



Medications

Special Message

This booklet is designed to help people understand how and why drugs can be used as part of the treatment of mental health problems. It is important for persons who use mental health services to be well informed about medications for mental illnesses, but this booklet is not a "do-it-yourself" manual. Self-medication can be dangerous. Interpretation of both signs and symptoms of the illness and side effects are jobs for the professional. The prescription and management of medication, in all cases, must be done by a responsible physician working closely with the patient and sometimes the patient's family or other mental health professionals. This is the only way to ensure that the most effective use of medication is achieved with minimum risk of side effects or complications.

Oftentimes an individual is taking more than one medication and at different times of the day. It is essential to take the correct dosage of each medication. An easy way to ensure this is to use a 7-day pill box, available at the prescription counter in any pharmacy, and to fill the box with the proper medications at the beginning of each week.

Introduction

Anyone can develop a mental illness you, a family member, a friend, or the fellow down the block. Some disorders are mild, while others are serious and long-lasting. These conditions can be helped. One way an important way is with psychotherapeutic medications. Compared to other types of treatment, these medications are relative newcomers in the fight against mental illness. It was only 41 years ago that the first one, chlorpromazine, was introduced. But considering the short time they've been around, psychotherapeutic medications have made dramatic changes in the treatment of mental disorders. People who, years ago, might have spent many years in mental hospitals because of crippling mental illness may now only go in for brief treatment, or might receive all their treatment at an outpatient clinic.

Psychotherapeutic medications also may make other kinds of treatment more effective. Someone who is too depressed to talk, for instance,

can't get much benefit from psychotherapy or counseling; but often, the right medication will improve symptoms so that the person can respond better.

Another benefit from these medications is an increased understanding of the causes of mental illness. Scientists have learned a great deal more about the workings of the brain as a result of their investigations into how psycho-therapeutic medications relieve disorders such as psychosis, depression, anxiety, obsessive compulsive disorder, and panic disorder.

Symptom Relief, Not Cure

Just as aspirin can reduce a fever without clearing up the infection that causes it, psychotherapeutic medications act by controlling symptoms. Like most drugs used in medicine, they correct or compensate for some malfunction in the body. Psychotherapeutic medications do not cure mental illness, but they do lessen its burden. In many cases, these medications can help a person get on with life despite some continuing mental pain and difficulty coping with problems. For example, drugs like chlorpromazine can turn off the "voices" heard by some people with schizophrenia and help them to perceive reality more accurately. And antidepressants can lift the dark, heavy moods of depression. The degree of response ranging from little relief of symptoms to complete remission depends on a variety of factors related to the individual and the particular disorder being treated.

How long someone must take a psychotherapeutic medication depends on the disorder. Many depressed and anxious people may need medication for a single period perhaps for several months and then never have to take it again. For some conditions, such as schizophrenia or manic-depressive illness, medication may have to be taken indefinitely or, perhaps, intermittently.

Like any medication, psychotherapeutic medications do not produce the same effect in everyone. Some people may respond better to one medication than another. Some may need larger dosages than others do. Some experience annoying side effects, while others do not. Age, sex, body size, body chemistry, physical illnesses and their treatments, diet, and habits such as smoking, are some of the factors that can influence a medication's effect.

Questions for Your Doctor

To increase the likelihood that a medication will work well, patients and their families must actively participate with the doctor prescribing it. They must tell the doctor about the patient's past medical history, other medications being taken, anticipated life changes such as planning to have a baby and, after some experience with a medication, whether it is causing side effects. When a medication is prescribed, the patient or family member should ask the following questions recommended by the U.S. Food and Drug Administration (FDA) and professional organizations:

- What is the name of the medication, and what is it supposed to do?
- How and when do I take it, and when do I stop taking it?
- What foods, drinks, other medications, or activities should I avoid while taking the prescribed medication?
- What are the side effects, and what should I do if they occur?
- Is there any written information available about the medication?

In this booklet, medications are described by their generic (chemical) names and in italics by their trade names (brand names used by drug companies). They are divided into four large categories based on the symptoms for which they are primarily used antipsychotic, antimanic, antidepressant, and anti-anxiety medications. In addition, stimulants used for attention-deficit/hyperactivity disorder are listed.

An index at the end of the booklet gives the trade name, and the generic name, of the most commonly prescribed medications and notes the section that contains information about each type.

Treatment evaluation studies have established the efficacy of the medications described here; however, much remains to be learned about these medications. The National Institute of Mental Health, other Federal agencies, and private research groups are sponsoring studies of these medications. Scientists are hoping to improve their understanding of how and why these medications work, how to control or eliminate unwanted side effects, and how to make the medications more effective.

Antipsychotic Medications

A person who is psychotic is out of touch with reality. He may "hear voices" or have strange and untrue ideas (for example, thinking that others can hear his thoughts, or are trying to harm him, or that he is the President of the United States or some other famous person).* He may get excited or angry for no apparent reason, or spend a lot of time off by himself, or in bed, sleeping during the day and staying awake at night. He may neglect his appearance, not bathing or changing clothes, and

may become difficult to communicate with saying things that make no sense, or barely talking at all.

These kinds of behaviors are symptoms of psychotic illness, the principal form of which is schizophrenia. All of the symptoms may not be present when someone is psychotic, but some of them always are. Antipsychotic medications, as their name suggests, act against these symptoms. These medications cannot "cure" the illness, but they can take away many of the symptoms or make them milder. In some cases, they can shorten the course of the illness as well.

There are a number of antipsychotic (neuroleptic) medications available. They all work; the main differences are in the potency that is, the dosage (amount) prescribed to produce therapeutic effects and the side effects. Some people might think that the higher the dose of medication, the more serious the illness, but this is not always true.

A doctor will consider several factors when prescribing an antipsychotic medication, besides how "ill" someone is. These include the patient's age, body weight, and type of medication. Past history is important, too. If a person took a particular medication before and it worked, the doctor is likely to prescribe the same one again. Some less potent drugs, like chlorpromazine (Thorazine), are prescribed in higher numbers of milligrams than others of high potency, like haloperidol (Haldol).

If a person has to take a large amount of a "high-dose" antipsychotic medication, such as chlorpromazine, to get the same effect as a small amount of a "low-dose" medication, such as haloperidol, why doesn't the doctor just prescribe "low-dose" medications? The main reason is the difference in their side effects (actions of the medication other than the one intended for the illness). These medications vary in their side effects, and some people have more trouble with certain side effects than others. A side effect may sometimes be desirable. For instance, the sedative effect of some antipsychotic medications is useful for patients who have trouble sleeping or who become agitated during the day.

Unlike some prescription drugs, which must be taken several times during the day, antipsychotic medications can usually be taken just once a day. Thus, patients can reduce daytime side effects by taking the medications once, before bed. Some antipsychotic medications are available in forms that can be injected once or twice a month, thus assuring that the medicine is being taken reliably.

Most side effects of antipsychotic medications are mild. Many common ones disappear after the first few weeks of treatment. These include drowsiness, rapid heartbeat, and dizziness when changing position.

Some people gain weight while taking antipsychotic medications and may have to change their diet to control their weight. Other side effects that may be caused by some antipsychotic medications include decrease in sexual ability or interest, problems with menstrual periods, sunburn, or skin rashes. If a side effect is especially troublesome, it should be discussed with the doctor who may prescribe a different medication, change the dosage level or schedule, or prescribe an additional medication to control the side effects.

Movement difficulties may occur with the use of antipsychotic medications, although most of them can be controlled with an anticholinergic medication. These movement problems include muscle spasms of the neck, eye, back, or other muscles; restlessness and pacing; a general slowing-down of movement and speech; and a shuffling walk. Some of these side effects may look like psychotic or neurologic (Parkinson's disease) symptoms, but aren't. If they are severe, or persist with continued treatment with an antipsychotic, it is important to notify the doctor, who might either change the medication or prescribe an additional one to control the side effects.

Just as people vary in their responses to antipsychotic medications, they also vary in their speed of improvement. Some symptoms diminish in days, while others take weeks or months. For many patients, substantial improvement is seen by the sixth week of treatment, although this is not true in every case. If someone does not seem to be improving, a different type of medication may be tried.

Even if a person is feeling better or completely well, he should not just stop taking the medication. Continuing to see the doctor while tapering off medication is important. Some people may need to take medication for an extended period of time, or even indefinitely. These people usually have chronic (long-term, continuous) schizophrenic disorders, or have a history of repeated schizophrenic episodes, and are likely to become ill again. Also, in some cases a person who has experienced one or two severe episodes may need medication indefinitely. In these cases, medication may be continued in as low a dosage as possible to maintain control of symptoms. This approach, called maintenance treatment, prevents relapse in many people and removes or reduces symptoms for others.

While maintenance treatment is helpful for many people, a drawback for some is the possibility of developing long-term side effects, particularly a condition called tardive dyskinesia. This condition is characterized by involuntary movements. These abnormal movements most often occur around the mouth, but are sometimes seen in other muscle areas such as the trunk, pelvis, or diaphragm. The disorder may range from mild to severe. For some people, it cannot be reversed, while others recover partially or completely. Tardive dyskinesia is seen

most often after long-term treatment with antipsychotic medications. There is a higher incidence in women, with the risk rising with age. There is no way to determine whether someone will develop this condition, and if it develops, whether the patient will recover. At present, there is no effective treatment for tardive dyskinesia. The possible risks of long-term treatment with antipsychotic medications must be weighed against the benefits in each individual case by patient, family, and doctor.

Antipsychotic medications can produce unwanted effects when taken in combination with other medications. Therefore, the doctor should be told about all medicine being taken, including over-the-counter preparations, and the extent of the use of alcohol. Some antipsychotic medications interfere with the action of antihypertensive medications (taken for high blood pressure), anticonvulsants (taken for epilepsy), and medications used for Parkinson's disease. Some antipsychotic medications add to the effects of alcohol and other central nervous system depressants, such as antihistamines, antidepressants, barbiturates, some sleeping and pain medications, and narcotics.

Atypical neuroleptics

In 1990, clozapine (Clozaril), an "atypical neuroleptic," was introduced in the United States. In clinical trials, this medication was found to be more effective than traditional antipsychotic medications in individuals with treatment-resistant schizophrenia, and the risk of tardive dyskinesia is lower. However, because of the potential side effect of a serious blood disorder, agranulocytosis, patients who are on clozapine must have a blood test each week. The expense involved in this monitoring, together with the cost of the medication, has made maintenance on clozapine difficult for many persons with schizophrenia. However, 5 years after its introduction in the United States, approximately 58,000 persons were being treated with clozapine.

Since clozapine's approval in the United States, other atypical neuroleptics (also called atypical antipsychotics) have been introduced. Risperidone (Risperdal) was released in 1994, olanzapine (Zyprexa) in 1996, and quetiapine (Seroquel) in 1997. Several other atypical neuroleptics are in development. While they have some side effects, these newer medications are generally better tolerated than either clozapine or the traditional antipsychotics, and they do not cause agranulocytosis. Like clozapine, they have shown little tendency to give rise to tardive dyskinesia or other movement difficulties. Their main disadvantages compared to the older medications are a greater tendency to produce weight gain, and much higher cost.

Antimanic Medications

Bipolar disorder (manic-depressive illness) is characterized by cycling mood changes: severe highs (mania) and lows (depression). Cycles may be predominantly manic or depressive with normal mood between cycles. Mood swings may follow each other very closely, within hours or days, or may be separated by months to years. These "highs" and "lows" may vary in intensity and severity.

When someone is in a manic "high," he may be overactive, overtalkative, and have a great deal of energy. He will switch quickly from one topic to another, as if he cannot get his thoughts out fast enough; his attention span is often short, and he can easily be distracted. Sometimes, the "high" person is irritable or angry and has false or inflated ideas about his position or importance in the world. He may be very elated, full of grand schemes which might range from business deals to romantic sprees. Often, he shows poor judgment in these ventures. Mania, untreated, may worsen to a psychotic state.

Depression will show in a "low" mood, lack of energy, changes in eating and sleeping patterns, feelings of hopelessness, helplessness, sadness, worthlessness, and guilt, and sometimes thoughts of suicide.

Lithium

The medication used most often to combat a manic "high" is lithium. It is unusual to find mania without a subsequent or preceding period of depression. Lithium evens out mood swings in both directions, so that it is used not just for acute manic attacks or flare-ups of the illness, but also as an ongoing treatment of bipolar disorder.

Lithium will diminish severe manic symptoms in about 5 to 14 days, but it may be anywhere from days to several months until the condition is fully controlled. Antipsychotic medications are sometimes used in the first several days of treatment to control manic symptoms until the lithium begins to take effect. Likewise, antidepressants may be needed in addition to lithium during the depressive phase of bipolar disorder.

Someone may have one episode of bipolar disorder and never have another, or be free of illness for several years. However, for those who have more than one episode, continuing (maintenance) treatment on lithium is usually given serious consideration.

Some people respond well to maintenance treatment and have no further episodes, while others may have moderate mood swings that lessen as treatment continues. Some people may continue to have episodes that are diminished in frequency and severity. Unfortunately,

some manic-depressive patients may not be helped at all. Response to treatment with lithium varies, and it cannot be determined beforehand who will or will not respond to treatment.

Regular blood tests are an important part of treatment with lithium. A lithium level must be checked periodically to measure the amount of the drug in the body. If too little is taken, lithium will not be effective. If too much is taken, a variety of side effects may occur. The range between an effective dose and a toxic one is small. A lithium level is routinely checked at the beginning of treatment to determine the best lithium dosage for the patient. Once a person is stable and on maintenance dosage, a lithium level should be checked every few months. How much lithium a person needs to take may vary over time, depending on how ill he is, his body chemistry, and his physical condition.

Anything that lowers the level of sodium (table salt is sodium chloride) in the body may cause a lithium buildup and lead to toxicity. Reduced salt intake, heavy sweating, fever, vomiting, or diarrhea may do this. An unusual amount of exercise or a switch to a low-salt diet are examples. It's important to be aware of conditions that lower sodium and to share this information with the doctor. The lithium dosage may have to be adjusted.

When a person first takes lithium, he may experience side effects, such as drowsiness, weakness, nausea, vomiting, fatigue, hand tremor, or increased thirst and urination. These usually disappear or subside quickly, although hand tremor may persist. Weight gain may also occur. Dieting will help, but crash diets should be avoided because they may affect the lithium level. Drinking low-calorie or no-calorie beverages will help keep weight down. Kidney changes, accompanied by increased thirst and urination, may develop during treatment. These conditions that may occur are generally manageable and are reduced by lowering the dosage. Because lithium may cause the thyroid gland to become underactive (hypothyroidism) or sometimes enlarged (goiter), thyroid function monitoring is a part of the therapy. To restore normal thyroid function, thyroid hormone is given along with lithium.

Because of possible complications, lithium may either not be recommended or may be given with caution when a person has existing thyroid, kidney, or heart disorders, epilepsy, or brain damage. Women of child-bearing age should be aware that lithium increases the risk of congenital malformations in babies born to women taking lithium. Special caution should be taken during the first 3 months of pregnancy.

Lithium, when combined with certain other medications, can have unwanted effects. Some diuretic substances that remove water from the body increase the level of lithium and can cause toxicity. Other

diuretics, like coffee and tea, can lower the level of lithium. Signs of lithium toxicity may include nausea, vomiting, drowsiness, mental dullness, slurred speech, confusion, dizziness, muscle twitching, irregular heart beat, and blurred vision. A serious lithium overdose can be life-threatening. Someone who is taking lithium should tell all the doctors including dentistshe sees about all other medications he is taking.

With regular monitoring, lithium is a safe and effective drug that enables many people, who otherwise would suffer from incapacitating mood swings, to lead normal lives.

Anticonvulsants

Not all patients with symptoms of mania benefit from lithium. Some have been found to respond to another type of medication, the anticonvulsant medications that are usually used to treat epilepsy. Carbamazepine (Tegretol) is the anticonvulsant that has been most widely used. Manic-depressive patients who cycle rapidly that is, they change from mania to depression and back again over the course of hours or days, rather than months seem to respond particularly well to carbamazepine.

Early side effects of carbamazepine, although generally mild, include drowsiness, dizziness, confusion, disturbed vision, perceptual distortions, memory impairment, and nausea. They are usually transient and often respond to temporary dosage reduction. Another common but generally mild adverse effect is the lowering of the white blood cell count which requires periodic blood tests to monitor against the rare possibility of more serious, even life-threatening, bone marrow depression. Also serious are the skin rashes that can occur in 15 to 20 percent of patients. These rashes are sometimes severe enough to require discontinuation of the medication.

In 1995, the anticonvulsant divalproex sodium (Depakote) was approved by the Food and Drug Administration for manic-depressive illness. Clinical trials have shown it to have an effectiveness in controlling manic symptoms equivalent to that of lithium; it is effective in both rapid-cycling and non-rapid-cycling bipolar.

Though divalproex can cause gastrointestinal side effects, the incidence is low. Other adverse effects occasionally reported are headache, double vision, dizziness, anxiety, or confusion. Because in some cases divalproex has caused liver dysfunction, liver function tests should be performed prior to therapy and at frequent intervals thereafter, particularly during the first six months of therapy.

Antidepressant Medications

The kind of depression that will most likely benefit from treatment with medications is more than just "the blues." It's a condition that's prolonged, lasting 2 weeks or more, and interferes with a person's ability to carry on daily tasks and to enjoy activities that previously brought pleasure.

The depressed person will seem sad, or "down," or may show a lack of interest in his surroundings. He may have trouble eating and lose weight (although some people eat more and gain weight when depressed). He may sleep too much or too little, have difficulty going to sleep, sleep restlessly, or awaken very early in the morning. He may speak of feeling guilty, worthless, or hopeless. He may complain that his thinking is slowed down. He may lack energy, feeling "everything's too much," or he might be agitated and jumpy. A person who is depressed may cry. He may think and talk about killing himself and may even make a suicide attempt. Some people who are depressed have psychotic symptoms, such as delusions (false ideas) that are related to their depression. For instance, a psychotically depressed person might imagine that he is already dead, or "in hell," being punished.

Not everyone who is depressed has all these symptoms, but everyone who is depressed has at least some of them. A depression can range in intensity from mild to severe.

Antidepressants are used most widely for serious depressions, but they can also be helpful for some milder depressions. Antidepressants, although they are not "uppers" or stimulants, take away or reduce the symptoms of depression and help the depressed person feel the way he did before he became depressed.

Antidepressants are also used for disorders characterized principally by anxiety. They can block the symptoms of panic, including rapid heartbeat, terror, dizziness, chest pains, nausea, and breathing problems. They can also be used to treat some phobias.

The physician chooses the particular antidepressant to prescribe based on the individual patient's symptoms. When someone begins taking an antidepressant, improvement generally will not begin to show immediately. With most of these medications, it will take from 1 to 3 weeks before changes begin to occur. Some symptoms diminish early in treatment; others, later. For instance, a person's energy level or sleeping or eating patterns may improve before his depressed mood lifts. If there is little or no change in symptoms after 5 to 6 weeks, a different medication may be tried. Some people will respond better to one than another. Since there is no certain way of determining beforehand which

medication will be effective, the doctor may have to prescribe first one, then another, until an effective one is found. Treatment is continued for a minimum of several months and may last up to a year or more.

While some people have one episode of depression and then never have another, or remain symptom-free for years, others have more frequent episodes or very long-lasting depressions that may go on for years. Some people find that their depressions become more frequent and severe as they get older. For these people, continuing (maintenance) treatment with antidepressants can be an effective way of reducing the frequency and severity of depressions. Those that are commonly used have no known long-term side effects and may be continued indefinitely. The prescribed dosage of the medication may be lowered if side effects become troublesome. Lithium can also be used for maintenance treatment of repeated depressions whether or not there is evidence of a manic or manic-like episode in the past.

Dosage of antidepressants varies, depending on the type of drug, the person's body chemistry, age, and, sometimes, body weight. Dosages are generally started low and raised gradually over time until the desired effect is reached without the appearance of troublesome side effects.

There are a number of antidepressant medications available. They differ in their side effects and, to some extent, in their level of effectiveness. Tricyclic antidepressants (named for their chemical structure) are more commonly used for treatment of major depressions than are monoamine oxidase inhibitors (MAOIs); but MAOIs are often helpful in so-called "atypical" depressions in which there are symptoms like oversleeping, anxiety, panic attacks, and phobias.

The last few years have seen the introduction of a number of new antidepressants. Several of them are called "selective serotonin reuptake inhibitors" (SSRIs). Those available at the present time in the United States are fluoxetine (Prozac), fluvoxamine (Luvox), paroxetine (Paxil), and sertraline (Zoloft). (Luvox has been approved for obsessive-compulsive disorder, and Paxil has been approved for panic disorder.) Though structurally different from each other, all the SSRIs' antidepressant effects are due to their action on one specific neurotransmitter, serotonin. Two other antidepressants that affect two neurotransmitters serotonin and norepinephrine have also been approved by the FDA. They are venlafaxine (Effexor) and nefazodone (Serzone). All of these newer antidepressants seem to have less bothersome side effects than the older tricyclic antidepressants.

The tricyclic antidepressant clomipramine (Anafranil) affects serotonin but is not as selective as the SSRIs. It was the first medication specifically approved for use in the treatment of obsessive-compulsive

disorder (OCD). Prozac and Luvox have now been approved for use with OCD.

Another of the newer antidepressants, bupropion (Wellbutrin), is chemically unrelated to the other antidepressants. It has more effect on norepinephrine and dopamine than on serotonin. Wellbutrin has not been associated with weight gain or sexual dysfunction. It is contraindicated for individuals with, or at risk for, a seizure disorder or who have been diagnosed with bulimia or anorexia nervosa.

Side Effects of Antidepressant Medications

1. Tricyclic Antidepressants

There are a number of possible side effects with tricyclic antidepressants that vary, depending on the medication. For example, amitriptyline (Elavil) may make people feel drowsy, while protriptyline (Vivactil) hardly does this at all and, in some people, may have an opposite effect, producing feelings of anxiety and restlessness. Because of this kind of variation in side effects, one antidepressant might be highly desirable for one person and not recommended for another. Tricyclics on occasion may complicate specific heart problems, and for this reason the physician should be aware of all such difficulties. Other side effects with tricyclics may include blurred vision, dry mouth, constipation, weight gain, dizziness when changing position, increased sweating, difficulty urinating, changes in sexual desire, decrease in sexual ability, muscle twitches, fatigue, and weakness. Not all these medications produce all side effects, and not everybody gets them. Some will disappear quickly, while others may remain for the length of treatment. Some side effects are similar to symptoms of depression (for instance, fatigue and constipation). For this reason, the patient or family should discuss all symptoms with the doctor, who may change the medication or dosage.

Tricyclics also may interact with thyroid hormone, antihypertensive medications, oral contraceptives, some blood coagulants, some sleeping medications, antipsychotic medications, diuretics, antihistamines, aspirin, bicarbonate of soda, vitamin C, alcohol, and tobacco.

An overdose of antidepressants is serious and potentially lethal. It requires immediate medical attention. Symptoms of an overdose of tricyclic antidepressant medication develop within an hour and may start with rapid heartbeat, dilated pupils, flushed face, and agitation, and progress to confusion, loss of consciousness, seizures, irregular heart beats, cardiorespiratory collapse, and death.

2. The Newer Antidepressants

The most common side effects of these antidepressants are gastrointestinal problems and headache. Others are insomnia, anxiety, and agitation. Because of potentially serious interaction between these medications and monoamine oxidase inhibitors, it is advisable to stop taking one medication from 2 to 4 or 5 weeks before starting the other, depending on the specific medications involved. In addition, some SSRIs have been found to affect metabolism of certain other medications in the liver, creating possible drug interactions.

3. Monoamine Oxidase Inhibitors (MAOIs)

MAOIs may cause some side effects similar to those of the other antidepressants. Dizziness when changing position and rapid heartbeat are common. MAOIs also react with certain foods and alcoholic beverages (such as aged cheeses, foods containing monosodium glutamate (MSG), Chianti and other red wines), and other medications (such as over-the-counter cold and allergy preparations, local anesthetics, amphetamines, insulin, some narcotics, and antiparkinsonian medications). These reactions often do not appear for several hours. Signs may include severe high blood pressure, headache, nausea, vomiting, rapid heartbeat, possible confusion, psychotic symptoms, seizures, stroke, and coma. For this reason, people taking MAOIs must stay away from restricted foods, drinks, and medications. They should be sure that they are furnished, by their doctor or pharmacist, a list of all foods, beverages, and other medications that should be avoided.

Precautions to be Observed When Taking Antidepressants

When taking antidepressants, it is important to tell all doctors (and dentists) being seen not just the one who is treating the depression about all medications being used, including over-the-counter preparations and alcohol. Antidepressants should be taken only in the amount prescribed and should be kept in a secure place away from children. When used with proper care, following doctors' instructions, antidepressants are extremely useful medications that can reverse the misery of a depression and help a person feel like himself again.

Antianxiety Medications

Everyone experiences anxiety at one time or another "butterflies in the stomach" before giving a speech or sweaty palms during a job interview are common symptoms. Other symptoms of anxiety include irritability, uneasiness, jumpiness, feelings of apprehension, rapid or irregular heartbeat, stomach ache, nausea, faintness, and breathing problems.

Anxiety is often manageable and mild. But sometimes it can present serious problems. A high level or prolonged state of anxiety can be very incapacitating, making the activities of daily life difficult or impossible. Besides generalized anxiety, other anxiety disorders are panic, phobia, obsessive-compulsive disorder (OCD), and posttraumatic stress disorder.

Phobias, which are persistent, irrational fears and are characterized by avoidance of certain objects, places, and things, sometimes accompany anxiety. A panic attack is a severe form of anxiety that may occur suddenly and is marked with symptoms of nervousness, breathlessness, pounding heart, and sweating. Sometimes the fear that one may die is present.

Antianxiety medications help to calm and relax the anxious person and remove the troubling symptoms. There are a number of antianxiety medications currently available. The preferred medications for most anxiety disorders are the benzodiazepines. In addition to the benzodiazepines, a non-benzodiazepine, buspirone (BuSpar), is used for generalized anxiety disorders. Antidepressants are also effective for panic attacks and some phobias and are often prescribed for these conditions. They are also sometimes used for more generalized forms of anxiety, especially when it is accompanied by depression. The medications approved by the FDA for use in OCD are all antidepressants clomipramine, fluoxetine, and fluvoxamine.

The most commonly used benzodiazepines are alprazolam (Xanax) and diazepam (Valium), followed by chlordiazepoxide (Librium, Librax, Libritabs). Benzodiazepines are relatively fast-acting medications; in contrast, buspirone must be taken daily for 2 or 3 weeks prior to exerting its antianxiety effect. Most benzodiazepines will begin to take effect within hours, some in even less time. Benzodiazepines differ in duration of action in different individuals; they may be taken two or three times a day, or sometimes only once a day. Dosage is generally started at a low level and gradually raised until symptoms are diminished or removed. The dosage will vary a great deal depending on the symptoms and the individual's body chemistry.

Benzodiazepines have few side effects. Drowsiness and loss of coordination are most common; fatigue and mental slowing or confusion can also occur. These effects make it dangerous to drive or operate some machinery when taking benzodiazepines especially when the patient is just beginning treatment. Other side effects are rare.

Benzodiazepines combined with other medications can present a problem, notably when taken together with commonly used substances such as alcohol. It is wise to abstain from alcohol when taking benzodiazepines, as the interaction between benzodiazepines and

alcohol can lead to serious and possibly life-threatening complications. Following the doctor's instructions is important. The doctor should be informed of all other medications the patient is taking, including over-the-counter preparations. Benzodiazepines increase central nervous system depression when combined with alcohol, anesthetics, antihistamines, sedatives, muscle relaxants, and some prescription pain medications. Particular benzodiazepines may influence the action of some anticonvulsant and cardiac medications. Benzodiazepines have also been associated with abnormalities in babies born to mothers who were taking these medications during pregnancy.

With benzodiazepines, there is a potential for the development of tolerance and dependence as well as the possibility of abuse and withdrawal reactions. For these reasons, the medications are generally prescribed for brief periods of time days or weeks and sometimes intermittently, for stressful situations or anxiety attacks. For the same reason, ongoing or continuous treatment with benzodiazepines is not recommended for most people. Some patients may, however, need long-term treatment.

Consult with the doctor before discontinuing a benzodiazepine. A withdrawal reaction may occur if the treatment is abruptly stopped. Symptoms may include anxiety, shakiness, headache, dizziness, sleeplessness, loss of appetite, and, in more severe cases, fever, seizures, and psychosis. A withdrawal reaction may be mistaken for a return of the anxiety, since many of the symptoms are similar. Thus, after benzodiazepines are taken for an extended period, the dosage is gradually tapered off before being completely stopped.

Although benzodiazepines, buspirone, tricyclic antidepressants, or SSRIs are the preferred medications for most anxiety disorders, occasionally, for specific reasons, one of the following medications may be prescribed: antipsychotic medications; antihistamines (such as Atarax, Vistaril, and others); barbiturates such as phenobarbital; and beta-blockers such as propranolol (Inderal, Inderide). Propanediols such as meprobamate (Equanil) were commonly prescribed prior to the introduction of the benzodiazepines, but today rarely are used.

Children, the Elderly, and Pregnant, Nursing, or Child-bearing Age Women:

Special Considerations

Children, the elderly, and pregnant and nursing women have special concerns and needs when taking psychotherapeutic medications. Some effects of medications on the growing body, the aging body, and the

childbearing body are known, but much remains to be learned. Research in these areas is ongoing.

While, in general, what has been said in this booklet applies to these groups, below are a few special points to bear in mind:

Children

Studies consistently show that about 15 percent of the U.S. population below age 18, or over 9 million children, suffer from a psychiatric disorder that compromises their ability to function. It is easy to overlook the seriousness of childhood mental disorders. In children, these disorders may present symptoms that are different or less clear-cut than the same disorders in adults. Younger children, especially, may not talk about what's bothering them, but this is sometimes a problem with older children as well. For this reason, having a doctor, other mental health professional, or psychiatric team examine the child is especially important.

There is an array of treatments that can help these children. These include medications and psychotherapy behavioral therapy, treatment of impaired social skills, parental and family therapy, group therapy. The therapy used for an individual child is based on the child's diagnosis and individual needs.

When the decision is reached that a child should take medication, active monitoring by all caretakers (parents, teachers, others who have charge of the child) is essential. Children should be watched and questioned for side effects (many children, especially younger ones, do not volunteer information). They should also be monitored to see that they are actually taking the medication and taking the proper dosage.

One type of medication not covered elsewhere in this booklet is stimulants. Three stimulants, methylphenidate (Ritalin) dextroamphetamine (Dexedrine), and pemoline (Cylert) are more commonly prescribed for children than adults. They are successfully used in the treatment of attention- deficit/ hyperactivity disorder (ADHD). ADHD is a disorder usually diagnosed in early childhood in which the child exhibits such symptoms as short attention span, excessive activity, and impulsivity. A child with ADHD should take a stimulant medication only on the advice and under the careful supervision of a physician.

The use with children of the medications described in this booklet is more limited than with adults. In the list of medications beginning on page , commonly used psychotropic medications that have specific indications and dose guidelines for children, as listed in the Physicians' Desk Reference, are indicated by a double asterisk (**).

The Elderly

Persons over the age of 65 make up 12 percent of the population of the United States, yet they receive 30 percent of prescriptions filled. The elderly generally have more medical problems and often are taking medications for more than one of these problems. In addition, they tend to be more sensitive to medications. Even healthy older people eliminate some medications from the body more slowly than younger persons and therefore require a lower or less frequent dosage to maintain an effective level of medication.

The elderly may sometimes accidentally take too much of a medication because they forget that they have taken a dose and take another dose. The use of a 7-day pill box, as described on page of this brochure, is especially helpful to an elderly person.

The elderly and those close to them friends, relatives, caretakers need to pay special attention and watch for adverse (negative) physical and psychological responses to medication. Because they often take more medications--not only those prescribed but also over-the-counter preparations and home or folk remedies the possibility of negative drug interactions is higher.

Pregnant, Nursing, or Childbearing-Age Women

In general, during pregnancy, all medications (including psychotherapeutic medications) should be avoided where possible, and other methods of treatment should be tried.

A woman who is taking a psychotherapeutic medication and plans to become pregnant should discuss her plans with her doctor; if she discovers that she is pregnant, she should contact her doctor immediately. During early pregnancy, there is a possible risk of birth defects with some of these medications, and for this reason:

- 1) Lithium is not recommended during the first 3 months of pregnancy.
- 2) Benzodiazepines are not recommended during the first 3 months of pregnancy.

The decision to use a psychotherapeutic medication should be made only after a careful discussion with the doctor concerning the risks and benefits to the woman and her baby.

Small amounts of medication pass into the breast milk; this is a consideration for mothers who are planning to breast-feed.

A woman who is taking birth-control pills should be sure that her

doctor is aware of this. The estrogen in these pills may alter the breakdown of medications by the body, for example increasing side effects of some antianxiety medications and/or reducing their efficacy to relieve symptoms of anxiety.

For more detailed information, talk to your doctor or mental health professional, consult your local public library, or write to the pharmaceutical company that produces the medication or the U.S. Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857.

Index of Medications

To find the section of the text that describes the medication you or a friend or family member is taking, find either the generic (chemical) name and look it up on the first list, or the trade name and look it up on the second list. If you do not find the name of the medication on the label, ask your doctor or pharmacist for it (Note: some drugs, such as amitriptyline and chlorthalidone, are marketed under numerous trade names, not all of which can be mentioned in a brief publication such as this. If your medication's trade name does not appear in this list, look it up by its generic name or ask your doctor or pharmacist for more information.)

Alphabetical Listing of Medications by Generic Name

Antipsychotic Medications

GENERIC NAME	TRADE NAME
chlorpromazine**	Thorazine
chlorprothixene	Taractan
clozapine	Clozaril
fluphenazine	Permitil
	Prolixin
haloperidol**	Haldol
loxapine	Daxolin
	Loxitane
mesoridazine	Serentil
molindone	Lidone
	Moban

olanzapine	Zyprexa
perphenazine	Trilafon
pimozide (for Tourette's Syndrome)**	Orap
quetiapine	Seroquel
risperidone	Risperdal
thioridazine**	Mellaril
thiothixene	Navane
trifluoperazine	Stelazine
triflupromazine	Vesprin

Antimanic Medications

carbamazepine	Tegretol
divalproex sodium	Depakote
lithium carbonate	Eskalith
lithium carbonate	Lithane
	Lithobid
lithium citrate	Cibalith-S
GENERIC NAME	TRADE NAME

Antidepressants

amitriptyline	Elavil
amoxapine	Asendin
bupropion	Wellbutrin
desipramine	Norpramin
	Pertofrane
doxepin	Adapin
	Sinequan
clomipramine**	Anafranil
fluvoxamine (SSRI)	Luvox
fluoxetine (SSRI)	Prozac
imipramine**	Tofranil
isocarboxazid (MAOI)	Marplan
maprotiline	Ludiomil
mirtazapine	Remeron
nefazodone	Serzone
nortriptyline	Aventyl
	Pamelor
paroxetine (SSRI)	Paxil
phenelzine (MAOI)	Nardil
protriptyline	Vivactil
sertraline (SSRI)	Zoloft

tranylcypromine (MAOI)	Parnate
trazodone	Desyrel
trimipramine	Surmontil
venlafaxine	Effexor
GENERIC NAME	TRADE NAME

Antianxiety Medications

(All of these antianxiety medications except buspirone are benzodiazepines)

alprazolam	Xanax
buspirone	BuSpar
chlordiazepoxide	Librax
	Libritabs
	Librium
clorazepate	Azene
	Tranxene
diazepam	Valium
halazepam	Paxipam
lorazepam	Ativan
oxazepam	Serax
prazepam	Centrax

Stimulants

(Given for Attention-Deficit /Hyperactivity Disorder)

d-amphetamine**	Dexedrine
methylphenidate**	Ritalin
pemoline**	Cylert
GENERIC NAME	TRADE NAME

Antipsychotic Medications

Clozaril	clozapine
Daxolin	loxapine
Haldol**	haloperidol
Lidone	molindone
Loxitane	loxapine
Mellaril**	thioridazine
Moban	molindone
Navane	thiothixene
Orap (for Tourette's Syndrome)**	pimozide
Permitil	fluphenazine
Prolixin	fluphenazine

Risperdal	risperidone
Serentil	mesoridazine
Seroquel	quetiapine
Stelazine	trifluoperazine
Taractan	chlorprothixene
Thorazine**	chlorpromazine
Trilafon	perphenazine
Vesprin	trifluopromazine
Zyprexa	olanzapine

Antimanic Medications

Cibalith-S	lithium citrate
Depakote	divalproex sodium
Eskalith	lithium carbonate
Lithane	lithium carbonate
Lithobid	lithium carbonate
Tegretol	carbamazepine
GENERIC NAME	TRADE NAME

Antidepressant Medications

Adapin	doxepin
Anafranil**	clomipramine
Asendin	amoxapine
Aventyl	nortriptyline
Desyrel	trazodone
Effexor	venlafaxine
Elavil	amitriptyline
Ludiomil	maprotiline
Luvox (SSRI)	fluvoxamine
Marplan (MAOI)	isocarboxazid
Nardil (MAOI)	phenelzine
Norpramin	desipramine
Pamelor	nortriptyline
Parnate (MAOI)	tranylcypromine
Paxil (SSRI)	paroxetine
Pertofrane	desipramine
Prozac (SSRI)	fluoxetine
Remeron	mirtazapine
Serzone	nefazodone
Sinequan	doxepin
Surmontil	trimipramine
Tofranil**	imipramine

Vivactil	protriptyline
Wellbutrin	bupropion
Zoloft (SSRI)	sertraline

Antianxiety Medications

(All of these antianxiety medications except buspirone are benzodiazepines)

Ativan	lorazepam
Azene	clorazepate
BuSpar	buspirone
Centrax	prazepam
Paxipam	halazepam
Serax	oxazepam
Tranxene	clorazepate
Valium	diazepam
Xanax	alprazolam

Stimulants

(Given for Attention-Deficit/ Hyperactivity Disorder)

Cylert**	pemoline
Dexedrine**	d-amphetamine
Ritalin**	methylphenidate

At one time, two combination medications not included in the above list were often prescribed, but are prescribed only occasionally today. They are: a combination of amitriptyline (antidepressant) and perphenazine (anti- psychotic) marketed as Triavil or Etrafon; and a combination of amitriptyline (antidepressant) and chlordiazepoxide (antianxiety) marketed as Limbitrol.

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