

Module 72

Evaluating Psychotherapies and Prevention Strategies

Module Learning Objectives

- 72-1** Discuss whether psychotherapy works as interpreted by clients, clinicians, and outcome research.
- 72-2** Describe which psychotherapies are most effective for specific disorders.
- 72-3** Discuss how alternative therapies fare under scientific scrutiny.
- 72-4** Describe the three elements shared by all forms of psychotherapy.
- 72-5** Discuss how culture, gender, and values influence the therapist-client relationship.
- 72-6** Identify some guidelines for selecting a therapist.
- 72-7** Explain the rationale of preventive mental health programs.



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Evaluating Psychotherapies

Advice columnists frequently urge their troubled letter writers to get professional help: “Don’t give up. Find a therapist who can help you. Make an appointment.”

Many Americans share this confidence in psychotherapy’s effectiveness. Before 1950, psychiatrists were the primary providers of mental health care. Today’s providers include clinical and counseling psychologists; clinical social workers; clergy; marital and school counselors; and psychiatric nurses. With such an enormous outlay of time as well as money, effort, and hope, it is important to ask: Are the millions of people worldwide justified in placing their hopes in psychotherapy?

Is Psychotherapy Effective?

- 72-1** Does psychotherapy work? Who decides?

The question, though simply put, is not simple to answer. Measuring therapy’s effectiveness is not like taking your body’s temperature to see if your fever has gone away. If you and I were to undergo psychotherapy, how would we assess its effectiveness? By how we feel about our progress? By how our therapist feels about it? By how our friends and family feel about it? By how our behavior has changed?

CLIENTS' PERCEPTIONS

If clients' testimonials were the only measuring stick, we could strongly affirm the effectiveness of psychotherapy. When 2900 *Consumer Reports* readers (1995; Kotkin et al., 1996; Seligman, 1995) related their experiences with mental health professionals, 89 percent said they were at least "fairly well satisfied." Among those who recalled feeling *fair* or *very poor* when beginning therapy, 9 in 10 now were feeling *very good*, *good*, or at least *so-so*. We have their word for it—and who should know better?

We should not dismiss these testimonials lightly. But for several reasons, client testimonials do not persuade psychotherapy's skeptics:

- **People often enter therapy in crisis.** When, with the normal ebb and flow of events, the crisis passes, people may attribute their improvement to the therapy.
- **Clients may need to believe the therapy was worth the effort.** To admit investing time and money in something ineffective is like admitting to having one's car serviced repeatedly by a mechanic who never fixes it. Self-justification is a powerful human motive.
- **Clients generally speak kindly of their therapists.** Even if the problems remain, say the critics, clients "work hard to find something positive to say. The therapist had been very understanding, the client had gained a new perspective, he learned to communicate better, his mind was eased, anything at all so as not to have to say treatment was a failure" (Zilbergeld, 1983, p. 117).

As earlier units document, we are prone to selective and biased recall and to making judgments that confirm our beliefs. Consider the testimonials gathered in a massive experiment with over 500 Massachusetts boys, aged 5 to 13 years, many of whom seemed bound for delinquency. By the toss of a coin, half the boys were assigned to a 5-year treatment program. The treated boys were visited by counselors twice a month. They participated in community programs, and they received academic tutoring, medical attention, and family assistance as needed. Some 30 years later, Joan McCord (1978, 1979) located 485 participants, sent them questionnaires, and checked public records from courts, mental hospitals, and other sources. Was the treatment successful?

Client testimonials yielded encouraging results, even glowing reports. Some men noted that, had it not been for their counselors, "I would probably be in jail," "My life would have gone the other way," or "I think I would have ended up in a life of crime." Court records offered apparent support: Even among the "difficult" boys in the treatment group, 66 percent had no official juvenile crime record.

But recall psychology's most powerful tool for sorting reality from wishful thinking: the *control group*. For every boy in the treatment group, there was a similar boy in a control group, receiving no counseling. Of these untreated men, 70 percent had no juvenile record. On several other measures, such as a record of having committed a second crime, alcohol use disorder, death rate, and job satisfaction, the untreated men exhibited slightly *fewer* problems. The glowing testimonials of those treated had been unintentionally deceiving.

CLINICIANS' PERCEPTIONS

Do clinicians' perceptions give us any more reason to celebrate? Case studies of successful treatment abound. The problem is that clients justify entering psychotherapy by emphasizing their unhappiness and justify leaving by emphasizing their well-being. Therapists treasure compliments from clients as they say good-bye or later express their gratitude, but they hear little from clients who experience only temporary relief and seek out new therapists for their recurring problems. Thus, the same person—with the same recurring anxieties, depression, or marital difficulty—may be a "success" story in several therapists' files.

Because people enter therapy when they are extremely unhappy, and usually leave when they are less extremely unhappy, most therapists, like most clients, testify to therapy's success—regardless of the treatment (see Thinking Critically About: "Regressing" From Unusual to Usual on the next page).



Feng Li/Getty Images

Trauma These women were mourning the tragic loss of lives and homes in the 2010 earthquake in China. Those who suffer through such trauma may benefit from counseling, though many people recover on their own, or with the help of supportive relationships with family and friends. "Life itself still remains a very effective therapist," noted psychodynamic therapist Karen Horney (*Our Inner Conflicts*, 1945).

Thinking Critically About

“Regressing” From Unusual to Usual

Clients’ and therapists’ perceptions of therapy’s effectiveness are vulnerable to inflation from two phenomena. One is the *placebo effect*—the power of belief in a treatment. If you think a treatment is going to be effective, it just may be (thanks to the healing power of your positive expectations).

The second phenomenon is **regression toward the mean**—the tendency for unusual events (or emotions) to “regress” (return) to their average state. Thus, extraordinary happenings (feeling low) tend to be followed by more ordinary ones (a return to our more usual state). Indeed, when things hit bottom, whatever we try—going to a psychotherapist, starting yoga, doing aerobic exercise—is more likely to be followed by improvement than by further descent.

“Once you become sensitized to it, you see regression everywhere.”

Psychologist Daniel Kahneman (1985)

The point may seem obvious, yet we regularly miss it: We sometimes attribute what may be a normal regression (the expected return to normal) to something we have done. Consider:

- Students who score much lower or higher on a test than they usually do are likely, when retested, to return toward their average.
- Unusual ESP subjects who defy chance when first tested nearly always lose their “psychic powers” when retested (a phenomenon parapsychologists have called the decline effect).
- Coaches often yell at their players after an unusually bad first half. They may then feel rewarded for having done so when the team’s performance improves (returns to normal) during the second half.

In each case, the cause-effect link may be genuine. Each may, however, be an instance of the natural tendency for behavior to regress from the unusual to the more usual. And this defines the task for therapy-efficacy research: Does the client’s improvement following a particular therapy exceed what could be expected from the placebo and regression effects alone, shown by comparison with control groups?

regression toward the mean the tendency for extreme or unusual scores to fall back (regress) toward their average.

OUTCOME RESEARCH

How, then, can we objectively measure the effectiveness of psychotherapy if neither clients nor clinicians can tell us? How can we determine which people and problems are best helped, and by what type of psychotherapy?

In search of answers, psychologists have turned to controlled research studies. Similar research in the 1800s transformed the field of medicine. Physicians, skeptical of many of the fashionable treatments (bleeding, purging, infusions of plant and metal substances), began to realize that many patients got better on their own, without these treatments, and that others died despite them. Sorting fact from superstition required observing patients with and without a particular treatment. Typhoid fever patients, for example, often improved after being bled, convincing most physicians that the treatment worked. Not until a control group was given mere bed rest—and 70 percent were observed to improve after five weeks of fever—did physicians learn, to their shock, that the bleeding was worthless (Thomas, 1992).

In psychology, the opening challenge to the effectiveness of psychotherapy was issued by British psychologist Hans Eysenck (1952). Launching a spirited debate, he summarized studies showing that two-thirds of those receiving psychotherapy for nonpsychotic disorders improved markedly. To this day, no one disputes that optimistic estimate.

Why, then, are we still debating psychotherapy’s effectiveness? Because Eysenck also reported similar improvement among *untreated* persons, such as those who were on waiting lists. With or without psychotherapy, he said, roughly two-thirds improved noticeably. Time was a great healer.

Later research revealed shortcomings in Eysenck’s analyses; his sample was small (only 24 studies of psychotherapy outcomes in 1952). Today, hundreds of studies are available. The best are *randomized clinical trials*, in which researchers randomly assign people on a waiting list to therapy or to no therapy, and later evaluate everyone, using tests and assessments

by others who don't know whether therapy was given. The results of many such studies are then digested by means of **meta-analysis**, a statistical procedure that combines the conclusions of a large number of different studies. Simply said, meta-analyses give us the bottom-line results of lots of studies.

Psychotherapists welcomed the first meta-analysis of some 475 psychotherapy outcome studies (Smith et al., 1980). It showed that the average therapy client ends up better off than 80 percent of the untreated individuals on waiting lists (**FIGURE 72.1**). The claim is modest—by definition, about 50 percent of untreated people also are better off than the average untreated person. Nevertheless, Mary Lee Smith and her colleagues exulted that “psychotherapy benefits people of all ages as reliably as schooling educates them, medicine cures them, or business turns a profit” (p. 183).

AP® Exam Tip

You will need to understand what basic statistical concepts are, but you will not need to do any actual calculations on the AP® exam.

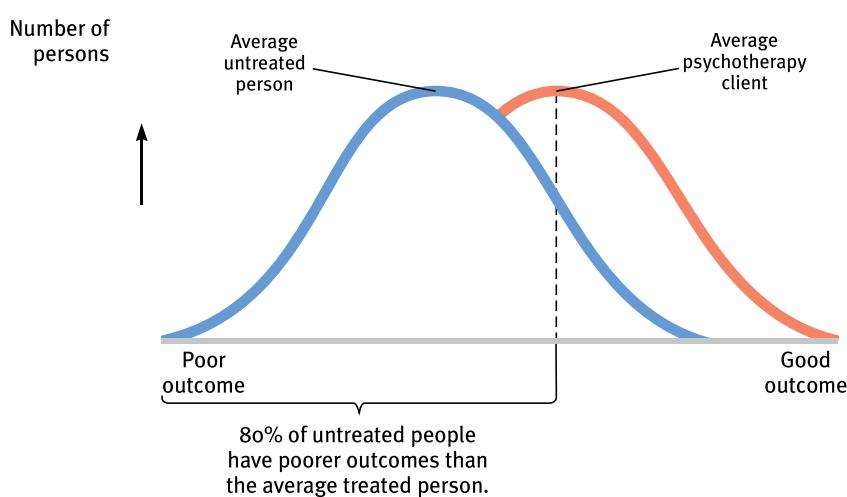


Figure 72.1

Treatment versus no treatment

These two normal distribution curves based on a meta-analysis (combining data from 475 studies) show the improvement of untreated people and psychotherapy clients. The outcome for the average therapy client surpassed that for 80 percent of the untreated people. (Adapted from Smith et al., 1980.)

meta-analysis a procedure for statistically combining the results of many different research studies.

Dozens of subsequent summaries have now examined this question. Their verdict echoes the results of the earlier outcome studies: *Those not undergoing therapy often improve, but those undergoing therapy are more likely to improve more quickly, and with less risk of relapse.*

Is psychotherapy also cost-effective? Again, the answer is Yes. Studies show that when people seek psychological treatment, their search for other medical treatment drops—by 16 percent in one digest of 91 studies (Chiles et al., 1999). Given the staggering annual cost of psychological disorders and substance abuse—including crime, accidents, lost work, and treatment—psychotherapy is a good investment, much like money spent on prenatal and well-baby care. Both reduce long-term costs. Boosting employees’ psychological well-being, for example, can lower medical costs, improve work efficiency, and diminish absenteeism.

But note that the claim—that psychotherapy, *on average*, is somewhat effective—refers to no one therapy in particular. It is like reassuring lung-cancer patients that “on average,” medical treatment of health problems is effective. What people want to know is the effectiveness of a *particular* treatment for their specific problems.

The Relative Effectiveness of Different Psychotherapies

72-2

Are some psychotherapies more effective than others for specific disorders?

So what can we tell people considering psychotherapy, and those paying for it, about *which* psychotherapy will be most effective for their problem? The statistical summaries and surveys fail to pinpoint any one type of therapy as generally superior (Smith et al., 1977, 1980). Clients seemed equally satisfied, *Consumer Reports* concluded, whether treated by a psychiatrist,

"Whatever differences in treatment efficacy exist, they appear to be extremely small, at best." -BRUCE WAMPOLD ET AL., 1997

"Different sores have different salves." -ENGLISH PROVERB

evidence-based practice
clinical decision making that integrates the best available research with clinical expertise and patient characteristics and preferences.

psychologist, or social worker; whether seen in a group or individual context; whether the therapist had extensive or relatively limited training and experience (Seligman, 1995). Other studies concur. There is little if any connection between clinicians' experience, training, supervision, and licensing and their clients' outcomes (Luborsky et al., 2002; Wampold, 2007).

So, was the dodo bird in Alice in Wonderland right: "Everyone has won and all must have prizes"? Not quite. Some forms of therapy get prizes for particular problems, though there is often an overlapping—or comorbidity—of disorders. Behavioral conditioning therapies, for example, have achieved especially favorable results with specific behavior problems, such as bed-wetting, phobias, compulsions, marital problems, and sexual dysfunctions (Baker et al., 2008; Hunsley & DiGiulio, 2002; Shadish & Baldwin, 2005). Psychodynamic therapy has helped treat depression and anxiety (Driessen et al., 2010; Leichsenring & Rabung, 2008; Shedler, 2010b). And new studies confirm cognitive and cognitive-behavioral therapy's effectiveness in coping with anxiety, posttraumatic stress disorder, and depression (Baker et al., 2008; De Los Reyes & Kazdin, 2009; Stewart & Chambliss, 2009; Tolin, 2010).

Moreover, we can say that therapy is most effective when the problem is clear-cut (Singer, 1981; Westen & Morrison, 2001). Those who experience phobias or panic and those who are unassertive can hope for improvement. Those with less-focused problems, such as depression and anxiety, usually benefit in the short term but often relapse later. And those with the negative symptoms of chronic schizophrenia or a desire to change their entire personality are unlikely to benefit from therapy alone (Pfammatter et al., 2006; Zilbergeld, 1983). The more specific the problem, the greater the hope.

But no prizes—and little or no scientific support—go to certain other therapies (Arkowitz & Lilienfeld, 2006). We would all therefore be wise to avoid energy therapies that propose to manipulate people's invisible energy fields, recovered-memory therapies that aim to unearth "repressed memories" of early child abuse (Module 33), and rebirthing therapies that engage people in reenacting the supposed trauma of their birth.

As with some medical treatments, it's possible for psychological treatments not only to be ineffective but harmful—by making people worse or preventing their getting better (Barlow, 2010; Castonguay et al., 2010; Dimidjian & Hollon, 2010). The National Science and Technology Council cites the Scared Straight program (seeking to deter children and youth from crime) as an example of well-intentioned programs that have proved ineffective or even harmful. The evaluation question—which therapies get prizes and which do not?—lies at the heart of what some call psychology's civil war. To what extent should science guide both clinical practice and the willingness of health care providers and insurers to pay for therapy?

On the one side are research psychologists using scientific methods to extend the list of well-defined and validated therapies for various disorders. They decry clinicians who "give more weight to their personal experiences" (Baker et al., 2008). On the other side are nonscientist therapists who view their practice as more art than science, saying that people are too complex and therapy too intuitive to describe in a manual or test in an experiment. Between these two factions stand the science-oriented clinicians, who aim to base practice on evidence and make mental health professionals accountable for effectiveness.

To encourage **evidence-based practice** in psychology, the American Psychological Association and others (2006; Baker et al., 2008; Levant & Hasan, 2008) have followed the Institute of Medicine's lead, advocating that clinicians integrate the best available research with clinical expertise and with patient preferences and characteristics. Available therapies "should be rigorously evaluated" and then applied by clinicians who are mindful of their skills and of each patient's unique situation (**FIGURE 72.2**). Increasingly, insurer and government support for mental health services requires evidence-based practice. In 2007, for example, Britain's National Health Service announced that it would pour the equivalent of \$600 million into training new mental health workers in evidence-based practices (such as cognitive-behavioral therapy) and to disseminating information about such treatments (DeAngelis, 2008).

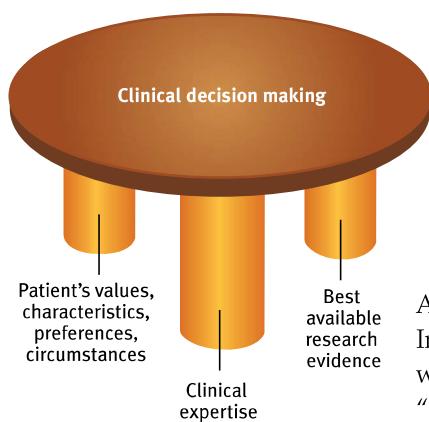


Figure 72.2

Evidence-based clinical decision making The ideal clinical decision making is a three-legged stool, upheld by research evidence, clinical expertise, and knowledge of the patient.

Evaluating Alternative Therapies

72-3 How do alternative therapies fare under scientific scrutiny?

The tendency of many abnormal states of mind to regress to normal, combined with the placebo effect, creates fertile soil for pseudotherapies. Bolstered by anecdotes, heralded by the media, and broadcast on the Internet, alternative therapies can spread like wildfire. In one national survey, 57 percent of those with a history of anxiety attacks and 54 percent of those with a history of depression had used alternative treatments, such as herbal medicine, massage, and spiritual healing (Kessler et al., 2001).

Testimonials aside, what does the evidence say? This is a tough question, because there is no evidence for or against most of them, though their proponents often feel personal experience is evidence enough. Some, however, have been the subject of controlled research. Let's consider two of them. As we do, remember that sifting sense from nonsense requires the scientific attitude: being skeptical but not cynical, open to surprises but not gullible.

EYE MOVEMENT DESENSITIZATION AND REPROCESSING (EMDR)

EMDR (eye movement desensitization and reprocessing) is a therapy adored by thousands and dismissed by thousands more as a sham—"an excellent vehicle for illustrating the differences between scientific and pseudoscientific therapy techniques," suggested James Herbert and seven others (2000). Francine Shapiro (1989, 2007) developed EMDR while walking in a park and observing that anxious thoughts vanished as her eyes spontaneously darted about. Offering her novel anxiety treatment to others, she had people imagine traumatic scenes while she triggered eye movements by waving her finger in front of their eyes, supposedly enabling them to unlock and reprocess previously frozen memories. Tens of thousands of mental health professionals from more than 75 countries have since undergone training (EMDR, 2011). Not since the similarly charismatic Franz Anton Mesmer introduced *animal magnetism* (hypnosis) more than two centuries ago (also after feeling inspired by an outdoor experience) has a new therapy attracted so many devotees so quickly.

Does it work? For 84 to 100 percent of single-trauma victims participating in four studies, the answer is *Yes*, reports Shapiro (1999, 2002). Moreover, the treatment need take no more than three 90-minute sessions. The Society of Clinical Psychology task force on empirically validated treatments acknowledges that EMDR is "probably efficacious" for the treatment of nonmilitary posttraumatic stress disorder (Chambless et al., 1997; see also Bisson & Andrew, 2007; Rodenburg et al., 2009; Seidler & Wagner, 2006).

Why, wonder the skeptics, would rapidly moving one's eyes while recalling traumas be therapeutic? Some argue that eye movements serve to relax or distract patients, thus allowing the memory-associated emotions to extinguish (Gunter & Bodner, 2008). Others believe that eye movements in themselves are *not* the therapeutic ingredient. Trials in which people imagined traumatic scenes and tapped a finger, or just stared straight ahead while the therapist's finger wagged, have produced therapeutic results (Devilly, 2003). EMDR does work better than doing nothing, acknowledge the skeptics (Lilienfeld & Arkowitz, 2007b), but many suspect that what is therapeutic is the combination of exposure therapy—repeatedly associating with traumatic memories a safe and reassuring context that provides some emotional distance from the experience—and a robust placebo effect. Had Mesmer's pseudotherapy been compared with no treatment at all, it, too (thanks to the healing power of positive belief), might have been found "probably efficacious," observed Richard McNally (1999).

LIGHT EXPOSURE THERAPY

Have you ever found yourself oversleeping, gaining weight, and feeling lethargic during the dark mornings and overcast days of winter? There likely was a survival advantage to your distant ancestors' slowing down and conserving energy during the dark days of winter. For some people, however, especially women and those living far from the equator, the wintertime

"Studies indicate that EMDR is just as effective with fixed eyes. If that conclusion is right, what's useful in the therapy (chiefly behavioral desensitization) is not new, and what's new is superfluous." —HARVARD MENTAL HEALTH LETTER, 2002



blahs constitute a seasonal pattern for major depressive disorder. To counteract these dark spirits, National Institute of Mental Health researchers in the early 1980s had an idea: Give people a timed daily dose of intense light. Sure enough, people reported they felt better.

Was this a bright idea, or another dim-witted example of the placebo effect? Research sheds some light. One study exposed some people with a seasonal pattern in their depression symptoms to 90 minutes of bright light and others to a sham placebo treatment—a hissing “negative ion generator” about which the staff expressed similar enthusiasm (but which was

not even turned on). After four weeks, 61 percent of those exposed to morning light had greatly improved, as had 50 percent of those exposed to evening light and 32 percent of those exposed to the placebo (Eastman et al., 1998). Other studies have found that 30 minutes of exposure to 10,000-lux white fluorescent light produced relief for more than half the people receiving morning light therapy (Flory et al., 2010; Terman et al., 1998, 2001). From 20 carefully controlled trials we have a verdict (Golden et al., 2005; Wirz-Justice, 2009): Morning bright light does indeed dim depression symptoms for many of those suffering in a seasonal pattern. Moreover, it does so as effectively as taking antidepressant drugs or undergoing cognitive-behavioral therapy (Lam et al., 2006; Rohan et al., 2007). The effects are clear in brain scans; light therapy sparks activity in a brain region that influences the body’s arousal and hormones (Ishida et al., 2005).



Light therapy To counteract winter depression, some people spend time each morning exposed to intense light that mimics natural outdoor light. Light boxes with the appropriate intensity are available from health supply and lighting stores.

Commonalities Among Psychotherapies

72-4 What three elements are shared by all forms of psychotherapy?

Why have studies found little correlation between therapists’ training and experience and clients’ outcomes? In search of some answers, Jerome Frank (1982), Marvin Goldfried (Goldfried & Padawer, 1982), Hans Strupp (1986), and Bruce Wampold (2001, 2007) have studied the common ingredients of various therapies. They suggest that all therapies offer at least three benefits:

- **Hope for demoralized people** People seeking therapy typically feel anxious, depressed, devoid of self-esteem, and incapable of turning things around. What any therapy offers is the expectation that, with commitment from the therapy seeker, things can and will get better. This belief, apart from any therapeutic technique, may function as a placebo, improving morale, creating feelings of self-efficacy, and diminishing symptoms (Prioleau et al., 1983).
- **A new perspective** Every therapy also offers people a plausible explanation of their symptoms and an alternative way of looking at themselves or responding to their world. Armed with a believable fresh perspective, they may approach life with a new attitude, open to making changes in their behaviors and their views of themselves.
- **An empathic, trusting, caring relationship** To say that therapy outcome is unrelated to training and experience is not to say all *therapists* are equally effective. No matter what therapeutic technique they use, effective therapists are empathic people who seek to understand another’s experience; who communicate their care and concern to the client; and who earn the client’s trust through respectful listening, reassurance, and advice. Marvin Goldfried and his associates (1998) found these qualities in recorded therapy sessions from 36 recognized master therapists. Some took a

cognitive-behavioral approach, others emphasized psychodynamic teachings. Regardless, the striking finding was how *similar* they were. At key moments, the empathic therapists of both persuasions would help clients evaluate themselves, link one aspect of their life with another, and gain insight into their interactions with others.

The emotional bond between therapist and client—the **therapeutic alliance**—is a key aspect of effective therapy (Klein et al., 2003; Wampold, 2001). One U.S. National Institute of Mental Health depression-treatment study confirmed that the most effective therapists were those who were perceived as most empathic and caring and who established the closest therapeutic bonds with their clients (Blatt et al., 1996). That all therapies offer hope through a fresh perspective offered by a caring person is what also enables paraprofessionals (briefly trained caregivers) to assist so many troubled people so effectively (Christensen & Jacobson, 1994).

These three common elements are also part of what the growing numbers of self-help and support groups offer their members. And they are part of what traditional healers have offered (Jackson, 1992). Healers everywhere—special people to whom others disclose their suffering, whether psychiatrists, witch doctors, or shamans—have listened in order to understand and to empathize, reassure, advise, console, interpret, or explain (Torrey, 1986). Such qualities may explain why people who feel supported by close relationships—who enjoy the fellowship and friendship of caring people—are less likely to need or seek therapy (Frank, 1982; O'Connor & Brown, 1984).

* * *

To recap, people who seek help usually improve. So do many of those who do not undergo psychotherapy, and that is a tribute to our human resourcefulness and our capacity to care for one another. Nevertheless, though the therapist's orientation and experience appear not to matter much, people who receive some psychotherapy usually improve more than those who do not. People with clear-cut, specific problems tend to improve the most.

Culture, Gender, and Values in Psychotherapy

72-5

How do culture, gender, and values influence the therapist-client relationship?

All therapies offer hope, and nearly all therapists attempt to enhance their clients' sensitivity, openness, personal responsibility, and sense of purpose (Jensen & Bergin, 1988). But in matters of diversity, therapists differ from one another and may differ from their clients (Delaney et al., 2007; Kelly, 1990).

These differences can become significant when a therapist from one culture or gender meets a client from another. In North America, Europe, and Australia, for example, most therapists reflect their culture's individualism, which often gives priority to personal desires and identity, particularly for men. Clients who are immigrants from Asian countries, where people are mindful of others' expectations, may have trouble relating to therapies that require them to think only of their own well-being. And women seeking therapy who are from a collectivist culture might be doubly discomfited. Such differences help explain minority populations' reluctance to use mental health services and their tendency to prematurely terminate therapy (Chen et al., 2009; Sue, 2006). In one experiment, Asian-American clients matched with counselors who shared their cultural values (rather than mismatched with those who did not) perceived more counselor empathy and felt a stronger alliance with the counselor (Kim et al., 2005). Recognizing that therapists and clients may differ in their values, communication styles, and language, American Psychological Association-accredited therapy training programs now provide training in cultural sensitivity and recruit members of underrepresented cultural groups.

Another area of potential conflict related to values is religion. Highly religious people may prefer and benefit from religiously similar therapists (Masters, 2010; Smith et al., 2007; Wade et al., 2006). They may have trouble establishing an emotional bond with a therapist who does not share their values.



David Buffington/Getty Images

A caring relationship Effective therapists form a bond of trust with their clients.

therapeutic alliance a bond of trust and mutual understanding between a therapist and client, who work together constructively to overcome the client's problem.

Albert Ellis, who advocated the aggressive rational-emotive behavior therapy (REBT), and Allen Bergin, co-editor of the *Handbook of Psychotherapy and Behavior Change*, illustrated how sharply therapists can differ, and how those differences can affect their view of a healthy person. Ellis (1980) assumed that “no one and nothing is supreme,” that “self-gratification” should be encouraged, and that “unequivocal love, commitment, service, and . . . fidelity to any interpersonal commitment, especially marriage, leads to harmful consequences.” Bergin (1980) assumed the opposite—that “because God is supreme, humility and the acceptance of divine authority are virtues,” that “self-control and committed love and self-sacrifice are to be encouraged,” and that “infidelity to any interpersonal commitment, especially marriage, leads to harmful consequences.”

Bergin and Ellis disagreed more radically than most therapists on what values are healthiest. In so doing, however, they agreed on a more general point: Psychotherapists’ personal beliefs influence their practice. Because clients tend to adopt their therapists’ values (Worthington et al., 1996), some psychologists believe therapists should divulge those values more openly. (For those thinking about seeking therapy, Close-up: A Consumer’s Guide to Psychotherapists offers some tips on when to seek help and how to start searching for a therapist who shares your perspective and goals.)

Close-up

A Consumer’s Guide to Psychotherapists

72-6

What should a person look for when selecting a therapist?

Life for everyone is marked by a mix of serenity and stress, blessing and bereavement, good moods and bad. So, when should we seek a mental health professional’s help? The American Psychological Association offers these common trouble signals:

- Feelings of hopelessness
- Deep and lasting depression
- Self-destructive behavior, such as substance use disorder
- Disruptive fears

TABLE 72.1

Therapists and Their Training

- Sudden mood shifts
- Thoughts of suicide
- Compulsive rituals, such as hand washing
- Hearing voices or seeing things that others don’t experience

In looking for a therapist, you may want to have a preliminary consultation with two or three. High school counseling offices are generally good starting points, and may offer some free services. You can describe your problem and learn each therapist’s treatment approach. You can ask questions about the therapist’s values, credentials (**TABLE 72.1**), and fees. And you can assess your own feelings about each of them. The emotional bond between therapist and client is perhaps the most important factor in effective therapy.

Type	Description
Clinical psychologists	Most are psychologists with a Ph.D. (includes research training) or Psy.D. (focuses on therapy) supplemented by a supervised internship and, often, postdoctoral training. About half work in agencies and institutions, half in private practice.
Psychiatrists	Psychiatrists are physicians who specialize in the treatment of psychological disorders. Not all psychiatrists have had extensive training in psychotherapy, but as M.D.s or D.O.s they can prescribe medications. Thus, they tend to see those with the most serious problems. Many have their own private practice.
Clinical or psychiatric social workers	A two-year master of social work graduate program plus postgraduate supervision prepares some social workers to offer psychotherapy, mostly to people with everyday personal and family problems. About half have earned the National Association of Social Workers’ designation of clinical social worker.
Counselors	Marriage and family counselors specialize in problems arising from family relations. Clergy provide counseling to countless people. Abuse counselors work with substance abusers and with spouse and child abusers and their victims. Mental health and other counselors may be required to have a two-year master’s degree.

Preventing Psychological Disorders

72-7 What is the rationale for preventive mental health programs?

We have seen that lifestyle change can help *reverse* some of the symptoms of psychological disorders. Might such change also *prevent* some disorders by building individuals' **resilience**—an ability to cope with stress and recover from adversity? Faced with unforeseen trauma, most adults exhibit resilience. This was true of New Yorkers in the aftermath of the September 11 terrorist attacks, especially those who enjoyed supportive close relationships and who had not recently experienced other stressful events (Bonanno et al., 2007). More than 9 in 10 New Yorkers, although stunned and grief-stricken by 9/11, did *not* have a dysfunctional stress reaction. By the following January, the stress symptoms of those who did were mostly gone (Person et al., 2006). Even in groups of combat-stressed veterans and political rebels who have survived dozens of episodes of torture, most do not later exhibit posttraumatic stress disorder (Mineka & Zinbarg, 1996).

Psychotherapies and biomedical therapies tend to locate the cause of psychological disorders within the person with the disorder. We infer that people who act cruelly must be cruel and that people who act "crazy" must be "sick." We attach labels to such people, thereby distinguishing them from "normal" folks. It follows, then, that we try to treat "abnormal" people by giving them insight into their problems, by changing their thinking, by helping them gain control with drugs.

There is an alternative viewpoint: We could interpret many psychological disorders as understandable responses to a disturbing and stressful society. According to this view, it is not just the person who needs treatment, but also the person's social context. Better to prevent a problem by reforming a sick situation and by developing people's coping competencies than to wait for a problem to arise and then treat it.

A story about the rescue of a drowning person from a rushing river illustrates this viewpoint: Having successfully administered first aid to the first victim, the rescuer spots another struggling person and pulls her out, too. After a half-dozen repetitions, the rescuer suddenly turns and starts running away while the river sweeps yet another floundering person into view. "Aren't you going to rescue that fellow?" asks a bystander. "Heck no," the rescuer replies. "I'm going upstream to find out what's pushing all these people in."

Preventive mental health is upstream work. It seeks to prevent psychological casualties by identifying and alleviating the conditions that cause them. As George Albee (1986) pointed out, there is abundant evidence that poverty, meaningless work, constant criticism, unemployment, racism, sexism, and heterosexism undermine people's sense of competence, personal control, and self-esteem. Such stresses increase their risk of depression, alcohol use disorder, and suicide.

We who care about preventing psychological casualties should, Albee contended, support programs that alleviate these demoralizing situations. We eliminated smallpox not by treating the afflicted but by inoculating the unafflicted. We conquered yellow fever by controlling mosquitoes. Preventing psychological problems means empowering those who feel helpless, changing environments that breed loneliness, renewing the disintegrating family, promoting communication training for couples, and bolstering parents' and teachers' skills. "Everything aimed at improving the human condition, at making life more fulfilling and meaningful, may be considered part of primary prevention of mental or emotional disturbance" (Kessler & Albee, 1975, p. 557). That includes the cognitive training that promotes positive thinking in children at risk for depression (Brunwasser et al., 2009; Gillham et al., 2006; Stice et al., 2009). A 2009 National Research Council and Institute of Medicine report—*Preventing Mental, Emotional, and Behavioral Disorders Among Young People*—offers encouragement. It documents that intervention efforts often based on cognitive-behavioral therapy principles significantly boost child and adolescent flourishing. Through such preventive efforts and healthy lifestyles, fewer of us will fall into the rushing river of psychological disorders.

resilience the personal strength that helps most people cope with stress and recover from adversity and even trauma.

"It is better to prevent than to cure." -PERUVIAN FOLK WISDOM

"Mental disorders arise from physical ones, and likewise physical disorders arise from mental ones." -THE MAHABHARATA, 200 B.C.E.

Before You Move On

► ASK YOURSELF

Can you think of a specific way that improving the environment in your own community might prevent some psychological disorders among its residents?

► TEST YOURSELF

What is the difference between preventive mental health and psychological or biomedical therapy?

Answers to the Test Yourself questions can be found in Appendix E at the end of the book.

Module 72 Review

72-1 Does psychotherapy work? Who decides?

- Clients' and therapists' positive testimonials cannot prove that therapy is actually effective, and the placebo effect and *regression toward the mean* (the tendency for extreme or unusual scores to fall back toward their average) make it difficult to judge whether improvement occurred because of the treatment.
- Using *meta-analyses* to statistically combine the results of hundreds of randomized psychotherapy outcome studies, researchers have found that those not undergoing treatment often improve, but those undergoing psychotherapy are more likely to improve more quickly, and with less chance of relapse.

72-2 Are some psychotherapies more effective than others for specific disorders?

- No one type of psychotherapy is generally superior to all others. Therapy is most effective for those with clear-cut, specific problems.
- Some therapies—such as behavior conditioning for treating phobias and compulsions—are more effective for specific disorders.
- Psychodynamic therapy helped treat depression and anxiety, and cognitive and cognitive-behavioral therapies have been effective in coping with anxiety, obsessive-compulsive disorder, posttraumatic stress disorder, and depression.
- *Evidence-based practice* integrates the best available research with clinicians' expertise and patients' characteristics, preferences, and circumstances.

72-3 How do alternative therapies fare under scientific scrutiny?

- Controlled research has found some benefits of eye movement desensitization and reprocessing (EMDR) therapy for PTSD, though possibly for reasons unrelated to eye movements.
- Light exposure therapy does seem to relieve depression symptoms for those with a seasonal pattern of major depressive disorder by activating a brain region that influences arousal and hormones.

72-4 What three elements are shared by all forms of psychotherapy?

- All psychotherapies offer new hope for demoralized people; a fresh perspective; and (if the therapist is effective) an empathic, trusting, and caring relationship.
- The emotional bond of trust and understanding between therapist and client—the *therapeutic alliance*—is an important element in effective therapy.

72-5 How do culture, gender, and values influence the therapist-client relationship?

- Therapists differ in the values that influence their goals in therapy and their views of progress. These differences may create problems if therapists and clients differ in their cultural, gender, or religious perspectives.

72-6**What should a person look for when selecting a therapist?**

- A person seeking therapy may want to ask about the therapist's treatment approach, values, credentials, and fees.
- An important consideration is whether the therapy seeker feels comfortable and able to establish a bond with the therapist.

72-7**What is the rationale for preventive mental health programs?**

- Preventive mental health programs are based on the idea that many psychological disorders could be prevented by changing oppressive, esteem-destroying environments into more benevolent, nurturing environments that foster growth, self-confidence, and *resilience*.

Multiple-Choice Questions

1. Which of the following does the text's author call psychology's most powerful tool for sorting reality from wishful thinking?
 - a. ESP or "psychic powers"
 - b. Regression toward the mean
 - c. Client perception
 - d. Control group
 - e. Placebo effect
2. Which of the following best describes meta-analysis?
 - a. Evidence-based practice
 - b. A treatment versus no treatment group
 - c. A tendency for smaller scores to move toward the average
 - d. Regressing from unusual to usual
 - e. A way to combine the results of lots of studies

3. Which of the following is the best phrase for a bond of trust and mutual understanding between a therapist and client who are working to overcome the client's problem?
 - a. Therapeutic alliance
 - b. EMDR
 - c. Evidence-based practice
 - d. Meta-analysis
 - e. Outcome research

Practice FRQs

1. Explain the three sides of evidence-based clinical decision making.

Answer

1 point: Using the best available research evidence.

1 point: Clinical expertise.

1 point: Using a patient's values, preferences, and circumstances.

2. Psychotherapies have many common ingredients. Identify three commonly agreed-upon benefits of psychotherapies.

(3 points)

Module 73

The Biomedical Therapies

Module Learning Objectives

- 73-1** Identify and describe the drug therapies, and explain how double-blind studies help researchers evaluate a drug's effectiveness.
- 73-2** Describe the use of brain stimulation techniques and psychosurgery in treating specific disorders.
- 73-3** Describe how, by taking care of themselves with a healthy lifestyle, people might find some relief from depression, and explain how this reflects our being biopsychosocial systems.



psychopharmacology the study of the effects of drugs on mind and behavior.

Psychotherapy is one way to treat psychological disorders. The other, often used with serious disorders, is biomedical therapy—physically changing the brain's functioning by altering its chemistry with drugs, or affecting its circuitry with electroconvulsive shock, magnetic impulses, or psychosurgery. Primary care providers prescribe most drugs for anxiety and depression, followed by psychiatrists and, in some states, psychologists.

Drug Therapies

Drug or placebo effect? For many people, depression lifts while taking an antidepressant drug. But people given a placebo may experience the same effect. Double-blind clinical trials suggest that, especially for those with severe depression, antidepressant drugs do have at least a modest clinical effect.



"Our psychopharmacologist is a genius."

- 73-1** What are the drug therapies? How do double-blind studies help researchers evaluate a drug's effectiveness?

By far the most widely used biomedical treatments today are the drug therapies. Since the 1950s, discoveries in **psychopharmacology** (the study of drug effects on mind and behavior) have revolutionized the treatment of people with severe disorders, liberating hundreds of thousands from hospital confinement. Thanks to drug therapy—and to efforts to minimize involuntary hospitalization and to support people through community mental health programs—the resident population of mental hospitals is a small fraction of what it was a half-century ago. For some unable to care for themselves, however, release from hospitals has meant homelessness, not liberation.

Almost any new treatment, including drug therapy, is greeted by an initial wave of enthusiasm as many people apparently improve. But that enthusiasm often diminishes after researchers subtract the rates of (1) normal recovery among untreated persons and (2) recovery due to the placebo effect, which arises from the positive expectations of patients and mental health workers alike. So, to evaluate the effectiveness of any new drug, researchers give half the patients the drug, and the other half a similar-appearing placebo. Because neither the staff nor the patients know who gets which, this is called a *double-blind procedure*. The good news: In double-blind studies, some drugs have proven useful.

Antipsychotic Drugs

The revolution in drug therapy for psychological disorders began with the accidental discovery that certain drugs, used for other medical purposes, calmed patients with *psychoses* (disorders in which hallucinations or delusions indicate some loss of contact with reality). These **antipsychotic drugs**, such as chlorpromazine (sold as Thorazine), dampened responsiveness to irrelevant stimuli. Thus, they provided the most help to patients experiencing positive symptoms of schizophrenia, such as auditory hallucinations and paranoia (Lehman et al., 1998; Lenzenweger et al., 1989).

The molecules of most conventional antipsychotic drugs are antagonists; they are similar enough to molecules of the neurotransmitter dopamine to occupy its receptor sites and block its activity. This finding reinforces the idea that an overactive dopamine system contributes to schizophrenia.

Antipsychotics also have powerful side effects. Some produce sluggishness, tremors, and twitches similar to those of Parkinson's disease (Kaplan & Saddock, 1989). Long-term use of antipsychotics can produce *tardive dyskinesia*, with involuntary movements of the facial muscles (such as grimacing), tongue, and limbs. Although not more effective in controlling schizophrenia symptoms, many of the newer-generation antipsychotics, such as risperidone (Risperdal) and olanzapine (Zyprexa), have fewer of these effects. These drugs may, however, increase the risk of obesity and diabetes (Buchanan et al., 2010; Tiihonen et al., 2009).

Antipsychotics, combined with life-skills programs and family support, have given new hope to many people with schizophrenia (Guo, 2010). Hundreds of thousands of patients have left the wards of mental hospitals and returned to work and to near-normal lives (Leucht et al., 2003).

Antianxiety Drugs

Like alcohol, **antianxiety drugs**, such as Xanax or Ativan, depress central nervous system activity (and so should not be used in combination with alcohol). Antianxiety drugs are often used in combination with psychological therapy. One antianxiety drug, the antibiotic D-cycloserine, acts upon a receptor that, in combination with behavioral treatments, facilitates the extinction of learned fears. Experiments indicate that the drug enhances the benefits of exposure therapy and helps relieve the symptoms of posttraumatic stress disorder and obsessive-compulsive disorder (Davis, 2005; Kushner et al., 2007).

A criticism sometimes made of the behavior therapies—that they reduce symptoms without resolving underlying problems—is also made of drug therapies. Unlike the behavior therapies, however, these substances may be used as an ongoing treatment. “Popping a Xanax” at the first sign of tension can create a learned response; the immediate relief reinforces a person’s tendency to take drugs when anxious. Antianxiety drugs can also be addicting. After heavy use, people who stop taking them may experience increased anxiety, insomnia, and other withdrawal symptoms.

Over the dozen years at the end of the twentieth century, the rate of outpatient treatment for anxiety disorders, obsessive-compulsive disorder, and posttraumatic stress disorder nearly doubled. The proportion of psychiatric patients receiving medication during that time increased from 52 to 70 percent (Olfson et al., 2004). And the new standard drug treatment for anxiety disorders? Antidepressants.

Antidepressant Drugs

The **antidepressants** were named for their ability to lift people up from a state of depression, and this was their main use until recently. The label is a bit of a misnomer now that these drugs are increasingly being used to successfully treat anxiety disorders, obsessive-compulsive disorder, and posttraumatic stress disorder. These drugs are agonists; they work by increasing the availability of certain neurotransmitters, such as norepinephrine or serotonin, which

AP® Exam Tip

The discussion of drug therapies is a great opportunity for you to review information about neurotransmitters and brain function. See Unit III if you need to brush up on these topics.

FYI

Perhaps you can guess an occasional side effect of L-dopa, a drug that raises dopamine levels for Parkinson's patients: hallucinations.

antipsychotic drugs drugs used to treat schizophrenia and other forms of severe thought disorder.

antianxiety drugs drugs used to control anxiety and agitation.

antidepressant drugs drugs used to treat depression, anxiety disorders, obsessive-compulsive disorder, and posttraumatic stress disorder. (Several widely used antidepressant drugs are *selective serotonin reuptake inhibitors*—SSRIs.)



© John Greim/Age fotostock

elevate arousal and mood and appear scarce when a person experiences feelings of depression or anxiety. Fluoxetine, which tens of millions of users worldwide have known as Prozac, falls into this category of drugs. The most commonly prescribed drugs in this group, including Prozac and its cousins Zoloft and Paxil, work by blocking the reabsorption and removal of serotonin from synapses (**FIGURE 73.1**). Given their use in treating disorders other than depression—from anxiety to strokes—this group of drugs is most often called *SSRIs* (*selective serotonin reuptake inhibitors*) rather than antidepressants (Kramer, 2011). Some of the older antidepressant drugs work by blocking the reabsorption or breakdown of both norepinephrine and serotonin. Though effective, these dual-action drugs have more potential side effects, such as dry mouth, weight gain, hypertension, or dizzy spells (Anderson, 2000; Mulrow, 1999). Administering them by means of a patch, bypassing the intestines and liver, helps reduce such side effects (Bodkin & Amsterdam, 2002).

After the introduction of SSRI drugs, the percentage of patients receiving medication for depression jumped dramatically, from 70 percent in 1987, the year before SSRIs were introduced, to 89 percent in 2001 (Olfson et al., 2003; Stafford et al., 2001). From 1996 to 2005, the number of Americans prescribed antidepressant drugs doubled, from 13 to 27 million (Olfson & Marcus, 2009). Between 2002 and 2007 in Australia, antidepressant drug use increased 41 percent (Hollingsworth et al., 2010).

Be advised: Patients with depression who begin taking antidepressants do not wake up the next day singing “It’s a beautiful day”! Although the drugs begin to influence neurotransmission within hours, their full psychological effect often requires four weeks. One possible reason for the delay is that increased serotonin promotes *neurogenesis*—the birth of new brain cells, perhaps reversing stress-induced loss of neurons (Becker & Wojtowicz, 2007; Jacobs, 2004).

Antidepressant drugs are not the only way to give the body a lift. Aerobic exercise, which calms people who feel anxious and energizes those who feel depressed, does about as much good for some people with mild to moderate depression, and has additional positive side effects (more on this topic later in this module). Cognitive therapy, by helping people reverse their habitual negative thinking style, can boost the drug-aided relief from depression and reduce the post-treatment risk of relapse (Hollon et al., 2002; Keller et al., 2000; Vittengl et al., 2007). Better yet, some studies suggest, is to attack depression (and anxiety) from both below and above (Cuijpers et al., 2010; Walkup et al., 2008). Use antidepressant drugs (which work, bottom-up, on the emotion-forming limbic system) in conjunction with cognitive-behavioral therapy (which works top-down, starting with changed frontal lobe activity).

Figure 73.1

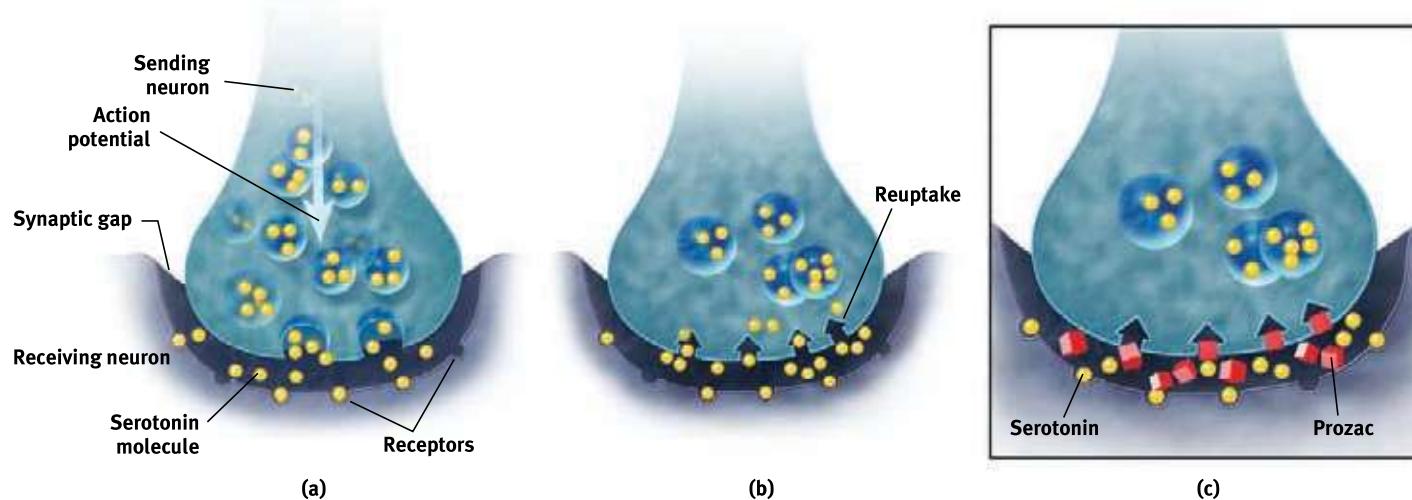
Biology of antidepressants

Shown here is the action of Prozac, which partially blocks the reuptake of serotonin.

Message is sent across synaptic gap.

Message is received; excess serotonin molecules are reabsorbed by sending neuron.

Prozac partially blocks normal reuptake of the neurotransmitter serotonin; excess serotonin in synapse enhances its mood-lifting effect.



Researchers generally agree that people with depression often improve after a month on antidepressants. But after allowing for natural recovery and the placebo effect, how big is the drug effect? Not big, report Irving Kirsch and his colleagues (1998, 2002, 2010). Their analyses of double-blind clinical trials indicate that the placebo effect accounted for about 75 percent of the active drug's effect. In a follow-up review that included unpublished clinical trials, the antidepressant drug effect was again modest (Kirsch et al., 2008). The placebo effect was less for those with severe depression, which made the added benefit of the drug somewhat greater for them. "Given these results, there seems little reason to prescribe antidepressant medication to any but the most severely depressed patients, unless alternative treatments have failed," Kirsch concluded (BBC, 2008). A newer analysis confirms that the antidepressant benefit compared with placebos is "minimal or nonexistent, on average, in patients with mild or moderate symptoms." For those folks, aerobic exercise or psychotherapy is often effective. But among patients with "very severe" depression, the medication advantage becomes "substantial" (Fournier et al., 2010).



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"If this doesn't help you don't worry, it's a placebo."

"No twisted thought without a twisted molecule." -ATTRIBUTED TO PSYCHOLOGIST RALPH GERARD

"Lithium prevents my seductive but disastrous highs, diminishes my depressions, clears out the wool and webbing from my disordered thinking, slows me down, gentles me out, keeps me from ruining my career and relationships, keeps me out of a hospital, alive, and makes psychotherapy possible."

-KAY REDFIELD JAMISON, *An Unquiet Mind*, 1995

Mood-Stabilizing Medications

In addition to antipsychotic, antianxiety, and antidepressant drugs, psychiatrists have *mood-stabilizing drugs* in their arsenal. For those suffering the emotional highs and lows of bipolar disorder, the simple salt *lithium* can be an effective mood stabilizer. Australian physician John Cade discovered this in the 1940s when he administered lithium to a patient with severe mania and the patient became perfectly well in less than a week (Snyder, 1986). After suffering mood swings for years, about 7 in 10 people with bipolar disorder benefit from a long-term daily dose of this cheap salt, which helps prevent or ease manic episodes and, to a lesser extent, lifts depression (Solomon et al., 1995). It also protects neural health, thus reducing bipolar patients' vulnerability to significant cognitive decline (Kessing et al., 2010).

Lithium also reduces bipolar patients' risk of suicide—to about one-sixth of bipolar patients not taking lithium (Tondo et al., 1997). Lithium amounts in drinking water have also correlated with lower suicide rates (across 18 Japanese cities and towns) and lower crime rates (across 27 Texas counties) (Ohgami et al., 2009; Schrauzer & Shrestha, 1990, 2010; Terao et al., 2010). Although we do not fully understand why, lithium works. And so does Depakote, a drug originally used to treat epilepsy and more recently found effective in the control of manic episodes associated with bipolar disorder.

Brain Stimulation

73-2

How are brain stimulation and psychosurgery used in treating specific disorders?

Electroconvulsive Therapy

A more controversial brain manipulation occurs through shock treatment, or **electroconvulsive therapy (ECT)**. When ECT was first introduced in 1938, the wide-awake patient was strapped to a table and jolted with roughly 100 volts of electricity to the brain, producing racking convulsions and brief unconsciousness. ECT therefore gained a barbaric image, one that lingers. Today, however, the patient receives a general anesthetic and a muscle relaxant (to prevent injury from seizures) before a psychiatrist delivers 30 to 60 seconds of electrical current (**FIGURE 73.2** on the next page). Within 30 minutes, the patient awakens and remembers nothing of the treatment or of the preceding hours. After three such sessions each week for two to four weeks, 80 percent or more of people receiving ECT improve markedly, showing some memory loss for the treatment period but no discernible brain damage.

electroconvulsive therapy (ECT)

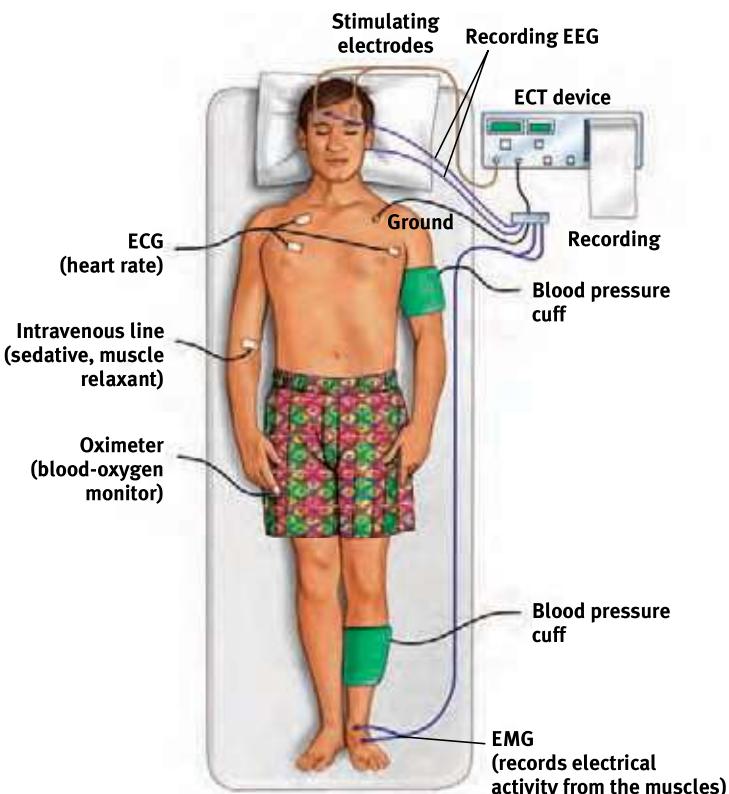
a biomedical therapy for severely depressed patients in which a brief electric current is sent through the brain of an anesthetized patient.

FYI

The medical use of electricity is an ancient practice. Physicians treated the Roman Emperor Claudius (10 B.C.E.–54 C.E.) for headaches by pressing electric eels to his temples.

Figure 73.2**Electroconvulsive therapy**

Although controversial, ECT is often an effective treatment for depression that does not respond to drug therapy. "Electroconvulsive" is no longer accurate because patients are now given a drug that prevents injurious seizures.



Rick Friedman/Corbis



ECT proponent In her book, *Shock: The Healing Power of Electroconvulsive Therapy* (2006), Kitty Dukakis writes, "I used to . . . be unable to shake the dread even when I was feeling good, because I knew the bad feelings would return. ECT has wiped away that foreboding. It has given me a sense of control, of hope."

Study after study confirms that ECT is an effective treatment for severe depression in "treatment-resistant" patients who have not responded to drug therapy (Bailine et al., 2010; Fink, 2009; UK ECT Review Group, 2003). An editorial in the *Journal of the American Medical Association* concluded that "the results of ECT in treating severe depression are among the most positive treatment effects in all of medicine" (Glass, 2001).

How does ECT alleviate severe depression? After more than 70 years, no one knows for sure. One recipient likened ECT to the smallpox vaccine, which was saving lives before we knew how it worked. Others think of it as rebooting their cerebral computer. But what makes it therapeutic? Perhaps the shock-induced seizures calm neural centers where overactivity produces depression. ECT, like antidepressant drugs and exercise, also appears to boost the production of new brain cells (Bolwig & Madsen, 2007).

Skeptics have raised one other possible explanation for how ECT works: as a placebo effect. Most ECT studies have failed to contain a control condition in which people are randomly assigned to receive the same general anesthesia and simulated ECT without the shock. When given this placebo treatment, note John Read and Richard Bentall (2010), the positive expectation is therapeutic, though a Food and Drug Administration (2011) research review concludes that ECT is more effective than a placebo, especially in the short run.

ECT is now administered with briefer pulses, sometimes only to the brain's right side and with less memory disruption (HMHL, 2007). Yet no matter how impressive the results, the idea of electrically shocking people still strikes many as barbaric, especially given our ignorance about why ECT works. Moreover, about 4 in 10 ECT-treated patients relapse into depression within six months (Kellner et al., 2006). Nevertheless, in the minds of many psychiatrists and patients, ECT is a lesser evil than severe depression's misery, anguish, and risk of suicide. As research psychologist Norman Endler (1982) reported after ECT alleviated his deep depression, "A miracle had happened in two weeks."

Alternative Neurostimulation Therapies

Two other neural stimulation techniques—magnetic stimulation and deep-brain stimulation—are raising hopes for gentler alternatives that jump-start neural circuits in the depressed brain.

MAGNETIC STIMULATION

Depressed moods seem to improve when repeated pulses surge through a magnetic coil held close to a person's skull (**FIGURE 73.3**). The painless procedure—called **repetitive transcranial magnetic stimulation (rTMS)**—is performed on wide-awake patients over several weeks. Unlike ECT, the rTMS procedure produces no seizures, memory loss, or other serious side effects. (Headaches can result.)

Initial studies have found “modest” positive benefits of rTMS (Daskalakis et al., 2008; George et al., 2010; López-Ibor et al., 2008). How it works is unclear. One possible explanation is that the stimulation energizes the brain's left frontal lobe, which is relatively inactive during depression (Helmuth, 2001). Repeated stimulation may cause nerve cells to form new functioning circuits through the process of long-term potentiation. (See Module 32 for more details on long-term potentiation.)

repetitive transcranial magnetic stimulation (rTMS) the application of repeated pulses of magnetic energy to the brain; used to stimulate or suppress brain activity.

FYI

A meta-analysis of 17 clinical experiments found that one other stimulation procedure alleviates depression: massage therapy (Hou et al., 2010).

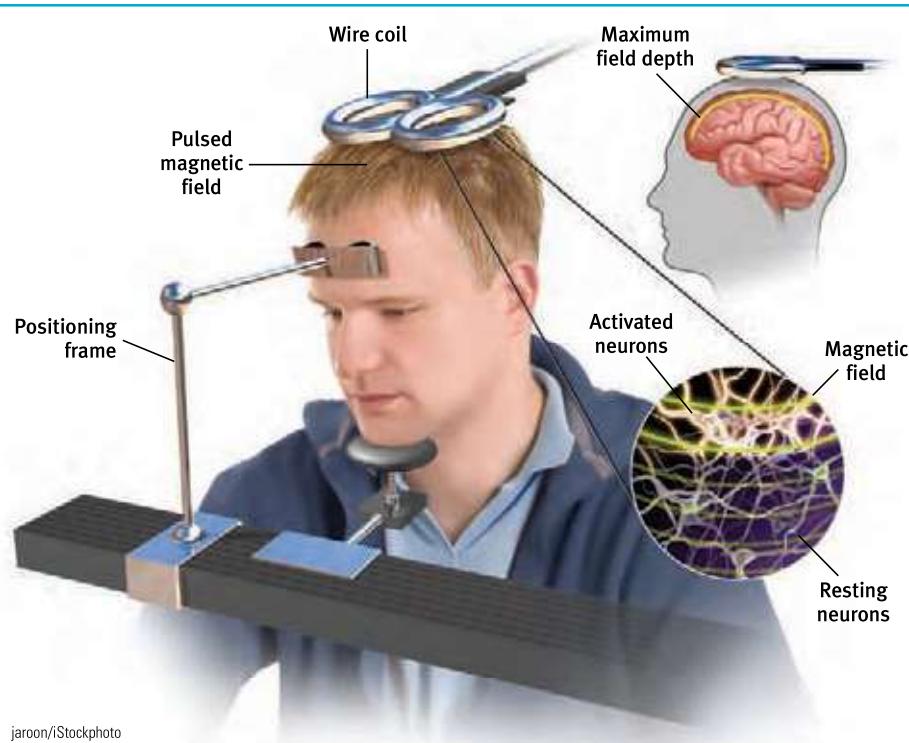


Figure 73.3

Magnets for the mind Repetitive transcranial magnetic stimulation (rTMS) sends a painless magnetic field through the skull to the surface of the cortex. Pulses can be used to stimulate or dampen activity in various cortical areas. (From George, 2003.)

jaroon/iStockphoto

DEEP-BRAIN STIMULATION

Other patients whose depression has resisted both drugs that flood the body and ECT that jolts at least half the brain have benefited from an experimental treatment pinpointed at a depression center in the brain. Neuroscientist Helen Mayberg and her colleagues (2005, 2006, 2007, 2009) have been focusing on a neural hub that bridges the thinking frontal lobes to the limbic system. This area, which is overactive in the brain of a depressed or temporarily sad person, calms when treated by ECT or antidepressants. To experimentally excite neurons that inhibit this negative emotion-feeding activity, Mayberg drew upon the deep-brain stimulation technology sometimes used to treat Parkinson's tremors. Among an initial 20 patients receiving implanted electrodes and a pacemaker stimulator, 12 experienced relief, which was sustained over three to six years of follow-up (Kennedy et al., 2011).

A depression switch?

By comparing the brains of patients with and without depression, researcher Helen Mayberg identified a brain area that appears active in people who are depressed or sad, and whose activity may be calmed by deep-brain stimulation.

psychosurgery surgery that removes or destroys brain tissue in an effort to change behavior.

lobotomy a psychosurgical procedure once used to calm uncontrollably emotional or violent patients. The procedure cut the nerves connecting the frontal lobes to the emotion-controlling centers of the inner brain.



© Erik S. Lesser

Some felt suddenly more aware and became more talkative and engaged; others improved only slightly if at all. Future research will explore whether Mayberg has discovered a switch that can lift depression. Other researchers are following up on reports that deep-brain stimulation can offer relief to people with obsessive-compulsive disorder (Rabins et al., 2009).



Failed lobotomy This 1940 photo shows Rosemary Kennedy (center) at age 22 with brother (and future U.S. president) John and sister Jean. A year later her father, on medical advice, approved a lobotomy that was promised to control her reportedly violent mood swings. The procedure left her confined to a hospital with an infantile mentality until her death in 2005 at age 86.

Psychosurgery

Because its effects are irreversible, **psychosurgery**—surgery that removes or destroys brain tissue—is the most drastic and the least-used biomedical intervention for changing behavior. In the 1930s, Portuguese physician Egas Moniz developed what became the best-known psychosurgical operation: the **lobotomy**. Moniz found that cutting the nerves connecting the frontal lobes with the emotion-controlling centers of the inner brain calmed uncontrollably emotional and violent patients. In what would later become a crude but easy and inexpensive procedure that took only about 10 minutes, a neurosurgeon would shock the patient into a coma, hammer an icepick-like instrument through each eye socket into the brain, and then wiggle it to sever connections running up to the frontal lobes. Between 1936 and 1954, tens of thousands of severely disturbed people were “lobotomized” (Valenstein, 1986).

Although the intention was simply to disconnect emotion from thought, a lobotomy’s effect was often more drastic: It usually decreased the person’s misery or tension, but also produced a permanently lethargic, immature, uncreative person. During the 1950s, after some 35,000 people had been lobotomized in the United States alone, calming drugs became available and psychosurgery was largely abandoned. Today, lobotomies are history. But more precise, microscale psychosurgery is sometimes used in extreme cases. For example, if a patient suffers uncontrollable seizures, surgeons can deactivate the specific nerve clusters that cause or transmit the convulsions. MRI-guided precision surgery is also occasionally done to cut the circuits involved in severe obsessive-compulsive disorder (Carey, 2009, 2011; Sachdev & Sachdev, 1997). Because these procedures are irreversible, they are controversial and neurosurgeons perform them only as a last resort.

Therapeutic Lifestyle Change

73-3 How, by taking care of themselves with a healthy lifestyle, might people find some relief from depression, and how does this reflect our being biopsychosocial systems?

The effectiveness of the biomedical therapies reminds us of a fundamental lesson: We find it convenient to talk of separate psychological and biological influences, but everything psychological is also biological (**FIGURE 73.4**). Every thought and feeling depends on the

functioning brain. Every creative idea, every moment of joy or anger, every period of depression emerges from the electrochemical activity of the living brain. The influence is two-way: When psychotherapy relieves obsessive-compulsive behavior, PET scans reveal a calmer brain (Schwartz et al., 1996).

Anxiety disorders, obsessive-compulsive disorder, posttraumatic stress disorder, major depression, bipolar disorder, and schizophrenia are all biological events. As we have seen over and again, *a human being is an integrated biopsychosocial system*. For years, we have considered the health of our bodies and minds separately. That neat separation no longer seems valid. Stress affects body chemistry and health. And chemical imbalances, whatever their cause, can produce schizophrenia, depression, and other mental disorders.

That lesson is being applied by Stephen Ilardi (2009) in training seminars promoting *therapeutic lifestyle change*. Human brains and bodies were designed for physical activity and social engagement, they note. Our ancestors hunted, gathered, and built in groups, with little evidence of disabling depression. Indeed, those whose way of life entails strenuous physical activity, strong community ties, sunlight exposure, and plenty of sleep (think of foraging bands in Papua New Guinea, or Amish farming communities in North America) rarely experience depression. For both children and adults, outdoor activity in natural environments—perhaps a walk in the woods—reduces stress and promotes health (NEEF, 2011; Phillips, 2011). “Simply put: humans were never designed for the sedentary, disengaged, socially isolated, poorly nourished, sleep-deprived pace of twenty-first-century American life.”

The Ilardi team was also impressed by research showing that regular aerobic exercise and a complete night’s sleep boost mood and energy. So they invited small groups of people with depression to undergo a 12-week training program with the following goals:

- *Aerobic exercise*, 30 minutes a day, at least 3 times weekly (increasing fitness and vitality, stimulating endorphins)
- *Adequate sleep*, with a goal of 7 to 8 hours a night (increasing energy and alertness, boosting immunity)
- *Light exposure*, at least 30 minutes each morning with a light box (amplifying arousal, influencing hormones)
- *Social connection*, with less alone time and at least two meaningful social engagements weekly (satisfying the human need to belong)
- *Antirumination*, by identifying and redirecting negative thoughts (enhancing positive thinking)
- *Nutritional supplements*, including a daily fish oil supplement with omega-3 fatty acids (supporting healthy brain functioning)

In one study of 74 people, 77 percent of those who completed the program experienced relief from depressive symptoms, compared with 19 percent in those assigned to a treatment-as-usual control condition. Future research will seek to replicate this striking result of lifestyle change, and also to identify which of the treatment components (additively or in some combination) produce the therapeutic effect. In the meantime, there seems little reason to doubt the truth of the Latin adage, *Mens sana in corpore sano*: “A healthy mind in a healthy body.”

TABLE 73.1 on the next page summarizes some aspects of the biomedical therapies we’ve discussed.

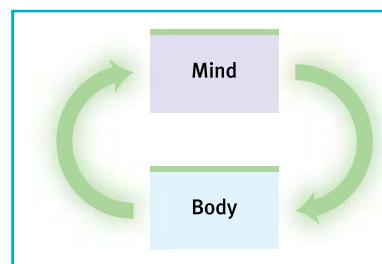


Figure 73.4

Mind-body interaction The biomedical therapies assume that mind and body are a unit: Affect one and you will affect the other.



Sturti/Getty Images

Healthier lifestyles Researchers suggest that therapeutic lifestyle change can be an effective antidote for people with depression. The changes include managing sleep time, spending more time outdoors (or with a light box), getting more exercise, and developing more social connections.

Table 73.1 Comparing Biomedical Therapies

Therapy	Presumed Problem	Therapy Aim	Therapy Technique
<i>Drug therapies</i>	Neurotransmitter malfunction	Control symptoms of psychological disorders.	Alter brain chemistry through drugs.
<i>Brain stimulation</i>	Severe, “treatment-resistant” depression	Alleviate depression that is unresponsive to drug therapy.	Stimulate brain through electroconvulsive shock, magnetic impulses, or deep-brain stimulation.
<i>Psychosurgery</i>	Brain malfunction	Relieve severe disorders.	Remove or destroy brain tissue.
<i>Therapeutic lifestyle change</i>	Stress and unhealthy lifestyle	Restore healthy biological state.	Alter lifestyle through adequate exercise, sleep, and other changes.

Before You Move On

► ASK YOURSELF

If a troubled friend asked, how would you summarize the available biomedical therapies?

► TEST YOURSELF

How do researchers evaluate the effectiveness of particular drug therapies?

Answers to the Test Yourself questions can be found in Appendix E at the end of the book.

Module 73 Review

73-1

What are the drug therapies? How do double-blind studies help researchers evaluate a drug’s effectiveness?

- *Psychopharmacology*, the study of drug effects on mind and behavior, has helped make drug therapy the most widely used biomedical therapy.
- *Antipsychotic drugs*, used in treating schizophrenia, block dopamine activity. Side effects may include tardive dyskinesia (with involuntary movements of facial muscles, tongue, and limbs) or increased risk of obesity and diabetes.
- *Antianxiety drugs*, which depress central nervous system activity, are used to treat anxiety disorders, obsessive-compulsive disorder, and posttraumatic stress disorder. These drugs can be physically and psychologically addictive.
- *Antidepressant drugs*, which increase the availability of serotonin and norepinephrine, are used for depression, with modest effectiveness beyond that of placebo drugs. The antidepressants known as selective serotonin reuptake inhibitors (SSRIs) are now used to treat other disorders, including strokes, anxiety disorders, obsessive-compulsive disorder, and posttraumatic stress disorder.
- Lithium and Depakote are mood stabilizers prescribed for those with bipolar disorder.
- Studies may use a double-blind procedure to avoid the placebo effect and researchers’ bias.

73-2

How are brain stimulation and psychosurgery used in treating specific disorders?

- *Electroconvulsive therapy (ECT)*, in which a brief electric current is sent through the brain of an anesthetized patient, is an effective treatment for severely depressed people who have not responded to other therapy.
- Newer alternative treatments for depression include *repetitive transcranial magnetic stimulation (rTMS)* and, in preliminary clinical experiments, deep-brain stimulation that calms an overactive brain region linked with negative emotions.
- *Psychosurgery* removes or destroys brain tissue in hopes of modifying behavior.
 - Radical psychosurgical procedures such as the *lobotomy* were once popular, but neurosurgeons now rarely perform brain surgery to change behavior or moods.
 - Brain surgery is a last-resort treatment because its effects are irreversible.

73-3

How, by taking care of themselves with a healthy lifestyle, might people find some relief from depression, and how does this reflect our being biopsychosocial systems?

- Depressed people who undergo a program of aerobic exercise, adequate sleep, light exposure, social engagement, negative-thought reduction, and better nutrition often gain some relief.
- In our integrated biopsychosocial system, stress affects our body chemistry and health; chemical imbalances can produce depression; and social support and other lifestyle changes can lead to relief of symptoms.

Multiple-Choice Questions

1. Which neurotransmitter is affected by antipsychotic medications?
 - Epinephrine
 - Dopamine
 - Norepinephrine
 - Acetylcholine
 - Serotonin
2. Which of the following is most effectively treated with electroconvulsive therapy (ECT)?
 - Psychosis
 - Schizophrenia
 - Obsessive-compulsive disorder
 - Depression
 - Generalized anxiety disorder

3. Which of the following was the purpose of lobotomies?
 - To alleviate depression
 - To minimize delusions and hallucinations
 - To “erase” troubling memories
 - To recover repressed memories
 - To separate the reasoning centers of the brain from the emotional centers

Practice FRQs

1. Identify the category of drugs used to treat schizophrenia and the category of drugs used to treat obsessive-compulsive disorder. Then explain what each of these two categories of drugs does inside the brain.

2. Briefly describe four therapeutic lifestyle changes advocated by Stephen Ilardi, and describe their benefits.
(4 points)

Answer

2 points: Antipsychotic medications are the preferred drug treatment for schizophrenia. They work by blocking dopamine receptors.

2 points: Antidepressant medications are the preferred drug treatment for obsessive-compulsive disorder. They work by blocking the reuptake of serotonin.