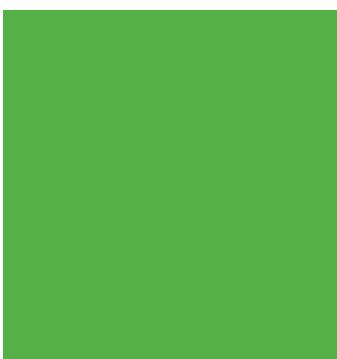
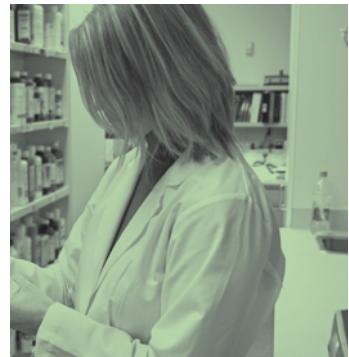


BEST BUY DRUGS™

The Antidepressants: Treating Depression

Comparing Effectiveness, Safety, and Price



Our Recommendations

Antidepressants can improve the symptoms of depression, but they can also have serious side effects. So you don't want to take one if you don't have to. The information in this report can help you decide—with your doctor or mental-health professional—whether an antidepressant might be right for you, and if so, which one.

Retail prices for commonly prescribed antidepressants range from about \$20 a month to more than \$400 a month. This report shows how you can save \$100 a month (\$1,200 a year) or more if you have to take an antidepressant regularly.

Here's a thumbnail guide to help you decide if you should consider medication:

- If you are feeling "down" or "blue"—for example, in the wake of a stressful life event, such as the death of someone close, a divorce, or a job loss—you may have mild depression. That's especially likely if you are still able to function and have no history of depression. Your symptoms will usually ease on their own within a few months, aided, if necessary, by family support and professional counseling, without the use of an antidepressant.
- If you are not functioning well and your symptoms (see page 6) have lasted for a few weeks, you are more likely to be a candidate for an antidepressant. That is especially true if there is no apparent reason for you to be depressed or if you have had repeated episodes of depression.

Your doctor may not be aware of price differences between medicines, so be cautious if he or she offers you a free sample of an antidepressant that they happen to have in their office. While the free price may be tempting, the drug may not be the right one for you. Individual needs vary and people respond to antidepressants quite differently. Some have to try two or three antidepressants before finding one that works.

Taking effectiveness, safety, side effects, and cost into account, we have chosen five *Consumer Reports Health Best Buy Drugs* as initial options to consider for depression:

- Generic bupropion
- Generic citalopram
- Generic fluoxetine
- Generic paroxetine
- Generic sertraline

These medicines are substantially less expensive than brand-name antidepressants and are as equally effective. If you have drug coverage, talk with your doctor about finding the antidepressant that has the lowest out-of-pocket cost under your insurance plan.

Other important considerations:

- Start with a low dose. If it doesn't help within six to eight weeks or causes side effects, talk with your doctor about a higher dose or switching to another antidepressant.
- If you took an antidepressant before and it worked, you may want to stick with that one.
- Tell your doctor whether the differences in side effects among the antidepressants are important to you. (See page 10.)

This report was updated in April 2011.

Welcome

This report on prescription drugs to treat depression is part of a Consumers Union and *Consumer Reports* project to help you find safe, effective medicines that give you the most value for your health-care dollar. To learn more about the project and other drugs we've evaluated, go to ConsumerReportsHealth.org/BestBuyDrugs.

We focus on the most commonly prescribed antidepressants, now taken by tens of millions of Americans every day to treat depression and other mood and emotional disorders. In 2010, antidepressants were the second most commonly prescribed class of drugs in the U.S., according to IMS Health. The first of these so-called "second generation antidepressants"—bupropion (Wellbutrin)—became available in 1985. Prozac, approved in 1987, is also in this class. Twelve were included in our analysis. A new antidepressant, vilazodone (Viibryd), was approved by the FDA in January 2011, too late to be included in our analysis. *Note: Nefazodone (Serzone) has been associated with reports of severe liver damage. In 2004, the manufacturers of the branded version stopped producing it. The generic version of this drug is still available. You should talk with your doctor if you are taking nefazodone.* (We discuss this drug in more detail on page 12). The 12 are:

Generic Name	Brand Name(s)	Available as a generic?
1. Bupropion	Wellbutrin, Wellbutrin SR, Budeprion SR, Wellbutrin XL	Yes
2. Citalopram	Celexa	Yes
3. Desvenlafaxine	Pristiq	No
4. Duloxetine	Cymbalta	No
5. Escitalopram	Lexapro	No
6. Fluoxetine	Prozac, Prozac Weekly, Sarafem	Yes
7. Fluvoxamine	Luvox, Luvox CR	Yes
8. Mirtazapine	Remeron	Yes
9. Nefazodone	Brand name no longer on the market	Yes
10. Paroxetine	Paxil, Paxil CR, Pexeva	Yes
11. Sertraline	Zoloft	Yes
12. Venlafaxine	Effexor, Effexor XR	Yes

These medicines were a significant advance over drugs used to treat depression up to 1985, for one chief reason: They caused fewer serious side effects. Notably, however, they are no more effective than the older medicines, many of which are still available and used with success in some circumstances.

Nine of the 12 medicines listed on page 4—bupropion, citalopram, fluoxetine, fluvoxamine, mirtazapine, nefazodone, paroxetine, sertraline, and venlafaxine—are now available as less costly generic drugs in some dosage forms. Several are also available in liquid formulations.

Many of the second-generation antidepressants have been approved for the treatment of other psychiatric conditions besides depression, such as anxiety, obsessive-compulsive disorder, panic disorder, social phobia, and post-traumatic stress disorder. In this report, we focus only on their use in the treatment of depression in adults, for which most antidepressant prescriptions are written.

Other treatments for depression are available, most notably psychotherapy or other professional counseling, and electroconvulsive therapy. In addition, some people with severe depression are hospitalized to undergo intensive treatment. This report does not evaluate those treatments or compare them with the use of antidepressants for outpatients. Table 2 on pages 7 and 8 presents treatment options for depression.

In any given year, nearly 7 percent of the U.S. adult population (18 and over)—some 14.8 million people—will have a depressive illness that warrants treatment. For reasons that remain unclear, women appear to develop depression at about twice the rate as men. About 4 percent of adolescents and 2 percent of children between the ages of 6 and 12 develop depression. The condition is rare in children under 6 years of age. Evidence indicates that today only about 30 percent to 40 percent of the people with major depression get adequate treatment, meaning that the majority are not getting the therapies that could bring them relief.

This report is based on a comprehensive expert analysis of the medical evidence on antidepressants. There's more information on page 22 and at ConsumerReportsHealth.org/BestBuyDrugs on how we conducted our evaluation.

This report was updated in April 2011.



What Are Antidepressants and Who Needs Them?

Antidepressants are thought to work primarily by altering levels of chemicals in the brain called neurotransmitters. The most important of these are serotonin, norepinephrine, and dopamine.

There are several different types of antidepressants among the 12 drugs listed on page 4. The main group of second-generation antidepressants is called the “selective serotonin reuptake inhibitors,” or SSRIs for short. As the name implies, they appear to affect mainly serotonin (a neurotransmitter) levels in the brain. This group includes citalopram (Celexa), escitalopram (Lexapro), fluoxetine (Prozac), fluvoxamine* (Luvox, Luvox CR), paroxetine (Paxil), and sertraline (Zoloft). *(Note that while fluvoxamine is an SSRI, it is not FDA approved for treating depression. It is only approved for treating social anxiety disorder and obsessive-compulsive disorder, but doctors do prescribe it “off label” to treat depression.

The other antidepressants—bupropion (Wellbutrin), desvenlafaxine (Pristiq), duloxetine (Cymbalta), mirtazapine (Remeron), and venlafaxine (Effexor)—appear to work by affecting brain levels of one, two, or possibly three neurotransmitters. Knowing this can help you understand why your doctor may prescribe another antidepressant for you if the first one doesn’t work. Our brain chemistries may be just as unique as our appearances and personalities.

Certain generic antidepressants cost as little as \$4 for a month’s supply through generic drug programs run by major chain stores, such as Kroger, Sam’s Club, Target, and Walmart. For an even better bargain, you can obtain a three-month supply for \$10 through these programs. We note in the price chart starting on page 14 which generic antidepressants are available through these programs. Some stores, such as CVS and Walgreens, require a membership fee to participate and might charge higher prices. There might be other restrictions too, so check the details carefully to make sure your drug and dose are covered.

Being sad, blue, or unhappy at times is a normal part of life. But being seriously “down” or

depressed for a prolonged period—more than two weeks or so—may not be normal and can be helped by professional attention. Depression is not simply unhappiness. Indeed, prolonged depression should be viewed as an illness like any other, no different than an infection, cancer, or heart disease. The symptoms are distinct (see Table 1) and can be triggered by adverse life events or arise for no apparent reason; both ways feel equally painful and the biological changes in the body and brain are the same.

Depression can be recurrent and chronic, and it can run in families as a result of genetic inheritance. And no matter what the cause, if left untreated, it can be deadly. People with untreated depression are

Table 1. The Symptoms of Depression

People experience depression symptoms differently. But generally, if you have five or more of the following symptoms persistently for several weeks or longer, you may have serious or so-called “major” depression that could warrant treatment with medication. That is especially likely if you have a history of depression and there has been no “triggering” event or trauma in your life, such as a death in the family, a job loss, a divorce, or marital problems.

Feelings of unhappiness, hopelessness, pessimism

Feelings of low self-esteem, worthlessness, guilt

Loss of interest or pleasure in hobbies, work, and activities you usually enjoy, including sex

Decreased energy, fatigue, feeling “slowed down”

Insomnia, early-morning awakening, or oversleeping

Difficulty concentrating, remembering, making decisions

Appetite changes (eating significantly less or more)

Irritability, restlessness, hostility

Feeling anxious; low tolerance for stress

Recurrent thoughts of death or suicide; suicide attempts

Unexplained physical symptoms or pains—such as headaches or chronic indigestion—that do not respond to treatment

at much greater risk of premature death, not only from suicide but also from a host of other illnesses.

The difficulty comes in determining the difference between a normal slump, even one that may last a while, and serious depression. Table 2, starting below, can help you determine the type of depression you may have. It is a brief guide to the different kinds and levels of depression and treatment options.

The bottom line is this:

- If you have some of the symptoms in Table 1 but they are not particularly severe and you are functioning OK in life, you may have mild depression. If your “blues” seem to be triggered by a specific event, trauma, or transition in your life (see Table 2) but you have no history of depression, you may also have a mild “situational” depression. In both cases, you should think twice before taking an antidepressant. Experts believe that too many people whose temporary depression can resolve on its own in a few weeks are prescribed an antidepressant.
- If you have five or more of the symptoms in Table 1, for most of the time almost everyday for two weeks or longer—and you are decidedly not functioning well in life—you are likely a candidate for an antidepressant. This is true even if your depression was triggered by a life event or trauma, and is especially true if you have had previous episodes of depression. Millions of people who have such symptoms are not getting the treatment they need.

- If you have had several of the symptoms in Table 1 at a low-grade level for months, you should see a doctor or therapist. You may want to try psychotherapy or other counseling first, especially if your symptoms can be linked to a definable stressor (such as marital discord, an unhappy work situation, or the illness of someone you care about). If that doesn’t help, consider an antidepressant.

Some studies have found—and many experts believe—that antidepressants often work best in combination with psychotherapy lasting at least several months. But antidepressants on their own play an important role in our culture. That’s because not everyone has access to, can afford, or accepts that psychotherapy can help.

On the other hand, many people prefer to try psychotherapy alone, or they are afraid of the side effects and skeptical of the benefits of antidepressant drugs. We would encourage you to seek out whichever type of treatment or combination of treatments you are most comfortable with. Getting some treatment, even if it is psychotherapy alone, is better than getting no treatment at all.

Table 2. Types and Levels of Depression

Level	Symptoms/Comments	Treatment Options
“Normal” sadness	<ul style="list-style-type: none">■ Feeling blue or down, usually not more than once or twice a month■ No significant disruption in normal life or ability to work■ Symptoms more likely if tired or stressed■ Any of the symptoms in Table 1 (except thoughts of suicide) may be present, but usually not for longer than a couple of days	<ul style="list-style-type: none">■ No treatment needed; goes away on its own■ Support from family and friends, and social activity can help alleviate symptoms

Table 2. Types and Levels of Depression (continued)

Level	Symptoms/Comments	Treatment Options
"Situational" or "reactive" sadness, grief, or depression	<ul style="list-style-type: none">■ In response to a life event, change, transition or stressor, such as divorce, job loss, a move, marital discord, or the death of a loved one■ Any of the symptoms in Table 1 can be present, including thoughts of suicide■ May affect people who have no history of depression■ Can also be triggered by a medical problem, particularly after a heart attack, open-heart surgery, a stroke, or a diagnosis of cancer or Parkinson's disease■ Certain medicines can also trigger it, including beta-blockers.	<ul style="list-style-type: none">■ None if symptoms ease or decline■ Counseling, psychotherapy■ Family and social support■ Sleep aid if needed for short periods■ Antidepressants, but only if symptoms persist or interfere with normal life for at least two weeks
Mild or low-grade depression, also called dysthymia or chronic depression	<ul style="list-style-type: none">■ Presence of some of the symptoms in Table 1 but at a low level. Symptoms may change or shift over time■ Still able to function but rarely feel happy or satisfied■ Reduced pleasure in life; vulnerability to stress■ May be chronic or long-term, lasting months■ Prone to major depression	<ul style="list-style-type: none">■ Counseling or psychotherapy; may take time to feel better■ Family and social support■ Antidepressants if symptoms worsen, if ability to function declines, or if psychotherapy alone fails to relieve symptoms
Major depression	<ul style="list-style-type: none">■ Presence or worsening of five or more of the symptoms in Table 1 for two weeks or longer■ Moderate to severe symptoms■ Disruption in normal life, ability to work and function, and engage in normal social contact and activities■ May be recurrent, with history of past depressions■ May require ongoing treatment even after acute episode subsides■ May require hospitalization or a brief stay in a clinic	<ul style="list-style-type: none">■ Can try counseling and psychotherapy first, without antidepressants. Some people respond, but evidence is mixed on success. Improvement can take time. Can be costly if insurance coverage is lacking■ Antidepressants alone can produce good but variable responses; one-third of people get little relief. Most drugs take four to six weeks to take effect■ Some people respond better to a combination of psychotherapy and antidepressants, but evidence is mixed on the advantage■ Electroconvulsive therapy can be an option if drugs fail to provide any relief and symptoms are severe and chronic, or for people who can't take antidepressants. Used sparingly these days.

Choosing an Antidepressant – Our *Best Buy* Picks

Second-generation antidepressants have been proven to help relieve the symptoms of depression in 55 to 70 percent of the people who take them. None have clearly been shown to be any more effective in relieving symptoms or bringing about a full recovery than any other when taken in comparable doses.

However, a recent meta-analysis—the combined results of many different studies—found that escitalopram and sertraline were superior to other second-generation antidepressants when considering both effectiveness and safety. But you should know that some experts have disagreed with this conclusion, pointing out that the study had several limitations that make the results unreliable. For example, it combined the results of several studies that measured patient responses to the medicines using different methods, so they say it is problematic to lump the results together. And while a few of the studies included in the analysis were done well, others were of lower quality. Another weakness is that the studies involved patients who may have varied significantly in terms of the severity of their depression, such as those treated in a hospital, those treated on an outpatient basis, elderly patients, and patients who also suffered from anxiety.

Other analyses—including the comparative effectiveness review conducted by researchers with the Drug Effectiveness Review Project at Oregon's Health & Science University that this *Best Buy Drugs* report is based upon—have concluded that no one second-generation antidepressant is clearly superior to another. That conclusion was also echoed by the American College of Physicians' current depression treatment guidelines, which recommend that antidepressants be chosen based on cost and the known differences in side effects.

Antidepressants differ significantly in the side effects they cause, and retail prices vary from about \$20 a month to more than \$400 a month (see Table 5 beginning on page 14).

The vast majority of people who take antidepressants (90 percent) experience at least one side effect. Most tolerate mild side effects without much difficulty. But a sizable minority—up to 30 per-

cent—find the side effects so intolerable that they stop taking the medicine.

Table 3 lists some of the side effects of antidepressants. Those related to one's sex life are many people's chief concern, but are not dangerous. Pharmaceutical company information and some studies indicate that between 5 to 15 percent of the people who take antidepressants can expect to experience a decline in interest in sex or difficulty reaching erection or orgasm. But other longer-term studies and some surveys, including one of the largest to date, conducted by Consumers Union and published in the June 2010 issue of *Consumer Reports* found that 23 to 36 percent of respondents had sexual problems associated with the use of some antidepressants.

Increases in agitation, anxiety, and suicide are more worrisome side effects, although they are relatively rare. *If you have such symptoms, you should contact your doctor immediately.* Suicide is rare, occurring

Table 3. Side Effects

Relatively minor side effects that usually go away in time or are short-lived:

- Diarrhea
- Dizziness
- Dry mouth
- Headaches
- Nausea
- Sweating
- Tremors

More serious side effects that can be annoying or dangerous (if they persist, you may need to switch drugs):

- Drowsiness or confusion
- Feeling of panic or dread
- Increased thoughts of suicide
- Insomnia
- Loss of libido, difficulty achieving erections, inability to reach orgasm
- Nervousness and agitation
- Weight gain

Table 4. Effectiveness and Tolerability of Antidepressants

Generic Name	Brand Name	Response to Treatment (percent) ¹	Discontinuation Because of Side Effects (percent) ²	Comments/Special Notes ³
Bupropion	Wellbutrin	55-70	6-8	<ul style="list-style-type: none"> ■ Lowest rate of sexual side effects ■ Risk of seizures at high doses
Citalopram	Celexa	55-70	5-9	None
Desvenlafaxine	Pristiq	55-70	6-22	<ul style="list-style-type: none"> ■ May increase blood pressure
Duloxetine	Cymbalta	55-70	3-13	<ul style="list-style-type: none"> ■ Has been associated with liver failure, including some cases that were fatal ■ May increase blood pressure
Escitalopram	Lexapro	55-70	3-10	<ul style="list-style-type: none"> ■ FDA approved for use by teenagers
Fluoxetine	Prozac, Sarafem	55-70	7-14	<ul style="list-style-type: none"> ■ FDA approved for use by children and teenagers
Fluvoxamine	Luvox CR	55-70	N/A	<ul style="list-style-type: none"> ■ Not FDA approved for treatment of depression; used "off label" for this illness. ■ Higher rate of side effects and drug interactions compared with several other SSRIs in one key study⁴
Mirtazapine	Remeron	55-70	10-17	<ul style="list-style-type: none"> ■ May have faster onset of action (See page 19) ■ Higher risk of weight gain
Nefazodone	Brand drug no longer manufactured; generic still available	47-59	Insufficient data	<ul style="list-style-type: none"> ■ Reports of liver failure leading to death or liver transplant (See page 12)
Paroxetine	Paxil	55-70	7-16	<ul style="list-style-type: none"> ■ Higher risk of sexual side effects compared with some other antidepressants⁵ ■ Higher risk of sweating
Sertraline	Zoloft	55-70	7-14	<ul style="list-style-type: none"> ■ Higher rate of diarrhea
Venlafaxine	Effexor	55-70	9-16	<ul style="list-style-type: none"> ■ Substantially higher rate of nausea and vomiting ■ May increase blood pressure and heart rate

1. Response defined as at least 50 percent reduction in depression symptoms on behavioral and emotion rating scales.

2. Numbers are the lower and upper quartile percentile of discontinuation rates from studies.

3. Based on multiple studies and combined analysis of studies, or from the drug's product label information. Statements made in reference to all other drugs listed except where noted. List is not intended to be comprehensive.

4. The other SSRIs were fluoxetine (Prozac), paroxetine (Paxil), and sertraline (Zoloft).

5. Higher than fluoxetine (Prozac), sertraline (Zoloft), and fluvoxamine (Luvox CR) in controlled trials. Highest rate of sexual side effects (53 percent) in a 2004 Consumer Reports survey of 1,664 people when compared with bupropion (Wellbutrin) (21 percent); fluoxetine (Prozac) (41 percent); citalopram (Celexa) (45 percent); sertraline (Zoloft) (46 percent); and venlafaxine (Effexor) (51 percent).

in approximately 1 in 8,000 people who take antidepressants. Suicidal thoughts, however, are more common, occurring in 1 in 166. Adolescents and young adults have the most risk of these serious side effects, while recent studies indicate that older adults who take antidepressants do not face an increased risk.

Observational studies indicate antidepressants may increase the risk of diabetes, fractures of the hip or other bones, and gastrointestinal bleeding, especially when used with non-steroidal anti-inflammatory drugs.

Talk with your doctor about the difference between antidepressants in terms of side effects. This may well affect your choice. Table 4, on page 10, summarizes the evidence on the effectiveness of antidepressants and the rate at which people stopped taking each antidepressant because of side effects. The table also has comments on some of the strengths and identified problems with each drug.

When you talk with a doctor about the antidepressant and dosage that is right for you, you should discuss:

- The scope and severity of your symptoms, especially any thoughts of suicide. Be specific; consider writing down symptoms before your discussion
- Any prior use of and response to an antidepressant or drug to treat anxiety or other psychiatric illness
- Other treatments you may want or plan to pursue, such as psychotherapy or counseling, or dietary supplements such as St. John's wort
- Side effects and dosage that may reduce the risk of them
- Side effects you fear or would prefer to avoid
- The rate at which people stop taking various antidepressants, as listed in Table 4 on page 10.
- The importance to you of how quickly the drug yields a response vs. the risk of side effects
- Cost (See Table 5 on pages 14 to 17)

- Your insurance coverage (if you have it) and which drugs may be "preferred" under that plan, for which you may pay less out-of-pocket

Taking the evidence on effectiveness, safety, side effects, and cost into account, we have chosen five *Consumer Reports Health Best Buy Drugs* as initial options to consider:

- Generic bupropion
- Generic citalopram
- Generic fluoxetine
- Generic paroxetine
- Generic sertraline

These medicines are substantially less expensive than the brand-name antidepressants we evaluate in this report, and are as effective and safe as any of them for initial treatment. They are also affordable options if you need to try another antidepressant because the first one your doctor prescribed did not help or caused unacceptable side effects. Citalopram, fluoxetine, paroxetine, and sertraline are also available in low-cost liquid formulations. (Escitalopram (Lexapro) is also available as a liquid, but it is more expensive.)

All five are generic drugs. There is no reason to take the brand-name version of any of those medicines. There are other generics available at comparable cost to our five *Best Buy Drugs*. (See Table 5.) Our choice of the five was based on the strength of the evidence for effectiveness, the risk of side effects, the risk of having to discontinue the drug, and other unique factors as identified in Table 4.

Several antidepressants discussed in this report are approved to treat people diagnosed with a combination of anxiety and depression. Our *Best Buy* picks are for those whose diagnosis is depression only (though some mild anxiety symptoms may be present). Talk with your doctor about the best medicine for you if he or she identifies you as having a combined depression/anxiety illness.

Be aware that there is a widely accepted practice in prescribing antidepressants. Doctors will—and

should—try the lowest dose possible initially. They will then monitor your response—mainly how you feel, how you are functioning, your symptoms, and any side effects. It's rare for antidepressants to have any immediate effect. Most people do not feel any different for several weeks, and a response can take as long as six weeks. Your response may build over time, too.

Response is also quite subjective; that is, some people are pleased with any improvement at all while others are not satisfied until they feel a substantial reduction in their symptoms.

If you do not respond to the first drug tried—and studies suggest that about 30 to 40 percent of the people don't—your doctor can (a) increase the dose of that drug or (b) switch you to another one. Typically, he or she will increase the dose first, unless you have had side effects that are severe or unacceptable. They can then switch you to a comparable or perhaps slightly higher dose of another antidepressant. It's not uncommon to try as many as three or even four antidepressants before you find one that works. By that time, your symptoms may be waning anyway.

Once you and your doctor find an antidepressant that works for you, your doctor may increase the dose to see if you can tolerate it and experience more improvement without side effects.

Venlafaxine (Effexor) is more often used as a “second line” drug in people who have not responded to other antidepressants, particularly those drugs in the subclass known as selective serotonin reuptake inhibitors, or SSRIs. If your doctor recommends this drug, you should know that it may increase blood pressure and heart rate. So if you start taking venlafaxine, your blood pressure should be monitored. If you do experience a rise in blood pressure that persists, you may have to either lower the dose or stop taking the drug. And if you have other conditions, including an overactive thyroid, heart failure or have recently had a heart attack—any of which can make you particularly vulnerable to problems from an increased heart rate—you should avoid the drug.

Given those risks, we advise against venlafaxine as initial therapy. In addition, we recommend that

people with high blood pressure and heart disease avoid the medicine. If you are taking venlafaxine, you should talk with your doctor.

Desvenlafaxine (Pristiq) and duloxetine (Cymbalta), the newest antidepressants, are chemically similar to venlafaxine. Both can increase blood pressure, but they have not been linked to an elevated heart rate. Desvenlafaxine was approved in 2008, so it does not have the long track record of some of the other antidepressants, and its safety profile is not fully established. We recommend caution.

Also, you should know that there have been reports of people taking nefazodone who suffered liver failure that resulted in death or the need for a liver transplant. The available studies involving nefazodone are insufficient to determine if it does or does not cause liver damage. The maker of the brand-name version, Serzone, discontinued the drug in 2004 after it was associated with reports of liver toxicity, but generic versions of the drug are still available. An advantage of nefazodone is that it carries a lower risk of sleep problems and sexual dysfunction side effects than the other antidepressants. But given the potential seriousness of the liver problems, we recommend avoiding nefazodone if at all possible until this important safety issue is resolved. If the antidepressant you're taking is causing you sleep disturbances or sexual side effects, we advise you to work with your doctor to find another antidepressant (other than nefazodone) that you tolerate better, or other solutions to alleviate these problems.

When taking an antidepressant, you should:

- Never take more than specified without telling your doctor. This raises your risk of side effects, and most notably could trigger agitation or distressing feelings of anxiety
- Never stop taking it on your own without consulting your doctor. Sudden withdrawal can cause uncomfortable, distressing, and even dangerous symptoms if you have been taking the drug for a while. These include agitation, nervousness, anxiety, tremors, irritability and insomnia, dizziness, and nausea

- When starting an antidepressant (or any new drug, for that matter), always ask about possible drug interactions with medications and dietary supplements you are already taking

Antidepressant Use in Children and Teenagers

The FDA now requires drug makers to put warnings (detailed descriptions of the medicine's intended use, safety, and efficacy) on labels for all antidepressants, stating that an increased risk of suicidal thinking may occur in children, teenagers, and young adults taking an antidepressant. This action took place after studies found that there was double the risk of suicidal thoughts in children and teenagers who took the drugs compared with those who took dummy pills. Such thoughts were rare, occurring in about 4 out of every 100 children and teenagers, and there were no actual suicides in the studies the agency reviewed.

The studies were too small to compare the risk between drugs, so the agency decided to require that all antidepressants carry the warning labels and that ads and promotions for the drugs cite this.

Of course, depression itself puts people at much higher risk for suicide, including teenagers, especially if they do not get proper treatment. While the agency now requires a warning of this association for young adults (24 and younger) as well, studies indicate that older adults (65 and older) who take antidepressants have a *reduced* risk of suicide and suicidal thoughts.

The FDA also urged that children and teenagers prescribed antidepressants be monitored by a doctor or mental-health professional much more closely—weekly during the first four weeks of treatment—than was the norm before the findings establishing this alarming link. The FDA has also issued a medication guide on antidepressant medicines that should be given to patients by their physicians.

It is also important that families and caregivers observe patients closely and communicate with their doctors. Parents and caregivers should monitor for clinical worsening, as well as agitation, irritability, and unusual changes in behavior, especially

during the initial few months of antidepressant therapy, or also at times of dosage changes.

Parents who suspect that their children or teenagers may be depressed should seek the help of a doctor or mental-health professional. We advise the following:

- Confirm the diagnosis. Depression can be more difficult to detect in children and teenagers
- Be especially alert to any signs of suicidal thinking or actions
- Consider psychotherapy or counseling
- Consider an antidepressant (fluoxetine to start) if a doctor advises it, especially if other treatments have not helped
- Use antidepressants with caution, and learn about the risks and side effects in children and teenagers

To date, only fluoxetine (Prozac) has been fully tested and proven effective in children. It is FDA approved for use in both children and teens. Escitalopram (Lexapro) is FDA approved for use in teens.

Pill Splitting

You may be able to save money by splitting your antidepressant pills or tablets. As you can see from Table 5, some antidepressants are more expensive at higher doses, but usually not twice as much. And higher doses of some antidepressants cost about the same as a lower dose.

Some antidepressants pills can be safely split. But you should talk with your doctor before you do this. Some people find splitting pills to be confusing or cumbersome to do. Other types of pills, including long-acting, sustained-release, or continuous-delivery pills, should not be split.

If you and your doctor agree that you can safely split your pills, you should use a pill splitter to make certain that the two halves are the same size and will therefore provide you with the correct dose. The devices cost \$5 to \$10 and are widely available.

Table 5. Antidepressant Cost Comparison

Note: If the price box contains a , that indicates the dose of that drug is available for a low monthly cost through programs offered by large chain stores. For example, Kroger, Sam's Club, Target, and Walmart offer a month's supply of selected generic drugs for \$4 or a three-month supply for \$10. Other chain stores, such as Costco, CVS, Kmart, and Walgreens, offer similar programs. Some programs have restrictions or membership fees, so check the details carefully for restrictions and to make sure your drug is covered.

Generic Name and Strength	Brand Name ^A	Frequency of Use ^B	Average Monthly Cost ^c
Bupropion 75 mg tablet	Wellbutrin	Three a day	\$283
 Bupropion 75 mg tablet	Generic	Three a day	\$53
Bupropion 100 mg tablet	Wellbutrin	Three a day	\$360
 Bupropion 100 mg tablet	Generic	Three a day	\$62
Bupropion 100 mg sustained-release tablet	Wellbutrin SR	Two a day	\$254
Bupropion 100 mg sustained-release tablet	Budeprion SR	Two a day	\$94
Bupropion 100 mg sustained-release tablet	Generic	Two a day	\$74
Bupropion 150 mg extended-release tablet	Wellbutrin XL	One a day	\$235
Bupropion 150 mg extended-release tablet	Budeprion XL	One a day	\$131
Bupropion 150 mg extended-release tablet	Generic	One a day	\$122
Bupropion 150 mg sustained-release tablet	Wellbutrin SR	Two a day	\$263
Bupropion 150 mg sustained-release tablet	Budeprion SR	Two a day	\$76
Bupropion 150 mg sustained-release tablet	Generic	Two a day	\$62
Bupropion 200 mg sustained-release tablet	Wellbutrin SR	Two a day	\$499
Bupropion 200 mg sustained-release tablet	Generic	Two a day	\$166
Bupropion 300 mg extended-release tablet	Wellbutrin XL	One a day	\$324
Bupropion 300 mg extended-release tablet	Budeprion XL	One a day	\$118
Bupropion 300 mg extended-release tablet	Generic	One a day	\$120
Bupropion 348 mg extended-release tablet	Applenzin	One a day	\$228
Bupropion 522 mg extended-release tablet	Applenzin	One a day	\$540
Citalopram 10 mg tablet	Celexa	One a day	\$127
 Citalopram 10 mg tablet	Generic	One a day	\$33 
Citalopram 20 mg tablet	Celexa	One a day	\$129
 Citalopram 20 mg tablet	Generic	One a day	\$31 
Citalopram 40 mg tablet	Celexa	One a day	\$143
 Citalopram 40 mg tablet	Generic	One a day	\$38 
Desvenlafaxine 50 mg sustained-release tablet	Pristiq	One a day	\$157

Table 5. Antidepressant Cost Comparison (continued)

Generic Name and Strength	Brand Name ^A	Frequency of Use ^B	Average Monthly Cost ^c
Desvenlafaxine 100 mg sustained-release tablet ^D	Pristiq	One a day	\$157
Duloxetine 20 mg capsule	Cymbalta	One a day	\$166
Duloxetine 30 mg capsule	Cymbalta	One a day	\$181
Duloxetine 60 mg capsule	Cymbalta	One a day	\$181
Escitalopram 5 mg tablet	Lexapro	One a day	\$125
Escitalopram 10 mg tablet	Lexapro	One a day	\$121
Escitalopram 20 mg tablet	Lexapro	One a day	\$124
Fluoxetine 10 mg capsule	Prozac	One a day	\$227
 Fluoxetine 10 mg capsule	Generic	One a day	\$22 
 Fluoxetine 10 mg tablet	Generic	One a day	\$41 
Fluoxetine 20 mg capsule	Prozac	One a day	\$225
 Fluoxetine 20 mg capsule	Generic	One a day	\$22 
 Fluoxetine 20 mg tablet	Generic	One a day	\$27
Fluoxetine 40 mg capsule	Prozac	One a day	\$449
 Fluoxetine 40 mg capsule	Generic	One a day	\$56 
Fluoxetine 90 mg delayed-release capsule	Prozac Weekly	One per week	\$176
Fluoxetine 90 mg delayed-release capsule	Generic	One per week	\$136
Fluvoxamine 50 mg tablet	Generic	Two a day	\$106
Fluvoxamine 100 mg tablet	Generic	Two a day	\$99
Fluvoxamine 100 mg continuous-delivery capsule	Luvox CR	One a day	\$213
Fluvoxamine 150 mg continuous-delivery capsule	Luvox CR	One a day	\$234
Mirtazapine 7.5 mg tablet	Generic	One at bedtime	\$77
Mirtazapine 15 mg tablet	Remeron	One at bedtime	\$155
Mirtazapine 15 mg tablet	Generic	One at bedtime	\$44
Mirtazapine 15 mg dissolvable tablet	Remeron	One at bedtime	\$131
Mirtazapine 15 mg dissolvable tablet	Generic	One at bedtime	\$67 
Mirtazapine 30 mg tablet	Remeron	One at bedtime	\$162
Mirtazapine 30 mg tablet	Generic	One at bedtime	\$44
Mirtazapine 30 mg dissolvable tablet	Remeron	One at bedtime	\$124
Mirtazapine 30 mg dissolvable tablet	Generic	One at bedtime	\$71 
Mirtazapine 45 mg tablet	Remeron	One at bedtime	\$190

Table 5. Antidepressant Cost Comparison (continued)

Generic Name and Strength	Brand Name ^A	Frequency of Use ^B	Average Monthly Cost ^c
Mirtazapine 45 mg tablet	Generic	One at bedtime	\$49
Mirtazapine 45 mg dissolvable tablet	Remeron	One at bedtime	\$133
Mirtazapine 45 mg dissolvable tablet	Generic	One at bedtime	\$73
Nefazodone 50 mg tablet ^E	Generic	Two a day	\$65
Nefazodone 100 mg tablet ^E	Generic	Two a day	\$66
Nefazodone 150 mg tablet ^E	Generic	Two a day	\$68
Nefazodone 200 mg tablet ^E	Generic	Two a day	\$65
Nefazodone 250 mg tablet ^E	Generic	Two a day	\$70
Paroxetine 10 mg tablet	Paxil	One a day	\$142
Paroxetine 10 mg tablet	Pexeva	One a day	\$196
CR BEST BUY Paroxetine 10 mg tablet	Generic	One a day	\$20 
Paroxetine 20 mg tablet	Paxil	One a day	\$143
Paroxetine 20 mg tablet	Pexeva	One a day	\$201
CR BEST BUY Paroxetine 20 mg tablet	Generic	One a day	\$22 
Paroxetine 30 mg tablet	Paxil	One a day	\$154
Paroxetine 30 mg tablet	Pexeva	One a day	\$207
CR BEST BUY Paroxetine 30 mg tablet	Generic	One a day	\$38 
Paroxetine 40 mg tablet	Paxil	One a day	\$163
Paroxetine 40 mg tablet	Pexeva	One a day	\$214
CR BEST BUY Paroxetine 40 mg tablet	Generic	One a day	\$37 
Paroxetine 12.5 mg sustained-release tablet	Paxil CR	One a day	\$130
Paroxetine 12.5 mg sustained-release tablet	Generic	One a day	\$99
Paroxetine 25 mg sustained-release tablet	Paxil CR	One a day	\$143
Paroxetine 25 mg sustained-release tablet	Generic	One a day	\$106
Paroxetine 37.5 mg sustained-release tablet	Paxil CR	One a day	\$144
Paroxetine 37.5 mg sustained-release tablet	Generic	One a day	\$115
Sertraline 25 mg tablet	Zoloft	One a day	\$152
CR BEST BUY Sertraline 25 mg tablet	Generic	One a day	\$29 
Sertraline 50 mg tablet	Zoloft	One a day	\$146

Table 5. Antidepressant Cost Comparison (continued)

Generic Name and Strength	Brand Name ^A	Frequency of Use ^B	Average Monthly Cost ^C
 Sertraline 50 mg tablet	Generic	One a day	\$28
 Sertraline 100 mg tablet	Zoloft	One a day	\$146
 Sertraline 100 mg tablet	Generic	One a day	\$28
Venlafaxine 25 mg tablet	Generic	Two a day	\$96
Venlafaxine 37.5 mg tablet	Effexor	Two a day	\$172
Venlafaxine 37.5 mg tablet	Generic	Two a day	\$88
Venlafaxine 50 mg tablet	Generic	Two a day	\$96
Venlafaxine 75 mg tablet	Effexor	Two a day	\$192
Venlafaxine 75 mg tablet	Generic	Two a day	\$89
Venlafaxine 100 mg tablet	Generic	Two a day	\$99
Venlafaxine 37.5 mg sustained release capsule	Effexor XR	One a day	\$168
Venlafaxine 37.5 mg sustained release tablet	Generic	One a day	\$123
Venlafaxine 75 mg sustained release capsule	Effexor XR	One a day	\$179
Venlafaxine 75 mg sustained release tablet	Generic	One a day	\$115
Venlafaxine 150 mg sustained release capsule	Effexor XR	One a day	\$193
Venlafaxine 150 mg sustained release tablet	Generic	One a day	\$129

A. "Generic" indicates drug sold by generic name

B. As typically prescribed.

C. Prices reflect nationwide retail average for January 2011, rounded to the nearest dollar. Information derived by *Consumer Reports Health Best Buy Drugs* from data provided by Wolters Kluwer Pharma Solutions, which is not involved in our analysis or recommendations.

D. According to Pristiq's drug label, "in clinical studies, doses of 50-400 mg/day were shown to be effective, although no additional benefit was demonstrated at doses greater than 50 mg/day and adverse events and discontinuations were more frequent at higher doses."

E. The brand-name version of generic nefazodone (Serzone) is no longer manufactured. This drug has been associated with reports of severe liver damage and should be used with caution.

The Evidence

This section presents more detailed information on the effectiveness and safety of antidepressants.

This report is based on an analysis of the scientific evidence for second-generation antidepressants. Overall, 4,896 studies and research articles dealing with antidepressant use were identified and screened. All were published between 1980 and August 2010. From these, the analysis focused on 275 studies that included 170 controlled clinical trials, 40 studies that performed a cross-cutting analysis of multiple other studies, 39 observational studies and 14 studies of other design. An additional 175 articles were reviewed for background information pertinent to antidepressant chemistry, biology, and clinical use.

How Effective Are Antidepressants?

Antidepressants are moderately effective medicines, with a wide variety of responses. Their effectiveness and benefits are assessed based on four criteria:

- Response to treatment, with at least a 50 percent improvement in depressive symptoms on a rating scale indicating a “positive” response
- Full recovery, or the complete elimination of symptoms
- Speed of response
- Quality of life

On average, 55 to 70 percent of the people who take antidepressants can expect at least a 50 percent improvement or decrease in their symptoms. This is measured using a rigorous rating scale but is still highly subjective. Response is quite different among individuals, as is the length of treatment required. Some people respond within a few weeks and experience an almost complete elimination of their symptoms within a few months. Others may get only about a 50 percent improvement even after months of taking an antidepressant. Roughly 30 to 45 percent of the people fail to respond to treatment with an antidepressant.

Also, of those who do respond, some can gradually stop taking their medicine six months or so after they improve, while others must take an antidepressant for long periods to keep symptoms at bay or prevent a relapse.

The antidepressants discussed in this report do not differ overall in the response they yield, though, as discussed, people respond to drugs differently. And no evidence indicates that any antidepressant is more effective than another in comparable doses. Larger doses of each of them can sometimes, but not always, improve the chances of response, but at the same time larger doses increase (sometimes sharply) the risk of side effects.

More extensive studies have been conducted on some antidepressants than on others. Unfortunately, not all of the antidepressants have been directly compared with others in terms of either effectiveness or safety.

In addition, most studies of antidepressants are short-term, lasting only six to 12 weeks. Such a time frame does not allow for an assessment of long-term response. The few longer-term studies have found a highly variable success rate in achieving “full recovery” in particular. They indicate that between 30 and 60 percent of the people “fully recover” from depression after taking an antidepressant alone. Here as well, no particular antidepressant has an edge over any other.

As we have already noted, a recent meta-analysis concluded that escitalopram and sertraline were superior to other second-generation antidepressants. But some experts have pointed out that this study had several limitations that make the results unreliable. In addition, other analyses have concluded that no one second-generation antidepressant is better than any of the others. So we recommend that the choice of antidepressant should be based on cost and the known differences in side effects, which are discussed on the following page.

Studies have found that the so-called “second generation” antidepressants that are the subject of this

report are as effective as and much safer—in terms of the risks of serious consequences as a result of overdose—than older medicines for depression, the tricyclic antidepressants and monoamine oxidase inhibitors, or MAOIs. Second generation antidepressants are also usually better tolerated.

Although marketing campaigns often tout the benefits of antidepressants for people who suffer from both depression and anxiety or other symptoms, there are few studies comparing drugs head-to-head in this regard and the available evidence does not indicate a clear advantage of one antidepressant over another in such people.

Some antidepressants do act faster than others. In particular, mirtazapine (Remeron) shows a faster onset of action in multiple studies compared with some SSRIs – fluoxetine (Prozac), paroxetine (Paxil), and sertraline (Zoloft). The makers of venlafaxine (Effexor) claim a similar fast onset but the evidence is less clear than for mirtazapine (Remeron). In the case of Remeron, a faster onset of response means a noticeable improvement of symptoms one to two weeks earlier than with the compared drugs. Unfortunately, this advantage is sometimes offset by an increased weight gain that many patients find disturbing.

How Safe Are Antidepressants?

By and large, the evidence indicates that antidepressants should be taken with caution, full awareness of the risks, and close attention to side effects. That said, they have been used safely by millions of people for 20 years.

As discussed earlier in this report, the vast majority of people who take an antidepressant (up to 90 percent) will experience at least one side effect. Most of them are minor. Diarrhea, dizziness, dry mouth, fatigue, headache, nausea, sexual side effects, sweating, tremors, and weight changes are the most common. Sometimes they are very severe, making it necessary to discontinue the medication and try another.

Antidepressants differ in the side effects they cause, and this can be a basis for choosing one over another, or weighing the risks against the benefits.

As presented in Table 4, bupropion (Wellbutrin) has a lower rate of sexual side effects; venlafaxine (Effexor) leads more often to nausea and vomiting, and elevations in blood pressure and heart rate; duloxetine (Cymbalta) has been associated with liver failure, including some cases that were fatal; sertraline (Zoloft) has higher rates of diarrhea; and mirtazapine (Remeron) leads more often to weight gain. High doses—and especially overdoses—of bupropion (Wellbutrin) have been linked to seizures, so most doctors don't prescribe it to people who have a history of seizures.

All antidepressants can cause serious side effects, too, as discussed on pages 9–11. The most serious of them are agitation, anxiety, confusion, panic, and suicidal thinking. (For most people, antidepressants reduce suicidal thinking. But for a small percentage of people, they may increase it.) These symptoms can also occur—in fact, are more likely to occur—if you stop taking an antidepressant suddenly, a condition called “discontinuation syndrome.”

Antidepressants can also cause very rare but potentially life-threatening side effects. They include seizures and dangerously low blood-sodium levels. If you have ever experienced any of these conditions before or feel that you may have an increased risk, tell your doctor before he or she prescribes an antidepressant for you.

Drug Interactions

Antidepressants can interact with other medicines or dietary supplements in ways that can be dangerous. Some drugs should never be used in combination with second-generation antidepressants. They include:

- Older antidepressant medications known as MAOIs, such as selegiline (Eldepryl), isocarboxazid (Marplan), phenelzine (Nardil), and tranylcypromine (Parnate)
- Certain psychiatric drugs, such as thioridazine and pimozide (Orap)

In some cases, your doctor may recommend that you take a specific second-generation antidepressant because of evidence that it is less likely to

interact with another medicine you are taking. The main drugs to be concerned about are:

- Blood thinners, such as warfarin (Coumadin)
- Seizure medications, such as carbamazepine (Tegretol) or phenytoin (Dilantin)
- Psychiatric medications, such as lithium (Eskalith or Lithobid), haloperidol (Haldol), or risperidone (Risperdal)
- Antianxiety medications, such as alprazolam (Xanax), diazepam (Valium), or lorazepam (Ativan)
- Certain antibiotics such as ciprofloxacin (Cipro) and erythromycin, or antifungal medicines, such as ketoconazole (Nizoral)
- Migraine medications, such as sumatriptan (Imitrex), zolmitriptan (Zomig), or others in this class of drugs known as “triptans”

You should also be aware that there's conflicting evidence from two recent studies about the potential for some antidepressants to negatively interact with the breast cancer drug tamoxifen (Nolvadex and generic). Many women may be taking both drugs because antidepressants are also sometimes used to treat hot flashes due to menopause. A U.S. study found that women taking tamoxifen and SSRI antidepressants had an increased rate of recurrence of their cancer over two years. But another study done in The Netherlands found no increased rate of cancer recurrence in women taking both tamoxifen and antidepressants for four years. Until these conflicting results are resolved, we would recommend that if you are taking tamoxifen, then you should avoid SSRI antidepressants for treating hot flashes and talk to your doctor about using other therapies. If you need an SSRI antidepressant for depression, two drugs – citalopram and escitalopram – may be the least likely to negatively interact with tamoxifen, but studies to support this have not yet been done.

If you are taking other medicines with a second-generation antidepressant, you should tell your doctor.

The main concern with mixing medicines is a potentially life-threatening condition called serotonin syndrome that occurs when serotonin levels in your body become too high. This can occur with antidepressants alone, but increasing the dosage or adding a new drug or dietary supplement to your regimen can also cause it. The main drugs or dietary supplements of concern are antipsychotics, the antibiotic linezolid, MAOIs, the “triptans,” tryptophan, and the herbal St. John's wort.

Symptoms include diarrhea, dilated pupils, fever, rapid or irregular heartbeat, seizures, shivering, or unconsciousness. If you develop any of these within hours after increasing your dosage or taking a new drug or dietary supplement, contact your physician or go to an emergency room immediately.

It's also wise to limit or eliminate your use of alcohol while taking an antidepressant. First, alcohol is a depressant (after the initial “high”) and it can worsen depression. Second, alcohol can affect you much more strongly when you are taking an antidepressant. Third, heavy alcohol use can damage your liver so that an antidepressant becomes toxic.

Age, Race, and Gender Differences

People older than 65 and members of various ethnic groups have been underrepresented in most studies of antidepressants. Still, the existing evidence does not indicate that any antidepressant is more or less effective in older patients, people of any particular race or gender, or in patients who have other diseases. Recent studies, however, have raised caution about the safety and effectiveness of antidepressants in children and adolescents, as discussed on page 13.

Talking with Your Doctor

It's important for you to know that the information we present here is not meant to substitute for a doctor's judgment. But we hope it will help you and your doctor arrive at a decision about which antidepressant and dose is best for you, and which gives you the most value for your health-care dollar.

Bear in mind that many people are reluctant to discuss the cost of medicines with their doctor, and that studies have found that doctors do not routinely take price into account when prescribing medicines. Unless you bring it up, your doctors may assume that cost is not a factor for you.

Many people (including physicians) believe that newer drugs are better. While that's a natural assumption to make, it's not usually true. Studies consistently find that many older medicines are as good as—and in some cases are better than—newer medicines. Think of them as "tried and true," particularly when it comes to their safety record. Newer drugs have not yet met the test of time, and unexpected problems can and do crop up once they hit the market.

Of course, some newer prescription drugs are indeed more effective and safer. Talk with your doctor about the pluses and minuses of newer vs. older medicines, including generic drugs.

Prescription medicines go "generic" when a company's patents on a drug lapse, usually after about 12 to 15 years. At that point, other companies can make and sell the drugs.

Generics are much less expensive than newer brand-name medicines, but they are not lesser-quality drugs. Indeed, most generics remain useful medicines even many years after first being marketed. That is why today more than 60 percent of all prescriptions in the U.S. are written for generics.

Another important issue to talk with your doctor about is keeping a record of the drugs you are taking. There are several reasons for this:

- First, if you see several doctors, each may not be aware of medicines the others have prescribed
- Second, since people differ in their response to medications, it is very common for doctors today to prescribe several medicines before finding one that works well or best
- Third, many people take several prescription medications, nonprescription drugs, and dietary supplements at the same time. They can interact in ways that can either reduce the benefit you get from a drug or be dangerous
- And fourth, the names of prescription drugs—both generic and brand—are often hard to pronounce and remember

For all those reasons, it's important to keep a written list of all the drugs and supplements you take and to periodically review it with your doctors.

Always be sure, too, that you understand the dose of the medicine being prescribed and how many pills you are to take each day. Your doctor should tell you this information. When you fill a prescription at a pharmacy (or if you get it by mail), check to see that the dose and the number of pills per day on the bottle match the amounts that your doctor told you.

How We Picked the *Best Buy* Antidepressants

Our evaluation is based on an independent, scientific review of the evidence on the effectiveness, safety, and adverse effects of antidepressants. A team of physicians and researchers at the Oregon Health & Science University Evidence-based Practice Center conducted the analysis as part of the Drug Effectiveness Review Project, or DERP. DERP is a first-of-its-kind 12-state initiative to evaluate the comparative effectiveness and safety of hundreds of prescription drugs.

A synopsis of DERP's analysis of antidepressants forms the basis for this report. A consultant to *Consumer Reports Health Best Buy Drugs* is also a member of the Oregon-based research team, which has no financial interest in any pharmaceutical company or product.

The full DERP review of antidepressants is available at <http://derp.ohsu.edu/about/final-document-display.cfm> (It is a long and technical document written for physicians and experts.)

The drug costs we cite were obtained from a health-care information company that tracks the sales of

prescription drugs in the U.S. Prices for a drug can vary quite widely, even within a city or town. All the prices in this report are national averages based on sales of prescription drugs in retail outlets. They reflect the cash price paid for a month's supply of each drug in January 2011, except where noted.

Consumers Union and *Consumer Reports* selected the *Best Buy Drugs* using the following criteria. The drug (and dose) had to:

- Be in the top tier of effectiveness among antidepressants
- Have a safety and side-effect record equal to or better than other antidepressants
- Have an average price for a 30-day supply that was substantially lower than the most costly antidepressant meeting the first two criteria

The *Consumer Reports Health Best Buy Drugs* methodology is described in more detail in the methods section at ConsumerReportsHealth.org/BestBuyDrugs.

About Us

Consumers Union, publisher of *Consumer Reports*™ magazine, is an independent nonprofit organization whose mission since 1936 has been to provide consumers with unbiased information on goods and services and to create a fair marketplace. Consumers Union's main Web site is ConsumersUnion.org. The magazine's Web site is ConsumerReports.org.

Consumer Reports Health Best Buy Drugs™ is a public education project administered by Consumers Union and can be found online at ConsumerReportsHealth.org/BestBuyDrugs. These materials are made possible from the state Attorney General Consumer and Prescriber Education Grant Program, which is funded by the multi-state settlement of consumer fraud claims regarding the marketing of the prescription drug Neurontin.

The Engelberg Foundation provided a major grant to fund the creation of the project from 2004 to 2007. Additional initial funding came from the National Library of Medicine, part of the National Institutes of Health.

A more detailed explanation of the project is available at ConsumerReportsHealth.org/BestBuyDrugs.

Sharing this Report

This report should not be viewed as a substitute for a consultation with a medical or health professional. The information is meant to enhance communication with your doctor, not replace it. Use of our drug reports is also at your own risk. Consumers Union cannot be liable for any loss, injury, or other damage related to your use of this report.

You should not make any changes in your medicines without first consulting a physician.

We followed a rigorous editorial process to ensure that the information in this report and on the *Consumer Reports Health Best Buy Drugs* Web site is accurate and describes generally accepted clinical practices. If we find an error or are alerted to one, we will correct it as quickly as possible. However, Consumer Reports and its authors, editors, publishers, licensors, and any suppliers cannot be responsible for medical errors or omissions, or any consequences from the use of the information on this site.

Your use of this report is also subject to our User Agreement available at ConsumerReportsHealth.org/BestBuyDrugs. The reports are intended solely for your personal, noncommercial use and may not be used in advertising, promotion, or for any other commercial purpose. You are free to download, copy, and distribute the reports for individual and family use. You may not modify or create derivative works from the text of the reports, however, or remove any copyright or trademark notices. Any organization interested in broader distribution of this or any of our reports in print or on the Internet should contact us at crbestbuydrugs@cu.consumers.org. All quotes from the reports should cite *Consumer Reports Health Best Buy Drugs*™ as the source. *Consumer Reports Health Best Buy Drugs*™, Consumers Union® and *Consumer Reports*® are trademarks of Consumers Union of U.S. Inc.

©2011 Consumers Union of United States, Inc.

References

1. Boyer P, Montgomery S, Lepola U, et al. Efficacy, safety, and tolerability of fixed-dose desvenlafaxine 50 and 100 mg/day for major depressive disorder in a placebo-controlled trial. *Int Clin Psychopharmacol*. Sep 2008;23(5):243-253.
2. Gartlehner G, Gaynes BN, Hansen RA, et al. Comparative benefits and harms of second-generation antidepressants: background paper for the American College of Physicians. *Ann Intern Med*. Nov 18 2008;149(10):734-750.
3. Gartlehner G, Thiede P, Hansen RA, et al. Comparative risk for harms of second-generation antidepressants: a systematic review and meta-analysis. *Drug Saf*. 2008;31(10):851-865.
4. Septien-Velez L, Pitrosky B, Padmanabhan SK, Germain JM, Tourian KA. A randomized, double-blind, placebo-controlled trial of desvenlafaxine succinate in the treatment of major depressive disorder. *Int Clin Psychopharmacol*. Nov 2007;22(6):338-347.
5. Aberg-Wistedt A, Agren H, Ekselius L, Bengtsson F, Akerblad AC. Sertraline versus paroxetine in major depression: clinical outcome after six months of continuous therapy. *J Clin Psychopharmacol*. 2000;20:645-52.
6. Aguglia E, Casacchia M, Cassano GB, et al. Double-blind study of the efficacy and safety of sertraline versus fluoxetine in major depression. *Int Clin Psychopharmacol*. 1993;8:197-202.
7. Alves C, Cachola I, Brandao J. Efficacy and tolerability of venlafaxine and fluoxetine in outpatients with major depression. *Primary Care Psychiatry*. 1999;5:57-63.
8. Ballus C, Quirós G, De Flores T, et al. The efficacy and tolerability of venlafaxine and paroxetine in outpatients with depressive disorder or dysthymia. *Int Clin Psychopharmacol*. 2000;15:43-8.
9. Beasley CM, Dornseif BE, Bosomworth JC, et al. Fluoxetine and suicide: a meta-analysis of controlled trials of treatment for depression. *Int Clin Psychopharmacol*. 1992;6 Suppl 6:35-37.
10. Beasley CM, Dornseif BE, Bosomworth JC, et al. Fluoxetine and suicide: a meta-analysis of controlled trials of treatment for depression. *BMJ*. 1991;303:685-92.
11. Behnke K, Sogaard J, Martin S, et al. Mirtazapine orally disintegrating tablet versus sertraline: a prospective onset of action study. *J Clin Psychopharmacol*. 2003;23:358-64.
12. Benkert O, Szegedi A, Kohnen R. Mirtazapine compared with paroxetine in major depression. *J Clin Psychiatry*. 2000;61:656-63.
13. Bennie EH, Mullin JM, Martindale JJ. A double-blind multicenter trial comparing sertraline and fluoxetine in outpatients with major depression. *J Clin Psychiatry*. 1995;56:229-37.
14. Boyer P, Danion JM, Bisserbe JC, Hotton JM, Troy S. Clinical and economic comparison of sertraline and fluoxetine in the treatment of depression. A 6-month double-blind study in a primary-care setting in France. *Pharmacoeconomics*. 1998;13:157-69.
16. Burke WJ, Gergel I, Bose A. Fixed-dose trial of the single isomer SSRI escitalopram in depressed outpatients. *J Clin Psychiatry*. 2002;63:331-6.
17. Cassano GB, Puca F, Scapicchio PL, Trabucchi M. Paroxetine and fluoxetine effects on mood and cognitive functions in depressed nondemented elderly patients. *J Clin Psychiatry*. 2002;63:396-402.
18. Chouinard G, Saxena B, Belanger MC, et al. A Canadian multicenter, double-blind study of paroxetine and fluoxetine in major depressive disorder. *J Affect Disord*. 1999;54:39-48.
19. Clayton AH, Pradko JF, Croft HA, et al. Prevalence of sexual dysfunction among newer antidepressants. *J Clin Psychiatry*. 2002;63:357-66.
20. Coleman CC, Cunningham LA, Foster VJ, et al. Sexual dysfunction associated with the treatment of depression: a placebo-controlled comparison of bupropion sustained release and sertraline treatment. *Ann Clin Psychiatry*. 1999;11:205-15.
21. Coleman CC, King BR, Bolden-Watson C, et al. A placebo-controlled comparison of the effects on sexual functioning of bupropion sustained release and fluoxetine. *Clin Ther*. 2001;23:1040-58.

22. Costa e Silva J. Randomized, double-blind comparison of venlafaxine and fluoxetine in outpatients with major depression. *J Clin Psychiatry*. 1998;59:352-357.
23. Croft H, Houser TL, Jamerson BD, et al. Effect on body weight of bupropion sustained-release in patients with major depression treated for 52 weeks. *Clin Ther*. 2002;24:662-72.
24. Dalery J, Honig A. Fluvoxamine versus fluoxetine in major depressive episode: a double-blind randomised comparison. *Hum Psychopharmacol*. 2003;18:379-84.
25. De Nayer A, Geerts S, Ruelens L, et al. Venlafaxine compared with fluoxetine in outpatients with depression and concomitant anxiety. *Int J Neuropsychopharmacol*. 2002;5:115-20.
26. De Wilde J, Spiers R, Mertens C, Bartholome F, Schotte G, Leyman S. A double-blind, comparative, multicentre study comparing paroxetine with fluoxetine in depressed patients. *Acta Psychiatr Scand*. 1993;87:141-5.
27. Dierick M, Ravizza L, Realini R, Martin A. A double-blind comparison of venlafaxine and fluoxetine for treatment of major depression in outpatients. *Prog Neuropsychopharmacol Biol Psychiatry*. 1996;20:57-71.
28. Dunner DL, Goldstein DJ, Mallinckrodt C, Lu Y, Detke MJ. Duloxetine in treatment of anxiety symptoms associated with depression. *Depress Anxiety*. 2003;18:53-61.
29. Ekselius L, von Knorring L, Eberhard G. A double-blind multicenter trial comparing sertraline and citalopram in patients with major depression treated in general practice. *Int Clin Psychopharmacol*. 1997;12:323-31.
30. Fava M, Amsterdam JD, Deltito JA, Salzman C, Schwaller M, Dunner DL. A double-blind study of paroxetine, fluoxetine, and placebo in outpatients with major depression. *Ann Clin Psychiatry*. 1998;10:145-50.
31. Fava M, Hoog SL, Judge RA, Kopp JB, Nilsson ME, Gonzales JS. Acute efficacy of fluoxetine versus sertraline and paroxetine in major depressive disorder including effects of baseline insomnia. *J Clin Psychopharmacol*. 2002;22:137-47.
32. Fava M, Judge R, Hoog SL, Nilsson ME, Koke SC. Fluoxetine versus sertraline and paroxetine in major depressive disorder: changes in weight with long-term treatment. *J Clin Psychiatry*. 2000;61:863-7.
33. Feiger AD, Flament MF, Boyer P, Gillespie JA. Sertraline versus fluoxetine in the treatment of major depression: a combined analysis of five double-blind comparator studies. *Int Clin Psychopharmacol*. 2003;18:203-10.
34. Feighner JP, Gardner EA, Johnston JA, et al. Double-blind comparison of bupropion and fluoxetine in depressed outpatients. *J Clin Psychiatry*. 1991;52:329-35.
35. Franchini L, Gasperini M, Perez J, Smeraldi E, Zanardi R. A double-blind study of long-term treatment with sertraline or fluvoxamine for prevention of highly recurrent unipolar depression. *J Clin Psychiatry*. 1997;58:104-7.
36. Gagiano CA. A double-blind comparison of paroxetine and fluoxetine in patients with major depression. *British Journal of Clinical Research*. 1993;4:145-52.
37. Goldstein DJ, Lu Y, Detke MJ, Wiltse C, Mallinckrodt C, Demitrack MA. Duloxetine in the treatment of depression: a double-blind placebo-controlled comparison with paroxetine. *J Clin Psychopharmacol*. 2004;24:389-99.
38. Goldstein DJ, Mallinckrodt C, Lu Y, Demitrack MA. Duloxetine in the treatment of major depressive disorder: a double-blind clinical trial. 2002;63: 3:225-31.
39. Haffmans PM, Timmerman L, Hoogduin CA. Efficacy and tolerability of citalopram in comparison with fluvoxamine in depressed outpatients: a double-blind, multicentre study. The LUCIFER Group. *Int Clin Psychopharmacol*. 1996;11:157-64.
40. Hong CJ, Hu WH, Chen CC, Hsiao CC, Tsai SJ, Ruwe FJ. A double-blind, randomized, group-comparative study of the tolerability and efficacy of 6 weeks' treatment with mirtazapine or fluoxetine in depressed Chinese patients. *J Clin Psychiatry*. 2003;64:921-6.
41. Jick H, Ulcickas M, Dean A. Comparison of frequencies of suicidal tendencies among patients receiving fluoxetine, lofepramine, mianserin, or trazodone. *Pharmacotherapy*. 1992;12:451-4.
42. Jick SS, Dean AD, Jick H. Antidepressants and suicide. *BMJ*. 1995;310:215-218.
43. Kavoussi RJ, Segraves RT, Hughes AR, Ascher JA, Johnston JA. Double-blind comparison of bupropion sustained release and sertraline in depressed outpatients. *J Clin Psychiatry*. 1997;58:532-7.
44. Keller MB, Ryan ND, Strober M, et al. Efficacy of paroxetine in the treatment of adolescent major depression: a randomized, controlled trial. *J Am Acad Child Adolesc Psychiatry*. 2001;40:762-72.
45. Khan A, Khan S, Kolts R, Brown WA. Suicide rates in clinical trials of SSRIs, other antidepressants, and placebo: analysis of FDA reports. *Am J Psychiatry*. 2003;160:790-92.
46. Kiev A, Feiger A. A double-blind comparison of fluvoxamine and paroxetine in the treatment of depressed outpatients. *J Clin Psychiatry*. 1997;58:146-52.
47. Kroenke K, West SL, Swindle R, et al. Similar effectiveness of paroxetine, fluoxetine, and sertraline in primary care: a randomized trial. *JAMA*. 2001;286:2947-55.
48. Lepola UM, Loft H, Reines EH. Escitalopram (10-20 mg/day) is effective and well tolerated in a placebo-controlled study in depression in primary care. *Int Clin Psychopharmacol*. 2003;18:211-7.
49. Lopez-Ibor JJ. Reduced suicidality with paroxetine. *European Psychiatry*. 1993;8:17S-19S.
50. Mackay FJ, Dunn NR, Wilton LV, Pearce GL, Freemantle SN, Mann RD. A comparison of fluvoxamine, fluoxetine, sertraline and paroxetine examined by observational cohort studies. *Pharmacoepid Drug Safety*. 1997;6:235-46.
51. Mackay FR, Dunn NR, Martin RM, Pearce GL, Freemantle SN, Mann RD. Newer antidepressants: a comparison of tolerability in general practice. *Br J Gen Pract*. 1999;49:892-6.
52. Mandoki MW, Tapia MR, Tapia MA, Sumner GS, Parker JL. Venlafaxine in the treatment of children and adolescents with major depression. *Psychopharmacol Bull*. 1997;33:149-54.
53. McPartlin GM, Reynolds A, Anderson C, Casoy J. A comparison of once-daily venlafaxine XR and paroxetine in depressed outpatients treated in general practice. *Primary Care Psychiatry*. 1998;4:127-132.
54. Mehtonen OP, Sogaard J, Roponen P, Behnke K. Randomized, double-blind comparison of venlafaxine and sertraline in outpatients with major depressive disorder. Venlafaxine 631 Study Group. *J Clin Psychiatry*. 2000;61:95-100.
55. Meijer WE, Heerdink ER, van Eijk JT, Leufkens HG. Adverse events in users of sertraline: results from an observational study in psychiatric practice in The Netherlands. *Pharmacoepidemiol Drug Saf*. 2002;11:655-62.
56. Nemeroff CB, Evans DL, Gyulai L, et al. Double-blind, placebo-controlled comparison of imipramine and paroxetine in the treatment of bipolar depression. *Am J Psychiatry*. 2001;158:906-12.
57. Newhouse PA, Krishnan KR, Doraishwamy PM, Richter EM, Batzar ED, Clary CM. A double-blind comparison of sertraline and fluoxetine in depressed elderly outpatients. *J Clin Psychiatry*. 2000;61:559-68.
58. Nieuwstraten CE, Dolovich LR. Bupropion versus selective serotonin-reuptake inhibitors for treatment of depression. *Ann Pharmacother*. 2001;35:1608-13.
59. Patris M, Bouchard JM, Bougerol T, et al. Citalopram versus fluoxetine: a double-blind, controlled, multicentre, phase III trial in patients with unipolar major depression treated in general practice. *Int Clin Psychopharmacol*. 1996;11:129-36.
60. Rudolph RL, Feiger AD. A double-blind, randomized, placebo-controlled trial of once-daily venlafaxine extended release (XR) and fluoxetine for the treatment of depression. *J Affect Disord*. 1999;56:171-81.
61. Schatzberg AF, Kremer C, Rodrigues HE, Murphy GMJ. Double-blind, randomized comparison of mirtazapine and paroxetine in elderly depressed patients. *Am J Geriatr Psychiatry*. 2002;10:541-50.
62. Schone W, Ludwig M. A double-blind study of paroxetine compared with fluoxetine in geriatric patients with major depression. *J Clin Psychopharmacol*. 1993;13:34S-39S.
63. Sechter D, Troy S, Paternetti S, Boyer P. A double-blind comparison of sertraline and fluoxetine in the treatment of major depressive episodes in outpatients. *Eur Psychiatry*. 1999;14:41-8.
64. Segraves RT, Kavoussi R, Hughes AR, et al. Evaluation of sexual functioning in depressed outpatients: a double-blind comparison of sustained-release bupropion and sertraline treatment. *J Clin Psychopharmacol*. 2000;20:122-8.
65. Silverstone PH, Ravindran A. Once-daily venlafaxine extended release (XR) compared with fluoxetine in outpatients with depression and anxiety. Venlafaxine XR 360 Study Group. *J Clin Psychiatry*. 1999;60:22-8.
66. Thase ME. Effects of venlafaxine on blood pressure: a meta-analysis of original data from 3744 depressed patients. *J Clin Psychiatry*. 1998;59:502-8.
67. Tylee A, Beaumont G, Bowden MW, Reynolds A. A double-blind, randomized, 12-week comparison study of the safety and efficacy of venlafaxine and fluoxetine in moderate to severe depression in general practice. *Primary Care Psychiatry*. 1997;3:51-58.
68. Wagner KD, Ambrosini P, Rynn M, et al. Efficacy of sertraline in the treatment of children and adolescents with major depressive disorder: two randomized controlled trials. *JAMA*. 2003;290:1033-41.
69. Weihl KL, Settle ECJ, Batey SR, Houser TL, Donahue RM, Ascher JA. Bupropion sustained release versus paroxetine for the treatment of depression in the elderly. *J Clin Psychiatry*. 2000;61:196-202.
70. Whittington CJ, Kendall T, Fonagy P, Cottrell D, Cotgrove A, Boddington E. Selective serotonin reuptake inhibitors in childhood depression: systematic review of published versus unpublished data. *Lancet*. 2004;363:1341-5.