

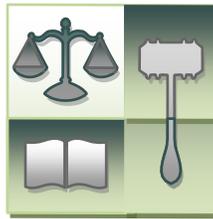


PSYCHOTROPIC MEDICATIONS JUDICIAL REFERENCE GUIDE

(Revised Edition 7/15/10)

PSYCHOTROPIC MEDICATIONS JUDICIAL REFERENCE GUIDE

FIRST EDITION



THE STEERING COMMITTEE ON FAMILIES AND CHILDREN IN THE COURT

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INTRODUCTION

One of the toughest challenges facing our dependency courts is the mental health of our children. “In July 2003, the Florida Statewide Advocacy Council published a Red Item Report finding 55% of foster children...in the state of Florida had been put on powerful mind altering psychotropic drugs.”¹ In order to assist in this regard, the Psychotherapeutic Medication Subcommittee of the Steering Committee on Families and Children in the Court of the Supreme Court of Florida compiled this resource guide to help judges have a better understanding of psychotropic medications and their interaction with other drugs and with mental health disorders. Recently, the tragic case of Gabriel Myers in 2009 highlighted the fact that a number of child deaths were linked to the off label use of anti-psychotic medications. This is of special concern to Dependency Judges who are ultimately responsible for children in Florida’s Foster Care system. The researchers used publically available data from the internet, FDA manufactures’ published guidelines, publically available non-copyrighted articles and Dr. Brenda Thompson graciously prepared the Psychotropic Medication Chart. Special thanks to Dr. Brenda Thompson, the Honorable Herbert J. Baumann, the Honorable Ralph C. Stoddard, General Magistrate Tracy Ellis, Avron Bernstein, Selena Schoonover, Daniel Ringhoff, Jovasha Lang and to the Members of the Psychotherapeutic Medication Subcommittee.

CAVEAT

This guide was compiled by non-medical professionals for Judges only and not for dissemination to the public. Judges are cautioned that this is an informal guide, not updated, not to be used as the Physicians Desk Reference or as a substitute for a medical professional. When in doubt always research original resources. In no event will the author or the reviewers be liable for any direct, indirect, or consequential damages resulting from the use of these materials.

¹ “Psychotropic Drug Use in Foster Care,” Florida Statewide Advocacy Council, Red Item Report, July 2003, p.3.

FLORIDA DEPENDENCY BENCHCARD: PSYCHOTROPIC MEDICATIONS

A. If the child comes into care with psychotropic medication already prescribed:

1. DCF should attempt to obtain permission from the parent to continue the psychotropic medication. §39.407(2)(a)1, Florida Statutes.
 - If parental authorization cannot be obtained, DCF may take possession of the remaining medication and may continue to provide the medication as prescribed until the shelter hearing, if it is determined that the medication is a current prescription for that child and the medication is in its original container. §39.407(3)(b)1, Florida Statutes.
 - If DCF continues to provide the psychotropic medication to a child when parental authorization cannot be obtained, the department shall notify the parent or legal guardian as soon as possible. The child's official departmental record must include the reason parental authorization was not initially obtained and an explanation of why the medication is necessary for the child's well-being. §39.407(3)(b)2, Florida Statutes.
2. If DCF is unable to get parental authorization and DCF is advised by a physician that the child should continue the psychotropic medication, DCF shall request court authorization at the shelter hearing to continue to provide the psychotropic medication and shall provide to the court any information in its possession in support of the request. Any authorization granted at the shelter hearing may extend only:
 - until the arraignment hearing on the petition for adjudication of dependency or
 - 28 days following the date of removal, whichever occurs sooner. §39.407(3)(b)3; Fla.R.Juv.P. Rule 8.355(c)(1)(A).
3. DCF should then schedule a physical evaluation with a licensed physician. §39.407(3)(b)4, Florida Statutes. DCF should also consider requesting a Comprehensive Behavioral Health Assessment (CBHA).
4. As a result of the required physician's evaluation, if DCF believes it is appropriate to continue the psychotropic medication beyond the time authorized by the court at the shelter hearing, DCF shall file a motion seeking continued court authorization at the same time as it files the dependency petition, within 21 days after the shelter hearing. §39.407(3)(b)(4), Florida Statutes; Fla.R.Juv.P. Rule 8.355(c)(1)(B). The motion must be supported by:
 - a written report prepared by DCF which describes the efforts made to enable the prescribing physician to obtain express and informed consent for providing the medication to the child and other treatments considered or recommended for the child;
 - the prescribing physician's signed medical report providing:
 - The name of the child, the name and range of the dosage of the psychotropic medication, and that there is a need to prescribe psychotropic medication to the child based upon a diagnosed condition for which such medication is being prescribed.
 - A statement indicating that the physician has reviewed all medical information concerning the child which has been provided.
 - A statement indicating that the psychotropic medication, at its prescribed dosage, is appropriate for treating the child's diagnosed medical condition, as well as the behaviors and symptoms the medication, at its prescribed dosage, is expected to address.
 - An explanation of the nature and purpose of the treatment; the recognized side effects, risks, and contraindications of the medication; drug-interaction precautions; the possible effects of stopping the

medication; and how the treatment will be monitored, followed by a statement indicating that this explanation was provided to the child if age appropriate and to the child's caregiver.

- Documentation addressing whether the psychotropic medication will replace or supplement any other currently prescribed medications or treatments; the length of time the child is expected to be taking the medication; and any additional medical, mental health, behavioral, counseling, or other services that the prescribing physician recommends.
 - If the child's prescribing physician certifies in the signed medical report required in paragraph (c) that delay in providing a prescribed psychotropic medication would more likely than not cause significant harm to the child, the medication may be provided in advance of the issuance of a court order.
 - The medical report must provide the specific reasons why the child may experience significant harm and the nature and the extent of the potential harm.
 - The department must submit a motion seeking continuation of the medication and the physician's medical report to the court, the child's guardian ad litem, and all other parties within 3 working days after the department commences providing the medication to the child.
 - The department shall seek the order at the next regularly scheduled court hearing, or within 30 days after the date of the prescription, whichever occurs sooner.
 - If any party objects to the department's motion, the court shall hold a hearing within 7 days. §39.407(3)(e)1, Florida Statutes.
5. Psychotropic medications may be administered in advance of a court order in hospitals, crisis stabilization units, and in statewide inpatient psychiatric programs. Within 3 working days after the medication is begun, the department must seek court authorization. §39.407(3)(e)2, Florida Statutes.
6. Note: §39.402(11)(b), Florida Statutes, requires the court to request the parent's consent to provide access to the child's medical records and further requires that when a parent is unavailable or unable to consent or withholds consent and the court deems access to the records necessary to provide services to the child, the court is to issue an order granting access to the records.
7. Note: §39.402(11)(c), Florida Statutes, requires the court to request that the parents consent to provide access to the child's educational records and further requires that when a parent is unavailable or unable to consent or withholds consent and the court deems access to the records and information is necessary to provide services to the child, the court shall issue an order granting access.

B. If child needs to be evaluated/prescribed psychotropic medication after coming into care:

1. DCF should schedule a physical evaluation with a licensed physician. §39.407(3)(b)4, Florida Statutes. DCF should also consider requesting a Comprehensive Behavioral Health Assessment (CBHA), and ensure that all medical reports have been provided to the prescribing physician.
2. If the parents have not consented, DCF shall file a motion with the court to authorize the administration of the psychotropic medication. The motion shall include the following information:
 - DCF's written report describing the efforts made to enable the prescribing physician to obtain express and informed consent for providing the medication to the child and describing other treatments considered or recommended for the child; and
 - The prescribing physician's signed medical report, as required by law. Fla.R.Juv.P. Rule 8.355(a)(1).
3. The court shall hear DCF's motion at the next regularly scheduled court hearing required by law, or within 30 days after the date of the prescription, whichever occurs sooner. However, if any party files an objection to the motion, the court shall hold a hearing within 7 days. Fla.R.Juv.P. Rule 8.355(c)(2)(C).

4. Determine whether parties were properly served or noticed, if not in attendance.
 - DCF must have notified all parties of the proposed action taken in writing or by whatever other method best ensures that all parties receive notification of the proposed action within 48 hours after the motion is filed. If any party objects to DCF's motion, that party should have filed the objection within 2 working days. §39.407(3)(d)1, Florida Statutes; Fla.R.Juv.P. Rules 8.355(a)(2), 8.355(a)(3).
 - If no party timely files an objection to DCF's motion, the court may enter its order authorizing the proposed administration of the psychotropic medication without a hearing. Fla.R.Juv.P. Rule 8.355(b)(1).
5. Verify that DCF obtained a medical evaluation to determine the need to initiate or continue a psychotropic medication before filing the dependency petition. §39.407(3)(b)(4), Florida Statutes.
6. Determine if DCF attempted to include the parents in the decision making process. §39.407(3)(a)1, Florida Statutes.
 - Did DCF take steps to include the parent in the child's consultation with the physician? §39.407(3)(a)1, Florida Statutes.
 - Did DCF attempt to obtain express and informed consent from the parents before filing the motion? §39.407(3)(a)1, Florida Statutes.
7. Confirm that DCF provided the evaluating physician with all pertinent medical information known to DCF concerning that child. §39.407(3)(a)2, Florida Statutes.
8. Verify that DCF's motion was supported by a written report prepared by the department which describes the efforts made to enable the prescribing physician to obtain express and informed consent for providing the medication to the child and other treatments considered or recommended for the child. In addition, the motion must be supported by the prescribing physician's signed medical report providing:
 - The name of the child, the name and range of the dosage, and that the child's need is based upon a diagnosed condition for which such medication is being prescribed.
 - A statement indicating that the physician has reviewed all medical information concerning the child which has been provided.
 - A statement indicating that the psychotropic medication, at its prescribed dosage, is appropriate for treating the child's diagnosed medical condition, as well as the behaviors and symptoms the medication, at its prescribed dosage, is expected to address.
 - An explanation of the nature and purpose of the treatment; the recognized side effects, risks, and contraindications of the medication; drug-interaction precautions; the possible effects of stopping the medication; and how the treatment will be monitored, followed by a statement indicating that this explanation was provided to the child if age appropriate and to the child's caregiver.
 - Documentation addressing whether the psychotropic medication will replace or supplement any other currently prescribed medications or treatments; the length of time the child is expected to be taking the medication; and any additional medical, mental health, behavioral, counseling, or other services that the prescribing physician recommends. §39.407(3)(c), Florida Statutes.

NOTE: The medical report of the prescribing physician is admissible into evidence. §39.407(3)(d)1; Fla.R.Juv.P. Rule 8.355(b)(2)(A).
9. Ask whether or not the parent, legal guardian, or child consents to the medication. See §39.407(8), Florida Statutes.
10. Determine if the motion for medication is in the child's best interests. §39.407(3)(d)1, Florida Statutes; Fla.R.Juv.P. Rule 8.355(b)(2)(D).

11. Ask DCF whether additional medical, mental health, behavioral, counseling, or other services are being provided to the child by DCF which the prescribing physician considers to be necessary or beneficial in treating the child's medical condition and which the physician recommends or expects to provide to the child in concert with the medication. §39.407(3)(d)1, Florida Statutes; Fla.R.Juv.P. Rule 8.355(b)(2)(B).
12. Be aware that the court may order additional medical consultation or require DCF to obtain a second opinion within 21 calendar days. The department must make a referral for an appointment for a second opinion with a physician within 1 working day. §39.407(3)(d)1, Florida Statutes.
13. The court may not order the discontinuation of prescribed psychotropic medication if such order is contrary to the decision of the prescribing physician unless the court first obtains an opinion from a licensed psychiatrist, if available, or, if not available, a physician stating that more likely than not, discontinuing the medication would not cause significant harm to the child. If, however, the prescribing psychiatrist specializes in mental health care for children and adolescents, the court may not order the discontinuation of prescribed psychotropic medication unless the required opinion is also from a psychiatrist who specializes in mental health care for children and adolescents. The court may also order the discontinuation of prescribed psychotropic medication if a child's treating physician states that continuing the prescribed psychotropic medication would cause significant harm to the child due to a diagnosed non-psychiatric medical condition. §39.407(3)(d)1, Florida Statutes.
 - When the court orders an additional medical consultation or second medical opinion, the department is required to file a written report including the results of this additional consultation or a copy of the second medical opinion with the court within the time required by the court. Fla.R.Juv.P. Rule 8.355(b)(1).
14. The burden of proof shall be by a preponderance of the evidence. §39.407(3)(d)2, Florida Statutes.

C. Follow up:

1. The department shall fully inform the court of the child's medical and behavioral status as part of the JRSSR and shall furnish copies of all pertinent medical records concerning the child which have been generated since the previous hearing. On its own motion or on good cause shown by any party, the court may review the status more frequently. §39.407(3)(f)1, Florida Statutes.
2. The parents or legal custodian remain financially responsible for the cost of medical treatment provided to the child even if either one or both of the parents or if the legal custodian did not consent to the medical treatment. After a hearing, the court may order the parents or legal custodian, if found able to do so, to reimburse the department or other provider of medical services for treatment provided. §39.407(13), Florida Statutes.
3. DCF may consent to medical treatment for a dependent child when the child has been committed to the department and the department has become the legal custodian of the child. §39.407(14), Florida Statutes.

D. General information:

1. Psychotropic medications may be administered in advance of a court order in hospitals, crisis stabilization units, and in statewide inpatient psychiatric programs. Within 3 working days after the medication is begun, the department must seek court authorization. §39.407(3)(e)2, Florida Statutes; Fla.R.Juv.P. Rule 8.355(c)(3).
2. If the child's prescribing physician certifies in the signed medical report that delay in providing a prescribed psychotropic medication would more likely than not cause significant harm to the child, the medication may be provided in advance of the issuance of a court order. In such event, the medical report must provide the specific reasons why the child may experience significant harm and the nature and the extent of the potential harm. The department must submit a motion seeking continuation of the medication and the physician's medical report to the court, the child's guardian ad litem, and all other parties within 3 working days after the department commences providing the medication to the child. The department shall seek the order at the next regularly scheduled court hearing required under this chapter, or within 30 days after the date of the prescription,

whichever occurs sooner. If any party objects to the department's motion, the court shall hold a hearing within 7 days. §39.407(3)(e)1, Florida Statutes. Fla.R.Juv.P. Rule 8.355(c)(2).

For further information regarding psychotropic medications, please see:

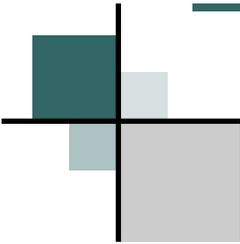
1. Daniel Castellanos, The Psychotropic Medication Reference for Judges, Attorneys, Guardians ad Litem and other Legal Professionals Addressing the Use of Psychotropic Medications with Children in State Custody in Florida, (2010).
2. Psychotropic Medications Judicial Reference Guide, (March 2010).

MEDICATION INDEX

Brand Name	Generic Name	Uses
Abilify	Aripiprazole	Antipsychotic
Adderall	Amphetamine	ADHD
Ativan	Lorazepam	Anxiety, Panic D/O, Impulse Control
Buspar **	Buspirone **	Anxiety, Panic D/O, Impulse Control
Carbatrol	Carbamazepine	Anti-seizure, Mood Stabilizers, Bipolar
Catapres	Clonidine	ADHD, Sleep D/O
Celexa	Citalopram	Depression, Anxiety
Clozaril **	Clozapine **	Antipsychotic
Concerta	Methylphenidate	ADHD
Cymbalta	Duloxetine	Depression
Depakene	Valproic acid	Anti-seizure, Mood Stabilizers, Bipolar
Depakote **	Divalproex sodium **	Anti-seizure, Mood Stabilizers, Bipolar
Desyrel	Trazodone	Depression
Dexedrine	Dextroamphetamine	ADHD
Effexor	Venlafaxine	Depression
Elavil	Amitriptyline	Depression, Anxiety
Eskalith	Lithium Carbonates	Mood D/O, Bipolar
Focalin	Dexmethylphenidate	ADHD
Geodon	Ziprasidone	Antipsychotic
Haldol	Haloperidol	Antipsychotic
Invega	Paliperidone	Antipsychotic
Klonopin	Clonazepam	Anxiety, Panic D/O, Impulse Control
Lamictal	Lamotrigine	Anti-seizure, Mood Stabilizers, Bipolar
Lexapro	Escitalopram	Depression, Anxiety
Lithobid	Lithium Carbonates	Mood D/O, Bipolar
Lithonate	Lithium Carbonates	Mood D/O, Bipolar
Loxitane	Loxapine	Antipsychotic
Luvox	Fluvoxamine	Depression, Anxiety
Mellaril	Thioridazine	Antipsychotic
Metadate CD	Methylphenidate	ADHD
Moban	Molindone	Antipsychotic
Navane	Thiothixene	Antipsychotic
Norpramin	Desipramine	Depression, Anxiety
Pamelor	Nortriptyline	Depression, Anxiety
Paxil	Paroxetine	Depression, Anxiety
Prolixin	Fluphenazine	Antipsychotic
Prozac	Fluoxetine	Depression, Anxiety
Risperdal	Risperidone	Antipsychotic
Ritalin	Methylphenidate	ADHD
Seroquel	Quetiapine	Antipsychotic
Sinequan	Doxepin	Depression, Anxiety
Stelazine	Trifluoperazine	Antipsychotic
Strattera	Atomoxetine	ADHD
Surmontil	Trimipramine	Depression, Anxiety
Tenex	Guanfacine	ADHD, Impulsiveness
Tegretol	Carbamazepine	Anti-seizure, Mood Stabilizers, Bipolar
Thorazine	Chlorpromazine	Antipsychotic
Tofranil	Imipramine	Depression, Anxiety
Trilafon	Perphenazine	Antipsychotic
Vivactil	Protriptyline	Depression, Anxiety
Vyvanse	Lisdexamfetamine dimesylate	ADHD
Wellbutrin	Bupropion	ADHD, Depression
Xanax	Alprazolam	Anxiety, Panic D/O, Impulse Control
Zyprexa	Olanzapine	Antipsychotic

Psychotic Symptoms (Antipsychotic medications)

Brand name ex. (atypical) Abilify, Geodon, Risperdal, Seroquel
(typical) Haldol, Thorazine, Trilafon



PSYCHOTIC SYMPTOMS

Antipsychotic medications reduce psychotic symptoms, such as **hallucinations** and **delusions**, **reduce manic symptoms**, and **stabilize moods**. **Antipsychotic medications come in two classes: the newer medications are called first-line agents** (they are also known as “second generation” and “atypical”); **and the older medications are called second-line agents** (they are also known as “first generation” and “typical”). **The newer medications, first-line agents, have fewer and less severe side effects.**

Atypical Medications

Brand Name	Generic Name
<i>Abilify</i>	<i>Aripiprazole</i>
<i>Geodon</i>	<i>Ziprasidone</i>
<i>Invega</i>	<i>Paliperidone</i>
<i>Risperdal</i>	<i>Risperidone</i>
<i>Seroquel</i>	<i>Quetiapine</i>
<i>Zyprexa</i>	<i>Olanzapine</i>
<i>Clozaril **</i>	<i>Clozapine **</i>

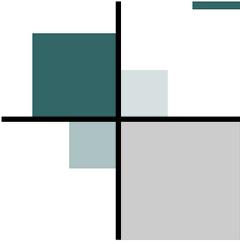
Possible side effects for Atypical medications: drowsiness; rapid heartbeat; sedation; nausea; constipation; weight gain; worsening triglycerides; worsening cholesterol and irreversible tardive dyskinesia (involuntary repetitive movements). Children with risk factors for diabetes should undergo blood testing of their blood sugar levels at the beginning of treatment and during treatment.

** Clozaril (Clozapine) is reserved for treatment resistant schizophrenia. Due to serious side effects, Clozaril is usually the last atypical antipsychotic prescribed and only for people who do not respond well to other medications or have frequent relapses. Youth taking Clozaril must have their blood monitored every one to two weeks to check white blood cell count.

Typical Medications

Brand Name	Generic Name
<i>Haldol</i>	<i>Haloperidol</i>
<i>Loxitane</i>	<i>Loxapine</i>
<i>Mellaril</i>	<i>Thioridazine</i>
<i>Moban</i>	<i>Molindone</i>
<i>Navane</i>	<i>Thiothixene</i>
<i>Prolixin</i>	<i>Fluphenazine</i>
<i>Stelazine</i>	<i>Trifluoperazine</i>
<i>Thorazine</i>	<i>Chlorpromazine</i>
<i>Trilafon</i>	<i>Perphenazine</i>

Possible side effects for Typical medications: dry mouth; rigidity; constipation; blurred vision; weight gain; drowsiness; restlessness; stiffness; tremors; muscle spasms and irreversible tardive dyskinesia (involuntary repetitive movements).



What medications are used to treat schizophrenia?*

Antipsychotic medications are used to treat schizophrenia and schizophrenia-related disorders. Some of these medications have been available since the mid-1950's. They are also called conventional "typical" antipsychotics. Some of the more commonly used medications include:

- Chlorpromazine (Thorazine)
- Haloperidol (Haldol)
- Perphenazine (generic only)
- Fluphenazine (generic only).

In the 1990's, new antipsychotic medications were developed. These new medications are called second generation, or "atypical" antipsychotics.

One of these medications was clozapine (Clozaril). It is a very effective medication that treats psychotic symptoms, hallucinations, and breaks with reality, such as when a person believes he or she is the president. But clozapine can sometimes cause a serious problem called agranulocytosis, which is a loss of the white blood cells that help a person fight infection. Therefore, people who take clozapine must get their white blood cell counts checked every week or two. This problem and the cost of blood tests make treatment with clozapine difficult for many people. Still, clozapine is potentially helpful for people who do not respond to other antipsychotic medications.

Other atypical antipsychotics were developed. All of them are effective, and none cause agranulocytosis. These include:

- Risperidone (Risperdal)
- Olanzapine (Zyprexa)
- Quetiapine (Seroquel)
- Ziprasidone (Geodon)
- Aripiprazole (Abilify)
- Paliperidone (Invega).

The antipsychotics listed here are some of the medications used to treat symptoms of schizophrenia.

Note: The FDA issued a Public Health Advisory for atypical antipsychotic medications. The FDA determined that death rates are higher for elderly people with dementia when taking this medication. A review of data has found a risk with conventional antipsychotics as well. Antipsychotic medications are not FDA-approved for the treatment of behavioral disorders in patients with dementia.

What are the side effects?*

Some people have side effects when they start taking these medications. Most side effects go away after a few days and often can be managed successfully. People who are taking antipsychotics should not drive until they adjust to their new medication. Side effects of many antipsychotics include:

- Drowsiness
- Dizziness when changing positions
- Blurred vision
- Rapid heartbeat
- Sensitivity to the sun
- Skin rashes
- Menstrual problems for women.

Atypical antipsychotic medications can cause major weight gain and changes in a person's metabolism. This may increase a person's risk of getting diabetes and high cholesterol.¹ A person's weight, glucose levels, and lipid levels should be monitored regularly by a doctor while taking an atypical antipsychotic medication.

- Typical antipsychotic medications can cause side effects related to physical movement, such as:
 - Rigidity
- Persistent muscle spasms
- Tremors
- Restlessness.

Long-term use of typical antipsychotic medications may lead to a condition called tardive dyskinesia (TD). TD causes muscle movements a person can't control. The movements commonly happen around the mouth. TD can range from mild to severe, and in some people the problem cannot be cured. Sometimes people with TD recover partially or fully after they stop taking the medication.

Every year, an estimated 5 percent of people taking typical antipsychotics get TD. The condition happens to fewer people who take the new, atypical antipsychotics, but some people may still get TD. People who think that they might have TD should check with their doctor before stopping their medication.

How are antipsychotics taken and how do people respond to them?*

Antipsychotics are usually pills that people swallow, or liquid they can drink. Some antipsychotics are shots that are given once or twice a month.

Symptoms of schizophrenia, such as feeling agitated and having hallucinations, usually go away within days. Symptoms like delusions usually go away within a few weeks. After about six weeks, many people will see a lot of improvement.

However, people respond in different ways to antipsychotic medications, and no one can tell beforehand how a person will respond. Sometimes a person needs to try several medications before finding the right one. Doctors and patients can work together to find the best medication or medication combination, and dose.

Some people may have a relapse—their symptoms come back or get worse. Usually, relapses happen when people stop taking their medication, or when they only take it sometimes. Some people stop taking the medication because they feel better or they may feel they don't need it anymore. **But no one should stop taking an antipsychotic medication without talking to his or her doctor.** When a doctor says it is okay to stop taking a medication, it should be gradually tapered off, never stopped suddenly.

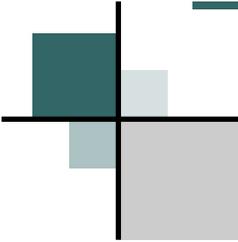
How do antipsychotics interact with other medications?*

Antipsychotics can produce unpleasant or dangerous side effects when taken with certain medications. For this reason, all doctors treating a patient need to be aware of all the medications that person is taking. Doctors need to know about prescription and over-the-counter medicine, vitamins, minerals, and herbal supplements. People also need to discuss any alcohol or other drug use with their doctor.

To find out more about how antipsychotics work, the National Institute of Mental Health (NIMH) funded a study called CATIE (Clinical Antipsychotic Trials of Intervention Effectiveness). This study compared the effectiveness and side effects of five antipsychotics used to treat people with schizophrenia. In general, the study found that the older medication perphenazine worked as well as the newer, atypical medications. But because people respond differently to different medications, it is important that treatments be designed carefully for each person.

Depression (Antidepressants)

Brand Name ex. (SSRIs) Celexa, Prozac, Paxil, Zoloft
(SARIs) Desyrel
(SNRIs) Effexor, Cymbalta
(TCAs) Elavil, Tofranil
(MAOIs) Nardil, Parnate
Other agents ex. Wellbutrin, Lexapro



DEPRESSION

Antidepressants are used to treat **depression**. They also may be used in children to treat **obsessive-compulsive disorders**. *In 2005, the FDA adopted a black box warning on all antidepressant medications which says there is an increased risk of suicidal thinking or attempts in children and adolescents taking antidepressants.*

Selective Serotonin Reuptake Inhibitors (SSRIs) are prescribed for **depression & anxiety**. They also may be used in children to treat **obsessive compulsive symptoms**.

Brand Name	Generic Name
<i>Celexa</i>	<i>Citalopram</i>
<i>Lexapro</i>	<i>Escitalopram</i>
<i>Luvox</i>	<i>Fluvoxamine</i>
<i>Paxil</i>	<i>Paroxetine</i>
<i>Prozac</i>	<i>Fluoxetine</i>
<i>Zoloft</i>	<i>Sertraline</i>

Possible side effects for SSRIs: Anxiety; nervousness; nausea; diarrhea; headache; insomnia; rash and slight weight loss.

Serotonin antagonist reuptake inhibitors (SARIs)

Brand Name	Generic Name
<i>Desyrel</i>	<i>Trazodone</i>

Serotonin and norepinephrine reuptake inhibitors (SNRIs)

Brand Name	Generic Name
<i>Effexor</i>	<i>Venlafaxine</i>
<i>Cymbalta</i>	<i>Duloxetine</i>

Possible side effects for newer antidepressants: anxiety; agitation; restlessness; panic attacks; nausea; headaches; difficulty sleeping; weight loss or gain; constipation; increase in blood pressure; drowsiness; irritability; hostility; impulse behavior; mania; apparent worsening of depression or thoughts of suicide.

Tricyclic Antidepressants (TCAs) are used to treat **Depression** and **Anxiety**. They may also be used as an adjunct for treating **ADHD** and bedwetting.

Brand Name	Generic Name
<i>Elavil</i>	<i>Amitriptyline</i>
<i>Norpramin</i>	<i>Desipramine</i>
<i>Pamelor</i>	<i>Nortriptyline</i>
<i>Sinequan</i>	<i>Doxepin</i>
<i>Surmontil</i>	<i>Trimipramine</i>
<i>Tofranil</i>	<i>Imipramine</i>
<i>Vivactil</i>	<i>Protriptyline</i>

Possible side effects for TCAs: drowsiness; anxiety; restlessness; dry mouth; blurred vision; constipation; cognitive and memory difficulties; weight gain; urinary retention; increased sweating; dizziness; muscle twitches; fatigue; increased heartbeats; irregular heartbeat (which can be potentially life threatening) and nausea.

Monoamine Oxidase Inhibitors (MAOIs) are another class of antidepressants used to treat **depression**.

Brand Name	Generic Name
<i>Nardil</i>	<i>Phenelzine</i>
<i>Parnate</i>	<i>Tranlycypromine</i>

MAOIs react with certain foods, alcoholic beverages and certain medications to produce a severe reaction which does not appear for several hours after taking the medication. The reaction may include dangerous rise in blood pressure, headache, nausea, vomiting, rapid heartbeat, possible confusion, psychotic symptoms, seizures, strokes and coma. The foods that negatively interact with MAOIs include aged cheeses, processed meats, fish and soy products, fava beans, and foods that contain MSG.

Norepinephrine and Dopamine Reuptake Inhibitors (NDRI)

Wellbutrin (Generic = *bupropion*) is a non-stimulant anti-depressant which may also be used for nicotine withdrawal or seasonal affective disorder (SAD).

Some other agents classified as antidepressants are also indicated for the treatment of disorders other than depression.

Lexapro (Generic = *escitalopram*) may be used for Obsessive compulsive disorder (OCD), Anxiety or Social phobia.

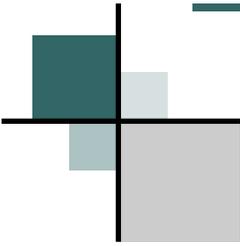
Paxil (Generic = *paroxetine*) may be used for Anxiety, OCD, Panic disorders, Post traumatic stress disorder (PTSD), Premenstrual dysphoric disorder (PMDD) or social phobia.

Prozac (Generic = *fluoxetine*) may be used for Bulimia nervosa, OCD, Panic disorder or Premenstrual dysphoric disorder (PMDD).

Zoloft (Generic = *sertraline*) may be used for Anxiety, OCD, Panic disorder, PTSD, PMDD or social phobia.

Cymbalta (Generic = *duloxetine*) may be used for Anxiety, diabetic neuropathy or fibromyalgia.

Effexor (Generic = *venlafaxine*) may be used for Anxiety, panic disorder or social phobia.



What medications are used to treat depression?*

Depression is commonly treated with antidepressant medications. Antidepressants work to balance some of the natural chemicals in our brains. These chemicals are called neurotransmitters, and they affect our mood and emotional responses. Antidepressants work on neurotransmitters such as serotonin, norepinephrine, and dopamine.

The most popular types of antidepressants are called selective serotonin reuptake inhibitors (SSRIs). These include:

- Fluoxetine (Prozac)
- Citalopram (Celexa)
- Sertraline (Zoloft)
- Paroxetine (Paxil)
- Escitalopram (Lexapro).

Other types of antidepressants are serotonin and norepinephrine reuptake inhibitors (SNRIs). SNRIs are similar to SSRIs and include venlafaxine (Effexor) and duloxetine (Cymbalta). Another antidepressant that is commonly used is bupropion (Wellbutrin). Bupropion, which works on the neurotransmitter dopamine, is unique in that it does not fit into any specific drug type.

SSRIs and SNRIs are popular because they do not cause as many side effects as older classes of antidepressants. Older antidepressant medications include tricyclics, tetracyclics, and monoamine oxidase inhibitors (MAOIs). For some people, tricyclics, tetracyclics, or MAOIs may be the best medications.

What are the side effects?*

Antidepressants may cause mild side effects that usually do not last long. **Any unusual reactions or side effects should be reported to a doctor immediately.**

- The most common side effects associated with SSRIs and SNRIs include:
 - Headache, which usually goes away within a few days.
- Nausea (feeling sick to your stomach), which usually goes away within a few days.
- Sleeplessness or drowsiness, which may happen during the first few weeks but then goes away. Sometimes the medication dose needs to be reduced or the time of day it is taken needs to be adjusted to help lessen these side effects.
- Agitation (feeling jittery).
- Sexual problems, which can affect both men and women and may include reduced sex drive, and problems having and enjoying sex.
- Tricyclic antidepressants can cause side effects, including:
- Dry mouth.

*Mental Health Medications, National Institute of Mental Health

- Constipation.
- Bladder problems. It may be hard to empty the bladder, or the urine stream may not be as strong as usual. Older men with enlarged prostate conditions may be more affected.
- Sexual problems, which can affect both men and women and may include reduced sex drive, and problems having and enjoying sex.
- Blurred vision, which usually goes away quickly.
- Drowsiness. Usually, antidepressants that make you drowsy are taken at bedtime.

People taking MAOIs need to be careful about the foods they eat and the medicines they take. Foods and medicines that contain high levels of a chemical called tyramine are dangerous for people taking MAOIs. Tyramine is found in some cheeses, wines, and pickles. The chemical is also in some medications, including decongestants and over-the-counter cold medicine.

Mixing MAOIs and tyramine can cause a sharp increase in blood pressure, which can lead to stroke. People taking MAOIs should ask their doctors for a complete list of foods, medicines, and other substances to avoid. An MAOI skin patch has recently been developed and may help reduce some of these risks. A doctor can help a person figure out if a patch or a pill will work for him or her.

How should antidepressants be taken?*

People taking antidepressants need to follow their doctors' directions. The medication should be taken in the right dose for the right amount of time. It can take three or four weeks until the medicine takes effect. Some people take the medications for a short time, and some people take them for much longer periods. People with long-term or severe depression may need to take medication for a long time.

Once a person is taking antidepressants, it is important not to stop taking them without the help of a doctor. Sometimes people taking antidepressants feel better and stop taking the medication too soon, and the depression may return. When it is time to stop the medication, the doctor will help the person slowly and safely decrease the dose. It's important to give the body time to adjust to the change. People don't get addicted, or "hooked," on the medications, but stopping them abruptly can cause withdrawal symptoms.

If a medication does not work, it is helpful to be open to trying another one. A study funded by NIMH found that if a person with difficult-to-treat depression did not get better with a first medication, chances of getting better increased when the person tried a new one or added a second medication to his or her treatment. The study was called [STAR*D \(Sequenced Treatment Alternatives to Relieve Depression\)](#).^{2,3}

Are herbal medicines used to treat depression?*

The herbal medicine St. John's wort has been used for centuries in many folk and herbal remedies. Today in Europe, it is used widely to treat mild-to-moderate depression. In the United States, it is one of the top-selling botanical products.

The National Institutes of Health conducted a clinical trial to determine the effectiveness of treating adults who have major depression with St. John's wort. The study included 340 people diagnosed with major depression. One-third of the people took the herbal medicine, one-third took an SSRI, and one-third took a placebo, or "sugar pill." The people did not know what they were taking. The study found that St. John's wort was no more effective than the placebo in treating major depression.⁴ A study currently in progress is looking at the effectiveness of St. John's wort for treating mild or minor depression.

*Mental Health Medications, National Institute of Mental Health

Other research has shown that St. John's wort can dangerously interact with other medications, including those used to control HIV. On February 10, 2000, the FDA issued a Public Health Advisory letter stating that the herb appears to interfere with certain medications used to treat heart disease, depression, seizures, certain cancers, and organ transplant rejection. Also, St. John's wort may interfere with oral contraceptives.

Because St. John's wort may not mix well with other medications, people should always talk with their doctors before taking it or any herbal supplement.

FDA warning on antidepressants*

Antidepressants are safe and popular, but some studies have suggested that they may have unintentional effects, especially in young people. In 2004, the FDA looked at published and unpublished data on trials of antidepressants that involved nearly 4,400 children and adolescents. They found that 4 percent of those taking antidepressants thought about or tried suicide (although no suicides occurred), compared to 2 percent of those receiving placebos (sugar pill).

In 2005, the FDA decided to adopt a "black box" warning label—the most serious type of warning—on all antidepressant medications. The warning says there is an increased risk of suicidal thinking or attempts in children and adolescents taking antidepressants. In 2007, the FDA proposed that makers of all antidepressant medications extend the warning to include young adults up through age 24.

The warning also says that patients of all ages taking antidepressants should be watched closely, especially during the first few weeks of treatment. Possible side effects to look for are depression that gets worse, suicidal thinking or behavior, or any unusual changes in behavior such as trouble sleeping, agitation, or withdrawal from normal social situations. Families and caregivers should report any changes to the doctor.

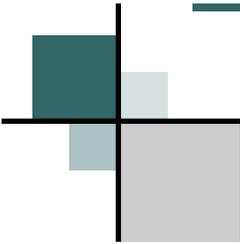
Results of a comprehensive review of pediatric trials conducted between 1988 and 2006 suggested that the benefits of antidepressant medications likely outweigh their risks to children and adolescents with major depression and anxiety disorders.² The study was funded in part by NIMH.

Finally, the FDA has warned that combining the newer SSRI or SNRI antidepressants with one of the commonly-used "triptan" medications used to treat migraine headaches could cause a life-threatening illness called "serotonin syndrome." A person with serotonin syndrome may be agitated, have hallucinations (see or hear things that are not real), have a high temperature, or have unusual blood pressure changes. Serotonin syndrome is usually associated with the older antidepressants called MAOIs, but it can happen with the newer antidepressants as well, if they are mixed with the wrong medications.

*Mental Health Medications, National Institute of Mental Health

Mood Disorders / Bi-polar Disorder (Mood Stabilizers)

Brand name ex. (Lithium Carbonates) Eskalith, Lithobid
(Anti-seizure Medications used as mood stabilizers)
Depakote, Tegretol



MOOD DISORDERS / BIPOLAR DISORDER

Mood Stabilizers are used to treat mood disorders, over-activity and aggressiveness. Lithium is a very effective mood stabilizer.

Lithium Carbonates: **Brand Names: Eskalith, Lithonate, Lithobid**

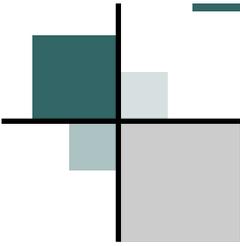
Possible side effects for Lithium include: Tremors, muscle weakness, upset stomach, diarrhea and trouble concentrating. Long term side effects can include weight gain, thyroid problems, kidney problems and acne. Lithium serum levels in blood need to be monitored. If a child has too much lithium in their system, you may see severe tremors, nausea, confusion and dehydration.

Anti-Seizure Medications are also used as mood stabilizers.

Brand Name	Generic Name
<i>Carbatrol</i>	<i>Carbamazepine</i>
<i>Depakene</i>	<i>Valproic acid</i>
<i>Depakote **</i>	<i>Divalproex sodium **</i>
<i>Lamictal</i>	<i>Lamotrigine</i>
<i>Tegretol</i>	<i>Carbamazepine</i>

Possible side effects for anti-seizure medications include: drowsiness, irritability, nausea, rash, clumsiness, dizziness and tremors. Some drugs produce changes in emotions, memory, behavior or affect learning.

** Depakote specifically may have side effects including upset stomach, dizziness and tremors.



What medications are used to treat bipolar disorder?*

Bipolar disorder, also called manic-depressive illness, is commonly treated with mood stabilizers. Sometimes, antipsychotics and antidepressants are used along with a mood stabilizer.

Mood stabilizers*

People with bipolar disorder usually try mood stabilizers first. In general, people continue treatment with mood stabilizers for years. Lithium is a very effective mood stabilizer. It was the first mood stabilizer approved by the FDA in the 1970's for treating both manic and depressive episodes.

Anticonvulsant medications also are used as mood stabilizers. They were originally developed to treat seizures, but they were found to help control moods as well. One anticonvulsant commonly used as a mood stabilizer is valproic acid, also called divalproex sodium (Depakote). For some people, it may work better than lithium.⁶ Other anticonvulsants used as mood stabilizers are carbamazepine (Tegretol), lamotrigine (Lamictal) and oxcarbazepine (Trileptal).

Atypical antipsychotics*

Atypical antipsychotic medications are sometimes used to treat symptoms of bipolar disorder. Often, antipsychotics are used along with other medications.

Antipsychotics used to treat people with bipolar disorder include:

- Olanzapine (Zyprexa), which helps people with severe or psychotic depression, which often is accompanied by a break with reality, hallucinations, or delusions⁷
- Aripiprazole (Abilify), which can be taken as a pill or as a shot
- Risperidone (Risperdal)
- Ziprasidone (Geodon)

Clozapine (Clozaril), which is often used for people who do not respond to lithium or anticonvulsants.⁸

*Mental Health Medications, National Institute of Mental Health

Antidepressants*

Antidepressants are sometimes used to treat symptoms of depression in bipolar disorder. Fluoxetine (Prozac), paroxetine (Paxil), or sertraline (Zoloft) are a few that are used. However, people with bipolar disorder should not take an antidepressant on its own. Doing so can cause the person to rapidly switch from depression to mania, which can be dangerous.⁹ To prevent this problem, doctors give patients a mood stabilizer or an antipsychotic along with an antidepressant.

Research on whether antidepressants help people with bipolar depression is mixed. An NIMH-funded study found that antidepressants were no more effective than a placebo to help treat depression in people with bipolar disorder. The people were taking mood stabilizers along with the antidepressants.

What are the side effects?*

Treatments for bipolar disorder have improved over the last 10 years. But everyone responds differently to medications.

If you have any side effects, tell your doctor right away. He or she may change the dose or prescribe a different medication.

Different medications for treating bipolar disorder may cause different side effects. Some medications used for treating bipolar disorder have been linked to unique and serious symptoms, which are described below.

- Lithium can cause several side effects, and some of them may become serious. They include:
 - Loss of coordination
- Excessive thirst
- Frequent urination
- Blackouts
- Seizures
- Slurred speech
- Fast, slow, irregular, or pounding heartbeat
- Hallucinations (seeing things or hearing voices that do not exist)
- Changes in vision
- Itching, rash
- Swelling of the eyes, face, lips, tongue, throat, hands, feet, ankles, or lower legs.

If a person with bipolar disorder is being treated with lithium, he or she should visit the doctor regularly to check the levels of lithium in the blood, and make sure the kidneys and the thyroid are working normally.

- Some possible side effects linked with valproic acid/divalproex sodium include:
 - Changes in weight
- Nausea
- Stomach pain

*Mental Health Medications, National Institute of Mental Health

- Vomiting
- Anorexia
- Loss of appetite.

Valproic acid may cause damage to the liver or pancreas, so people taking it should see their doctors regularly.

Valproic acid may affect young girls and women in unique ways. Sometimes, valproic acid may increase testosterone (a male hormone) levels in teenage girls and lead to a condition called polycystic ovarian syndrome (PCOS).^{11,12} PCOS is a disease that can affect fertility and make the menstrual cycle become irregular, but symptoms tend to go away after valproic acid is stopped.¹³ It also may cause birth defects in women who are pregnant.

Lamotrigine can cause a rare but serious skin rash that needs to be treated in a hospital. In some cases, this rash can cause permanent disability or be life-threatening.

In addition, valproic acid, lamotrigine, carbamazepine, oxcarbazepine and other anticonvulsant medications (listed in the chart at the end of this document) have an FDA warning. The warning states that their use may increase the risk of suicidal thoughts and behaviors. People taking anticonvulsant medications for bipolar or other illnesses should be closely monitored for new or worsening symptoms of depression, suicidal thoughts or behavior, or any unusual changes in mood or behavior. People taking these medications should not make any changes without talking to their health care professional.

Other medications for bipolar disorder may also be linked with rare but serious side effects. Always talk with the doctor or pharmacist about any potential side effects before taking the medication.

How should medications for bipolar disorder be taken?*

Medications should be taken as directed by a doctor. Sometimes a person's treatment plan needs to be changed. When changes in medicine are needed, the doctor will guide the change. **A person should never stop taking a medication without asking a doctor for help.**

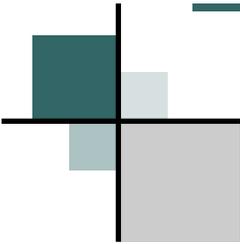
There is no cure for bipolar disorder, but treatment works for many people. Treatment works best when it is continuous, rather than on and off. However, mood changes can happen even when there are no breaks in treatment. Patients should be open with their doctors about treatment. Talking about how treatment is working can help it be more effective.

It may be helpful for people or their family members to keep a daily chart of mood symptoms, treatments, sleep patterns, and life events. This chart can help patients and doctors track the illness. Doctors can use the chart to treat the illness most effectively.

Because medications for bipolar disorder can have serious side effects, it is important for anyone taking them to see the doctor regularly to check for possibly dangerous changes in the body.

Anxiety (Benzodiazepines)

Brand name ex. (anxiety, panic disorders, impulse control)
Klonopin, Xanax
(anti-anxiety in treating aggressive behaviors)
Buspar



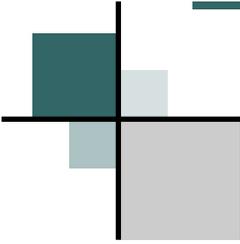
ANXIETY

Benzodiazepines can be used to treat **anxiety, panic disorders** and/or **impulse control problems**. These medications can contribute to excessive sedation and intoxication, especially when combined with alcohol.

Brand Name	Generic Name
<i>Ativan</i>	<i>Lorazepam</i>
<i>Buspar</i> **	<i>Buspirone</i> **
<i>Klonopin</i>	<i>Clonazepam</i>
<i>Xanax</i>	<i>Alprazolam</i>

Possible side effects for Benzodiazepines include: dizziness, lightheadedness, drowsiness, clumsiness, unsteadiness and slurred speech.

** *Buspar* (generic = Buspirone) is an **anti-anxiety** medication that may also be used in treating **aggressive behaviors** in children with developmental disorders.



What medications are used to treat anxiety disorders?*

Antidepressants, anti-anxiety medications, and beta-blockers are the most common medications used for anxiety disorders.

- Anxiety disorders include:
 - Obsessive compulsive disorder (OCD)
- Post-traumatic stress disorder (PTSD)
- Generalized anxiety disorder (GAD)
- Panic disorder
- Social phobia.

Antidepressants*

Antidepressants were developed to treat depression, but they also help people with anxiety disorders. SSRIs such as fluoxetine (Prozac), sertraline (Zoloft), escitalopram (Lexapro), paroxetine (Paxil), and citalopram (Celexa) are commonly prescribed for panic disorder, OCD, PTSD, and social phobia. The SNRI venlafaxine (Effexor) is commonly used to treat GAD. The antidepressant bupropion (Wellbutrin) is also sometimes used. When treating anxiety disorders, antidepressants generally are started at low doses and increased over time.

Some tricyclic antidepressants work well for anxiety. For example, imipramine (Tofranil) is prescribed for panic disorder and GAD. Clomipramine (Anafranil) is used to treat OCD. Tricyclics are also started at low doses and increased over time.

MAOIs are also used for anxiety disorders. Doctors sometimes prescribe phenelzine (Nardil), tranylcypromine (Parnate), and isocarboxazid (Marplan). People who take MAOIs must avoid certain food and medicines that can interact with their medicine and cause dangerous increases in blood pressure.

Benzodiazepines (anti-anxiety medications)*

- The anti-anxiety medications called benzodiazepines can start working more quickly than antidepressants. The ones used to treat anxiety disorders include:
 - Clonazepam (Klonopin), which is used for social phobia and GAD
- Lorazepam (Ativan), which is used for panic disorder
- Alprazolam (Xanax), which is used for panic disorder and GAD.

Buspirone (Buspar) is an anti-anxiety medication used to treat GAD. Unlike benzodiazepines, however, it takes at least two weeks for buspirone to begin working.

Clonazepam, listed above, is an anticonvulsant medication.

*Mental Health Medications, National Institute of Mental Health

Beta-blockers*

Beta-blockers control some of the physical symptoms of anxiety, such as trembling and sweating. Propranolol (Inderal) is a beta-blocker usually used to treat heart conditions and high blood pressure. The medicine also helps people who have physical problems related to anxiety. For example, when a person with social phobia must face a stressful situation, such as giving a speech, or attending an important meeting, a doctor may prescribe a beta-blocker. Taking the medicine for a short period of time can help the person keep physical symptoms under control.

What are the side effects?*

- See the [section on antidepressants](#) for a discussion on side effects. The most common side effects for benzodiazepines are drowsiness and dizziness. Other possible side effects include:

Upset stomach

- Blurred vision
- Headache
- Confusion
- Grogginess
- Nightmares.

Possible side effects from buspirone (BuSpar) include:

- Dizziness
- Headaches
- Nausea
- Nervousness
- Lightheadedness
- Excitement
- Trouble sleeping.

Common side effects from beta-blockers include:

- Fatigue
- Cold hands
- Dizziness
- Weakness.

In addition, beta-blockers generally are not recommended for people with asthma or diabetes because they may worsen symptoms.

How should medications for anxiety disorders be taken?*

People can build a tolerance to benzodiazepines if they are taken over a long period of time and may need higher and higher doses to get the same effect. Some people may become dependent on them. To avoid these problems, doctors usually prescribe the medication for short periods, a practice that is especially helpful for people who have substance abuse problems or who become dependent on medication easily. If people suddenly stop taking benzodiazepines, they may get withdrawal symptoms, or their anxiety may return. Therefore, they should be tapered off slowly.

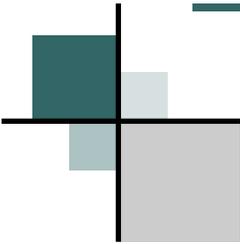
Buspirone and beta-blockers are similar. They are usually taken on a short-term basis for anxiety. Both should be tapered off slowly. Talk to the doctor before stopping any anti-anxiety medication.

*Mental Health Medications, National Institute of Mental Health

Attention Deficit Hyperactive Disorder (ADHD)

Brand name ex. (psycho stimulants) Adderall, Concerta,
Ritalin, Vyvanse
(non- stimulants) Strattera
(antidepressant) Wellbutrin

Treating aggressive behaviors and sleep problems (Catapres)
(Impulsiveness/ hyperactivity) Tenex



ADHD

Psycho stimulants are used to treat **ADHD**, reduce hyperactivity, reduce inattention, improve behavioral control and improve cognitive performance.

Brand Name	Generic Name
<i>Adderall</i>	<i>Amphetamine</i>
<i>Concerta</i>	<i>Methylphenidate</i>
<i>Dexedrine</i>	<i>Dextroamphetamine</i>
<i>Focalin</i>	<i>Dexmethylphenidate</i>
<i>Metadate CD</i>	<i>Methylphenidate</i>
<i>Ritalin</i>	<i>Methylphenidate</i>
<i>Vyvanse</i>	<i>Lisdexamfetamine dimesylate</i>

Possible side effects of stimulants: nervousness; difficulty sleeping; decreased appetite; weight loss; headache; stomach pain; moodiness; irritability; nausea; skin rash; jitteriness; social withdrawal; motor and vocal tics; and increase in blood pressure and pulse.

Non- Stimulants in the treatment of ADHD

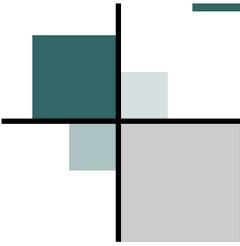
The non-stimulants are considered second line therapy and are beneficial as adjunct when patients have co morbidities.

A **nonstimulant** used to treat ADHD is **Strattera (Atomoxetine)**. The most common side effects are upset stomach, decreased appetite, nausea, dizziness, tiredness, mood swings, increased blood pressure and increased heart rate. Weight loss may also occur. Studies show that children and teenagers with ADHD who take this medication are more likely to have suicidal thoughts than those without ADHD who do not take this medication.

An **antidepressant** that is effective for symptoms of ADHD is **Wellbutrin (Bupropion)**. IT can also alleviate the symptoms of anxiety and depression

Catapres (generic = *Clonidine*) is used to treat high blood pressure but has also been used for treating **ADHD, aggressive behavior and sleep problems**. This medication is known as a antihypertensive agent and can help to control disruptive or aggressive behavior and alleviate the side effect of insomnia caused by stimulants.

Tenex (generic = *Guanfacine*) is similar to Clonidine above, but causes less sleepiness and may be more affective in improving attention. It is used to treat **impulsiveness and hyperactivity** associated with **ADHD**. This medication is known as a antihypertensive agent and can help to control disruptive or aggressive behavior and alleviate the side effect of insomnia caused by stimulants.



What medications are used to treat ADHD?*

- Attention deficit/hyperactivity disorder (ADHD) occurs in both children and adults. ADHD is commonly treated with stimulants, such as:
Methylphenidate (Ritalin, Metadate, Concerta, Daytrana)
- Amphetamine (Adderall)
- Dextroamphetamine (Dexedrine, Dextrostat).

In 2002, the FDA approved the nonstimulant medication atomoxetine (Strattera) for use as a treatment for ADHD. In February 2007, the FDA approved the use of the stimulant lisdexamfetamine dimesylate (Vyvanse) for the treatment of ADHD in children ages 6 to 12 years.

What are the side effects?*

- Most side effects are minor and disappear when dosage levels are lowered. The most common side effects include:
Decreased appetite. Children seem to be less hungry during the middle of the day, but they are often hungry by dinnertime as the medication wears off.
- Sleep problems. If a child cannot fall asleep, the doctor may prescribe a lower dose. The doctor might also suggest that parents give the medication to their child earlier in the day, or stop the afternoon or evening dose. To help ease sleeping problems, a doctor may add a prescription for a low dose of an antidepressant or a medication called clonidine.
- Stomachaches and headaches.

Less common side effects. A few children develop sudden, repetitive movements or sounds called tics. These tics may or may not be noticeable. Changing the medication dosage may make tics go away. Some children also may appear to have a personality change, such as appearing "flat" or without emotion. Talk with your child's doctor if you see any of these side effects.

How are ADHD medications taken?*

Stimulant medications can be short-acting or long-acting, and can be taken in different forms such as a pill, patch, or powder. Long-acting, sustained and extended release forms allow children to take the medication just once a day before school. Parents and doctors should decide together which medication is best for the child and whether the child needs medication only for school hours or for evenings and weekends too.

ADHD medications help many children and adults who are hyperactive and impulsive. They help people focus, work, and learn. Stimulant medication also may improve physical coordination. However, different people respond differently to medications, so children taking ADHD medications should be watched closely.

Are ADHD medications safe?*

Stimulant medications are safe when given under a doctor's supervision. Some children taking them may feel slightly different or "funny."

Some parents worry that stimulant medications may lead to drug abuse or dependence, but there is little evidence of this. Research shows that teens with ADHD who took stimulant medications were less likely to abuse drugs than those who did not take stimulant medications.¹⁴

FDA warning on possible rare side effects*

In 2007, the FDA required that all makers of ADHD medications develop Patient Medication Guides. The guides must alert patients to possible heart and psychiatric problems related to ADHD medicine. The FDA required the Patient Medication Guides because a review of data found that ADHD patients with heart conditions had a slightly higher risk of strokes, heart attacks, and sudden death when taking the medications. The review also found a slightly higher risk (about 1 in 1,000) for medication-related psychiatric problems, such as hearing voices, having hallucinations, becoming suspicious for no reason, or becoming manic. This happened to patients who had no history of psychiatric problems.

The FDA recommends that any treatment plan for ADHD include an initial health and family history examination. This exam should look for existing heart and psychiatric problems.

The non-stimulant ADHD medication called atomoxetine (Strattera) carries another warning. Studies show that children and teenagers with ADHD who take atomoxetine are more likely to have suicidal thoughts than children and teenagers with ADHD who do not take atomoxetine. If your child is taking atomoxetine, watch his or her behavior carefully. A child may develop serious symptoms suddenly, so it is important to pay attention to your child's behavior every day. Ask other people who spend a lot of time with your child, such as brothers, sisters, and teachers, to tell you if they notice changes in your child's behavior. Call a doctor right away if your child shows any of the following symptoms:

- Acting more subdued or withdrawn than usual
- Feeling helpless, hopeless, or worthless
- New or worsening depression
- Thinking or talking about hurting himself or herself
- Extreme worry
- Agitation
- Panic attacks
- Trouble sleeping
- Irritability
- Aggressive or violent behavior
- Acting without thinking
- Extreme increase in activity or talking
- Frenzied, abnormal excitement
- Any sudden or unusual changes in behavior.

While taking atomoxetine, your child should see a doctor often, especially at the beginning of treatment. Be sure that your child keeps all appointments with his or her doctor.



FDA Medications: Age Approved Listing

Alphabetical List of Medications*

This section identifies antipsychotic medications, antidepressant medications, mood stabilizers, anticonvulsant medications, anti-anxiety medications, and ADHD medications. Some medications are marketed under trade names, not all of which can be listed in this publication. The first chart lists the medications by trade name.

Also, ask your doctor or pharmacist for more information about any medication.

Medications Organized by Trade Name*

Trade Name	Generic Name	FDA Approved Age
Combination Antipsychotic and Antidepressant Medication*		
Symbyax (Prozac & Zyprexa)	fluoxetine & olanzapine	18 and older
Antipsychotic Medications		
Abilify	aripiprazole	13 to 17 for schizophrenia and bipolar; 18 and older for schizophrenia, bipolar mania, and depression
Clozaril	clozapine	18 and older
Fanapt	iloperidone	18 and older
fluphenazine (generic only)	fluphenazine	18 and older
Geodon	ziprasidone	18 and older
Haldol	haloperidol	3 and older
Invega	paliperidone	18 and older
Loxitane	loxapine	18 and older
Moban	molindone	18 and older
Navane	thiothixene	18 and older
Orap (for Tourette's syndrome)	pimozide	12 and older
perphenazine (generic only)	perphenazine	18 and older
Risperdal	risperidone	13 and older for schizophrenia; 10 and older for bipolar mania and mixed episodes; 5 to 16 for irritability associated with autism
Seroquel	quetiapine	18 and older, for schizophrenia and bipolar disorder
Stelazine	trifluoperazine	18 and older
thioridazine (generic only)	thioridazine	2 and older
Thorazine	chlorpromazine	18 and older
Zyprexa	olanzapine	18 and older

* Mental Health Medications, National Institute of Mental Health

Trade Name	Generic Name	FDA Approved Age
Antidepressant Medications (also used for anxiety disorders)*		
Anafranil (tricyclic)	clomipramine	10 and older (for OCD only)
Asendin	amoxapine	18 and older
Aventyl (tricyclic)	nortriptyline	18 and older
Celexa (SSRI)	citalopram	18 and older
Cymbalta (SNRI)	duloxetine	18 and older
Desyrel	trazodone	18 and older
Effexor (SNRI)	venlafaxine	18 and older
Elavil (tricyclic)	amitriptyline	18 and older
Emsam	selegiline	18 and older
Lexapro (SSRI)	escitalopram	18 and older; 12 - 17 (for major depressive disorder)
Ludiomil (tricyclic)	maprotiline	18 and older
Luvox (SSRI)	fluvoxamine	8 and older (for OCD only)
Marplan (MAOI)	isocarboxazid	18 and older
Nardil (MAOI)	phenelzine	18 and older
Norpramin (tricyclic)	desipramine	18 and older
Pamelor (tricyclic)	nortriptyline	18 and older
Parnate (MAOI)	tranylcypromine	18 and older
Paxil (SSRI)	paroxetine	18 and older
Pexeva (SSRI)	paroxetine-mesylate	18 and older
Prozac (SSRI)	fluoxetine	8 and older
Remeron	mirtazapine	18 and older
Sarafem (SSRI)	fluoxetine	18 and older for premenstrual dysphoric disorder (PMDD)
Sinequan (tricyclic)	doxepin	12 and older
Surmontil (tricyclic)	trimipramine	18 and older
Tofranil (tricyclic)	imipramine	6 and older (for bedwetting)
Tofranil-PM (tricyclic)	imipramine pamoate	18 and older
Vivactil (tricyclic)	protriptyline	18 and older
Wellbutrin	bupropion	18 and older
Zoloft (SSRI)	sertraline	6 and older (for OCD only)

* Mental Health Medications, National Institute of Mental Health

Trade Name	Generic Name	FDA Approved Age
Mood Stabilizing and Anticonvulsant Medications *		
Depakote	divalproex sodium (valproic acid)	2 and older (for seizures)
Eskalith	lithium carbonate	12 and older
Lamictal	lamotrigine	18 and older
lithium citrate (generic only)	lithium citrate	12 and older
Lithobid	lithium carbonate	12 and older
Neurontin	gabapentin	18 and older
Tegretol	carbamazepine	any age (for seizures)
Topamax	topiramate	18 and older
Trileptal	oxcarbazepine	4 and older

Trade Name	Generic Name	FDA Approved Age
Anti-anxiety Medications (All of these anti-anxiety medications are benzodiazepines, except BuSpar)*		
Ativan	lorazepam	18 and older
BuSpar	bupirone	18 and older
Klonopin	clonazepam	18 and older
Librium	chlordiazepoxide	18 and older
oxazepam (generic only)	oxazepam	18 and older
Tranxene	clorazepate	18 and older
Valium	diazepam	18 and older
Xanax	alprazolam	18 and older

* Mental Health Medications, National Institute of Mental Health

Trade Name	Generic Name	FDA Approved Age
ADHD Medications (All of these ADHD medications are stimulants, except Strattera.)*		
Adderall	amphetamine	3 and older
Adderall XR	amphetamine (extended release)	6 and older
Concerta	methylphenidate (long acting)	6 and older
Daytrana	methylphenidate patch	6 and older
Desoxyn	methamphetamine	6 and older
Dexedrine	dextroamphetamine	3 and older
Dextrostat	dextroamphetamine	3 and older
Focalin	dexmethylphenidate	6 and older
Focalin XR	dexmethylphenidate (extended release)	6 and older
Metadate ER	methylphenidate (extended release)	6 and older
Metadate CD	methylphenidate (extended release)	6 and older
Methylin	methylphenidate (oral solution and chewable tablets)	6 and older
Ritalin	methylphenidate	6 and older
Ritalin SR	methylphenidate (extended release)	6 and older
Ritalin LA	methylphenidate (long-acting)	6 and older
Strattera	atomoxetine	6 and older
Vyvanse	lisdexamfetamine dimesylate	6 and older

* Mental Health Medications, National Institute of Mental Health

Medications Organized by Generic Name

Generic Name	Trade Name	FDA Approved Age
Combination Antipsychotic and Antidepressant Medication*		
fluoxetine & olanzapine	Symbyax (Prozac & Zyprexa)	18 and older
Antipsychotic Medications		
aripiprazole	Abilify	13 to 17 for schizophrenia and bipolar; 18 and older for schizophrenia, bipolar mania, and depression
chlorpromazine	Thorazine	18 and older
clozapine	Clozaril	18 and older
fluphenazine (generic only)	fluphenazine	18 and older
haloperidol	Haldol	3 and older
iloperidone	Fanapt	18 and older
loxapine	Loxitane	18 and older
molindone	Moban	18 and older
olanzapine	Zyprexa	18 and older
paliperidone	Invega	18 and older
perphenazine (generic only)	perphenazine	18 and older
pimozide (for Tourette's syndrome)	Orap	12 and older
quetiapine	Seroquel	18 and older, for schizophrenia and bipolar disorder
risperidone	Risperdal	13 and older for schizophrenia; 10 and older for bipolar mania and mixed episodes; 5 to 16 for irritability associated with autism
thioridazine (generic only)	thioridazine	2 and older
thiothixene	Navane	18 and older
trifluoperazine	Stelazine	18 and older
ziprasidone	Geodon	18 and older

* Mental Health Medications, National Institute of Mental Health

Generic Name	Trade Name	FDA Approved Age
Antidepressant Medications (also used for anxiety disorders)*		
amitriptyline (tricyclic)	Elavil	18 and older
amoxapine	Asendin	18 and older
bupropion	Wellbutrin	18 and older
citalopram (SSRI)	Celexa	18 and older
clomipramine (tricyclic)	Anafranil	10 and older (for OCD only)
desipramine (tricyclic)	Norpramin	18 and older
doxepin (tricyclic)	Sinequan	12 and older
duloxetine (SNRI)	Cymbalta	18 and older
escitalopram (SSRI)	Lexapro	18 and older; 12 - 17 (for major depressive disorder)
fluoxetine (SSRI)	Prozac	8 and older
fluoxetine (SSRI)	Sarafem	18 and older for premenstrual dysphoric disorder (PMDD)
fluvoxamine (SSRI)	Luvox	8 and older (for OCD only)
imipramine (tricyclic)	Tofranil	6 and older (for bedwetting)
imipramine pamoate (tricyclic)	Tofranil-PM	18 and older
isocarboxazid (MAOI)	Marplan	18 and older
maprotiline (tricyclic)	Ludiomil	18 and older
mirtazapine	Remeron	18 and older
nortriptyline (tricyclic)	Aventyl, Pamelor	18 and older
paroxetine (SSRI)	Paxil	18 and older
paroxetine mesylate (SSRI)	Pexeva	18 and older
phenelzine (MAOI)	Nardil	18 and older
protriptyline (tricyclic)	Vivactil	18 and older
selegiline	Emsam	18 and older
sertraline (SSRI)	Zoloft	6 and older (for OCD only)
tranylcypromine (MAOI)	Parnate	18 and older
trazodone	Desyrel	18 and older
trimipramine (tricyclic)	Surmontil	18 and older
venlafaxine (SNRI)	Effexor	18 and older

* Mental Health Medications, National Institute of Mental Health

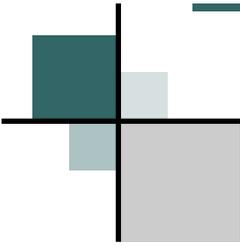
Generic Name	Trade Name	FDA Approved Age
Mood Stabilizing and Anticonvulsant Medications*		
carbamazepine	Tegretol	any age (for seizures)
divalproex sodium (valproic acid)	Depakote	2 and older (for seizures)
gabapentin	Neurontin	18 and older
lamotrigine	Lamictal	18 and older
lithium carbonate	Eskalith, Lithobid	12 and older
lithium citrate (generic only)	lithium citrate	12 and older
oxcarbazepine	Trileptal	4 and older
topiramate	Topamax	18 and older

Generic Name	Trade Name	FDA Approved Age
Anti-anxiety Medications (All of these anti-anxiety medications are benzodiazepines, except buspirone.)*		
alprazolam	Xanax	18 and older
buspirone	BuSpar	18 and older
chlordiazepoxide	Librium	18 and older
clonazepam	Klonopin	18 and older
clorazepate	Tranxene	18 and older
diazepam	Valium	18 and older
lorazepam	Ativan	18 and older
oxazepam (generic only)	oxazepam	18 and older

* Mental Health Medications, National Institute of Mental Health

Generic Name	Trade Name	FDA Approved Age
ADHD Medications (All of these ADHD medications are stimulants, except atomoxetine)*		
amphetamine	Adderall	3 and older
amphetamine (extended release)	Adderall XR	6 and older
atomoxetine	Strattera	6 and older
dexmethylphenidate	Focalin	6 and older
dexmethylphenidate (extended release)	Focalin XR	6 and older
dextroamphetamine	Dexedrine, Dextrostat	3 and older
lisdexamfetamine dimesylate	Vyvanse	6 and older
methamphetamine	Desoxyn	6 and older
methylphenidate	Ritalin	6 and older
methylphenidate (extended release)	Metadate CD, Metadate ER, Ritalin SR	6 and older
methylphenidate (long-acting)	Ritalin LA, Concerta	6 and older
methylphenidate patch	Daytrana	6 and older
methylphenidate (oral solution and chewable tablets)	Methylin	6 and older

* Mental Health Medications, National Institute of Mental Health



MEDICATION/ DISORDER OVERVIEW

Pharmacological Classification and possible side effects

- ***ADHD (Attention–Deficit Hyperactive Disorder):***
 - Stimulants
 - Non-Stimulants
- ***Anti-depressants:***
 - (MAOIs)** Monoamine Oxidase Inhibitors
 - (TCAs)** Tricyclic antidepressants and Tetracyclics
 - (SSRIs)** Selective Serotonin Reuptake Inhibitors
 - (NDRI)** Norepinephrine and Dopamine Reuptake Inhibitors
 - (SNRIs)** Serotonin and Norepinephrine Reuptake Inhibitors
 - (SARIs)** Serotonin antagonist and reuptake inhibitors
 - (NaSSA)** Noradrenergic and specific serotonergic anti-depressants
- ***Antidepressants with other FDA approved Indications***
- ***Antipsychotic Medications***
 - First Generation Antipsychotics “Typicals”
 - Second Generation Antipsychotics “Atypicals”
- ***Mood Disorders***
 - Anticonvulsants

Mental Health Medications

Article by the National Institute of Mental Health
U.S. Department of Health and Human Services, National Institutes of Health

For your convenience the National Institute of Mental Health Article, Mental Health Medications from the U.S. Department of Health and Human Services, National Institutes of Health has been quoted throughout this publication and is included in it's entirety.

ATTENTION-DEFICIT HYPERACTIVE DISORDER
(ADHD)

Medications for the treatment of ADHD include the broad class of “stimulants” and “non-stimulants”

The stimulants are considered first line agents and are classified as CII control substances and have similar side effects and black box warnings.

STIMULANTS

BRAND	GENERIC	SIDE EFFECTS INCLUDE:	BLACK BOX WARNINGS / Contra-indications
Adderall	Amphetamine + dextroamphetamine	Stomach pain; nausea; decreased appetite; potential growth inhibition; sleep disturbances; moodiness; irritability; elevation in blood pressure and pulse; tics.	<ul style="list-style-type: none"> • Cardiac disease • Substance abuse
Concerta	methylphenidate		
Dexedrine	dextroamphetamine		
Focalin	dexmethylphenidate		
Ritalin	methylphenidate		
Vyvanse	lisdexamfetamine		

Note: The use of Cylert (pemoline) has been discontinued in the United States. In October, 2005 the FDA concluded that the overall risk of liver toxicity outweighed the benefits.

NON-STIMULANTS in the treatment of ADHD

The non-stimulants are considered second line therapy and are beneficial as adjunct when patients have co morbidities. The antidepressants imipramine and bupropion can help alleviate the symptoms of anxiety and depression. Clonidine and Guanfacine, which are antihypertensive agents, can help to control disruptive or aggressive behavior and alleviate the side effect of insomnia caused by stimulants.

NON-STIMULANTS

BRAND	GENERIC	SIDE EFFECTS INCLUDE:	BLACK BOX WARNINGS / Contra-indications
Strattera	atomoxetine	Elevated blood pressure and pulse, nausea, vomiting, fatigue, and insomnia, liver damage (should be discontinued in patients who show symptoms of jaundice), suicidal thoughts	<ul style="list-style-type: none"> • Safety and efficacy in children under the age of 6 years, has not been established • Suicidal ideation
Tofranil	imipramine	Irregular heartbeat, dizziness, elevated pulse rate, constipation, dry mouth, difficulty urination, blurry vision	<ul style="list-style-type: none"> • Limited data on use in children for treatment of ADHD, anxiety, and depression. • Risk of suicide in pediatric patients
Catapres	Clonidine	Sedation, irregular heartbeat, constipation, dizziness, decrease blood pressure	<ul style="list-style-type: none"> • Safe and effective use in children has not been established
Tenex	Guanfacine		<ul style="list-style-type: none"> • Safe and effective use in children under the age of 6 years for the treatment of ADHD has not been established.
Wellbutrin	Bupropion	GI upset, restlessness, sleep disturbances, rash, tics, risk of seizures.	<ul style="list-style-type: none"> • Risk of suicide • Data on pediatric safety is limited • Seizures , seizure disorder • Anorexia / bulimia nervosa

Anti-depressants Pharmacological Classification and possible side effects

In October 2004, the FDA directed manufacturers of all antidepressants to include a **boxed warning** of the risk of suicide in children and adolescents.

BRAND NAME	GENERIC NAME	POSSIBLE SIDE EFFECTS
<i>Monoamine oxidase inhibitors (MAOIs)</i>		
Nardil	Phenelzine	React with certain foods, alcoholic beverages and certain medications to produce a severe reaction which does not appear for several hours after taking the medication. The reaction may include dangerous rise in blood pressure, headache nausea, vomiting, rapid heartbeat, possible confusion, psychotic symptoms, seizure, strokes and coma. The foods that interact with MAOIs are those that contain tyramine, such as; aged cheeses, processed meats, fish and soy products, fava beans, and foods that contain MSG.
Parnate	Tranylcypromine	
<i>Tricyclic antidepressants (TCAs) and Tetracyclics</i>		
Elavil	Amitriptyline	Drowsiness, anxiety, restlessness, dry mouth, blurred vision, constipation, urinary retention, cognitive and memory difficulties, weight gain, increased sweating, dizziness, muscle twitches, fatigue, increased heartbeats, irregular heartbeats, (which can be potentially life threatening) and nausea. Tofranil (imipramine) has been proven effective in the treatment of bedwetting, but as a class, TCA have not been proven effective for use in children
amoxapine	Amoxapine	
Anafranil	Clomipramine *not FDA approved for depression	
Norpramin	Desipramine	
Sinequan	Doxepin	
Tofranil	Imipramine	
ludionil	Marprotline	
Pamelor	Nortriptyline	
Vivactil	Protriptyline	
Surmontil	Trimipramine	

Anti- depressants
Pharmacological Classification and possible side effects
 (Cont'd)

BRAND NAME	GENERIC NAME	POSSIBLE SIDE EFFECTS
Selective serotonin reuptake inhibitors (SSRIs)		
Celexa	citalopram	Sexual disfunction, anxiety or nervousness, nausea, diarrhea, headache, insomnia, rash, slight weight gain.
Lexapro	escitalopram	
Luvox	fluvoxamine	
Paxil	paroxetine	
Prozac	fluoxetine	
Zoloft	sertraline	
Norepinephrine and dopamine reuptake inhibitors (NDRI)		
Wellbutrin	bupropion	Insomnia, nightmares, decreased appetite, anxiety and tremors. Most concerning side effect is seizures
Serotonin and norepinephrine reuptake inhibitors (SNRIs)		
Cymbalta	duloxetine	Nausea, increase in blood pressure, constipation, insomnia, fatigue, agitation, headache, weight loss/gain.
Effexor	Venlafaxine	
Serotonin antagonist and reuptake inhibitors (SARIs)		
Desyrel	trazodone	Incidence of sedation is very high with trazodone, and therefore is used as adjunct with other antidepressants for sleep. Nafazodone has been associated with liver damage, which has led to a black-box warning.
Nefazodone	nefazodone	
Noradrenergic and specific serotonergic antidepressants (NaSSA)		
Remeron	mirtazapine	Sedation, weight gain, and a black-box warning for neutropenia (decrease in neutrophil type white blood cells)

ANTIDEPRESSANTS WITH OTHER FDA APPROVED INDICATIONS

Some agents classified as antidepressants, also are indicated for the treatment of disorders other than depression.

Sinequan (doxepin)	Anxiety, Atopic dermatitis, Eczema, Lichen simplex
Tofranil (imipramine)	Enuresis
Lexapro (escitalopram)	Obsessive compulsive disorder (OCD) Anxiety, Social phobia
Paxil (paroxetine)	Anxiety, OCD, Panic disorder Post traumatic stress disorder (PTSD) Premenstrual dysphoric disorder (PMDD) Social phobia
Prozac (fluoxetine)	Bulimia nervosa, OCD, Panic disorder, Premenstrual dysphoric disorder (PMDD)
Zoloft (sertraline)	Anxiety, OCD, Panic disorder, PTSD, PMDD, social phobia
Wellbutrin (bupropion)	Nicotine withdrawal, seasonal affective disorder (SAD)
Cymbalta (duloxetine)	Anxiety, diabetic neuropathy, fibromyalgia
Effexor (venlafaxine)	Anxiety, panic disorder, social phobia

ANTIPSYCHOTIC MEDICATIONS

Antipsychotic medications reduce psychotic symptoms, such as hallucinations and delusions, reduce manic symptoms, and stabilize moods. These agents are divided into two major classes; First and Second Generation Antipsychotics.

- **First Generation Antipsychotics (FGAs); “Typical”**. These are the older medications and are also called **second-line agents**.

This class of antipsychotics has been in existence since the early 1950s. Their usage has declined because of their wide range of adverse effects, especially tardive dyskinesia (TD), extrapyramidal side effects (EPS), and Neuroleptic malignant syndrome (NMS). Although NMS is not a common occurrence, it is considered to be a life-threatening emergency. The use of FGA in younger patients has been associated with a higher risk of NMS.

TD is characterized by rapid, purposeless, irregular and spontaneous movements, EPS by restlessness, muscle spasms, slow movement, tremor, rigidity; and, NMS is characterized by severe muscle rigidity, autonomic instability and altered consciousness.

- **Second Generation Antipsychotics (SGAs); “Atypical”** are the newer medications. These are considered **first-line agents**. As a class, they offer a lower risk of extrapyramidal side effects (EPS) and tardive dyskinesia (TD)

POSSIBLE SIDE EFFECTS OF FIRST GENERATION ANTIPSYCHOTICS “TYPICALS”

	EPS	SEDATION	ANTICHOLINERGIC	CARDIOVASCULAR	QTc Prolongation
Chlorpromazine (Thorazine)	L	H	M	H	L
Fluphenazine (Prolixin)	H	L	L	L	VL
Haloperidol (Haldol)	H	VL	VL	VL	VL
Loxapine (Loxitane)	M	M	L	M	VL
Mesoridazine (Sereniti)	L	M	M	M	L
Molindone (Moban)	L	VL	L	L	VL
Perphenazine (Trilafon)	M	L	L	L	VL
Thioridazine (Mellaril)	L	H	H	H	M
Thiothixene (Navane)	M	L	L	L	VL
Trifluoperazine (Stelazine)	M	L	L	L	VL

VL, very low; **L**, low; **M**, moderate; **H**, high; Cardiovascular = orthostatic hypotension, tachycardia. Orap (pimozide) is as effective as other agents, but its use is limited due to severe cardiotoxic effects.

**COMPARATIVE DEGREE OF POSSIBLE SIDE EFFECTS OF
SECOND GENERATION ANTIPSYCHOTICS “ATYPICALS”**

	EPS	SED- ATION	ANTICHOLENERGIC SIDE-EFFECTS	ELEVATED LIPIDS	WEIGHT GAIN	QTc PROLONGATION	PROLACTIN ELEVATION	ELEVATED GLUCOSE
Aripiprazole (<i>Abilify</i>)	VL	L	VL	VL	L	VL	0	VL
* <i>Clonazepam</i> (<i>clonazepam</i>)	VL	H	H	H	H	L	0	M
Olanzapine (<i>Zyprexa</i>)	VL	L	M	H	H	VL	L	M
Quetiapine (<i>Seroquel</i>)	VL	M	L	M	M	VL	VL	L
Risperidone (<i>Risperdal</i>)	L	L	VL	L	M	VL	H	L
Ziprasidone (<i>Zyprexa</i>)	VL	L	VL	VL	L	L	L	VL

0, absent; **VL**, very low; **L**, low; **M**, moderate; **H**, high

**Clonazepam* is reserved for treatment resistant schizophrenia. Its life-threatening risk of agranulocytosis and seizures as well as common side effects such as sedation, weight gain, and hypersalivation has prohibited its use as a first line agent. The prevention of agranulocytosis requires frequent and long term monitoring of blood levels which is often a barrier to both the patient and care providers.

MOOD DISORDERS

Medications used in the treatment of mood disorders such as bipolar disease, include lithium and certain anticonvulsants. Atypical antipsychotics and some antidepressants are used to treat the symptoms of mood disorders.

BRAND NAME	GENERIC NAME	POSSIBLE SIDE EFFECTS	SPECIAL NOTE
Lithonate Eskalith Lithobid Lithium citrate (oral solution)	Lithium Carbonates	Tremors, muscle weakness, upset stomach, diarrhea and trouble concentrating. Long term side effects can include weight gain, thyroid problems, kidney problems, and acne. Lithium serum levels must be monitored. Lithium toxicity can be characterized as severe tremors, nausea, and confusion. Toxicity can be precipitated by dehydration.	
<i>Anticonvulsants</i>			
Depakote Depakene Depacon Stavzor	Valproic acid, divalproex sodium	Drowsiness, irritability Nausea, rash clumsiness, dizziness and tremors, emotional changes, memory and behavior.	
Lamictal	lamotrigine		
Tegretol Carbatrol	carbamazepine		

MOOD DISORDERS

(continued)

BRAND NAME	GENERIC NAME	POSSIBLE SIDE EFFECTS	SPECIAL NOTE
<i>Anticonvulsants</i>		<i>Anticonvulsants</i>	
Trileptal	oxcarbazepine	Drowsiness, irritability Nausea, rash clumsiness, dizziness and tremors, emotional changes, memory and behavior.	Used for bipolar disorder, but as a non-FDA approved indication.
Topamax	Topiramate		Used for bipolar disorder, but as a non-FDA approved indication.
The following anticonvulsants are not used in the treatment of bipolar disorder, but are included for the sake of completion of the list of anticonvulsants			
Neurontin	gabapentin		
Zonegran	zonisamide		
Keppra	levetiracetam		