect means that any improvements are just imaginary. But as described in Chapter 12 on page 512, brain imaging shows that placebos lead to real biological changes (Meissner & others, 2011). In response to a placebo, patients with Parkinson’s disease experience increased dopamine activation, pain patients saw less neural activity in the parts of the brain associated with pain, and depressed patients experienced metabolic increases in the same parts of the brain that respond to antidepressants (Price & others, 2008). Interestingly, another study found that the effect of a placebo on Parkinson’s symptoms was stronger when patients thought the placebo was expensive than when they thought it was cheap (Espay & others, 2015). Either way, improvements tend to come without the side effects and potentially high costs of “real” medication.

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**Electroconvulsive Therapy**

As we have just seen, millions of prescriptions are written for antidepressant medications in the United States every year. In contrast, a much smaller number of patients receive electroconvulsive therapy, or ECT, as a medical treatment for severe cases of major depressive disorder. Also known as electroshock therapy or shock therapy, electroconvulsive therapy involves using a brief burst of electric current to induce a seizure in the brain, much like an epileptic seizure. Although ECT is most commonly used to treat major depressive disorder, it is occasionally used to treat mania, schizophrenia, and other severe mental disorders (Nahas & Anderson, 2011).

ECT is a relatively simple and quick medical procedure, usually performed in a hospital. The patient lies on a table. Electrodes are placed on one or both of the patient’s temples, and the patient is given a short-term, light anesthetic and muscle-relaxing drugs. To ensure adequate airflow, a breathing tube is sometimes placed in the patient’s throat.

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**electroconvulsive therapy (ECT)**

A biomedical therapy used primarily in the treatment of major depressive disorder that involves electrically inducing a brief brain seizure; also called electroshock therapy.
and they spend more than $25 billion each year just in the United States marketing their drugs (Kornfeld & others, 2013).

While acknowledging concerns about the influence of the pharmaceutical industry, other researchers have found that antidepressants are superior to placebos. Using different statistical methods, several researchers identified a subset of about 20 percent of patients who benefited from antidepressants over placebos at all levels of depression severity (Horder & others, 2011; Thase & others, 2011). But even these researchers don’t entirely dispute Kirsch’s findings.

As more is known about the effects of placebos, there is more discussion about how to harness their power. Researchers suggest that clinicians should receive training on ethical ways to openly and successfully prescribe placebos by educating patients about their effectiveness (Brody & Miller, 2011). In the past, clinicians believed that successful treatment with placebos required that the patients believe the placebo was real, but recent research questions this premise. One study on irritable bowel syndrome (IBS) observed improvement in patients even after they were told they were receiving “placebo pills made of an inert substance, like sugar pills, that have been shown in clinical studies to produce significant improvement in IBS symptoms through mind–body self-healing processes” (Kaptchuk & others, 2010).

Research on the placebo effect continues to accumulate. However, despite Kirsch’s argument, it’s important to remember that many people have been and continue to be helped by antidepressant medication. Other treatment options, such as psychotherapy, may be unavailable. So, if antidepressants are helping you, you should continue to take them as directed by your physician. It can be dangerous to stop taking antidepressant medications without guidance from a physician.

CRITICAL THINKING QUESTIONS

- Why do you think studies that found differences are more likely to be published than studies that found no differences?
- What is the ethical problem with giving a patient a placebo and saying it is an antidepressant?
- Why might simply giving a patient a placebo openly not work without additional education?

While the patient is unconscious, a split-second burst of electricity induces a seizure. The seizure lasts for about a minute. Outwardly, the seizure typically produces mild muscle tremors. After the anesthesia wears off and the patient wakes up, confusion and disorientation may be present for a few hours. Some patients experience a temporary or permanent memory loss for the events leading up to the treatment. To treat major depressive disorder, the patient typically receives two to three treatments per week for two to seven weeks, with less frequent follow-up treatments for several additional months (Fink, 2009).

In the short term, ECT is a very effective treatment for severe cases of major depressive disorder: About 80 percent of patients improve (Rasmussen, 2009). ECT also relieves the symptoms of depression very quickly, typically within days. Author Donald Antrim once described his experience with ECT as “the color came back on” (Sullivan, 2014). And as the symptoms of depression decrease, ECT patients’ quality of life tends to increase to a level similar to that in people without depression (McCall & others, 2013).