



## Medications

*Detailed information on types of medication used to control the symptoms of bipolar disorder - mood stabilizers, antidepressants, and antipsychotics.*

The three most important types of medication used to control the symptoms of bipolar disorder are mood stabilizers, antidepressants and antipsychotics. Your doctor may also prescribe other medications to help with insomnia, anxiety, restlessness or other occurring symptoms. While we do not understand how some of these medications work, we do know that all of them affect chemicals in the brain called neurotransmitters, which are involved in the functioning of nerve cells.

### What are mood stabilizers?

Medications are considered mood stabilizers if they have 2 properties:

1. they provide relief from acute episodes of mania or depression, or prevent them from occurring; and
2. they do not worsen depression or mania or lead to increased cycling.

Lithium, divalproex and carbamazepine have been shown to meet this definition; the first 2 are the best established and most widely used. Divalproex and carbamazepine were originally developed as anticonvulsants for the control of epilepsy, another brain disorder. Other available medications that are undergoing research as promising mood stabilizers include several new anticonvulsants and the newer "atypical" antipsychotics. Electroconvulsive therapy (ECT), discussed later, is also considered a mood stabilizing treatment.

Lithium (brand names Eskalith, Lithobid, Lithonate)

The first known mood stabilizer, lithium, is actually an element rather than a compound (a substance synthesized by a laboratory). Lithium was first found to have behavioral effects in the 1950s and has been used as a mood stabilizer in the United States for 30 years. Lithium appears to be most effective for individuals with more "pure" or euphoric mania (where there is little depression mixed in with the elevated mood). It is also helpful for depression, especially when added to other medications. Lithium appears to be less effective in mixed manic episodes and in rapid-cycling bipolar disorder.

Monitoring blood levels of lithium can reduce side effects and ensure that the patient is receiving an adequate dose to help produce the best response. Common side effects of lithium include weight gain, tremor, nausea, and increased urination. Lithium may affect the thyroid gland and the kidneys, so that periodic blood tests are needed to be sure they are functioning properly.

Divalproex (brand name Depakote)

Divalproex has been used as an anticonvulsant - to treat seizures - for several decades. It has also been extensively researched as a mood stabilizer in bipolar illness. Divalproex is equally effective in both euphoric and mixed manic episodes. It is also effective in rapid cycling bipolar disorder and for individuals whose illness is complicated by substance abuse or anxiety disorders.

Unlike other mood stabilizers, divalproex can be given in relatively large initial doses for acute mania, which may produce a more rapid response. Common side effects of divalproex include sedation, weight gain, tremor, and gastrointestinal problems. Blood level monitoring and dose adjustments may help minimize side effects. Divalproex may cause a mild liver inflammation and may affect the production of a type of blood cell called platelets. Although it is quite rare for there to be any serious complications from these potential effects, it is important to monitor liver function tests and platelet counts periodically.

#### Other anticonvulsants used as mood stabilizers

- **Carbamazepine** (Tegretol, Carbatrol). Although fewer clinical studies support the use of carbamazepine, it appears to have a profile similar to divalproex. It, too, has been available for many years, and is effective in a broad range of subtypes of bipolar illness and in both euphoric and mixed manic episodes. Carbamazepine commonly causes sedation and gastrointestinal side effects. Because of a rare risk of bone marrow suppression and liver inflammation, periodic blood testing is also needed during carbamazepine treatment, just as during treatment with divalproex. Because carbamazepine has complicated interactions with many other medications, careful monitoring is needed when it is combined with other medications.
- **Lamotrigine** (Lamictal). Lamotrigine is a relatively new medication. Recent research suggests that it can act as a mood stabilizer, and may be especially useful for the depressed phase of bipolar disorder. One serious risk of lamotrigine use is that 3 out of every 1,000 individuals (0.3%) taking the medication develop a serious rash.
- **Gabapentin** (Neurontin). Gabapentin has become popular as a mood stabilizer, although there has been relatively little research on its use in bipolar disorder. It appears especially helpful in reducing anxiety. One strength of gabapentin is that it is unlikely to interact with other medications, so that it can be easily added to other mood stabilizers to augment their effect. Side effects of gabapentin can include fatigue, sedation, and dizziness.
- **Topiramate** (Topomax). Preliminary research suggests that this anticonvulsant may be helpful in mania. One side effect of topiramate may actually be an advantage. Unlike many of the other mood stabilizers, topiramate does not appear to cause weight gain and may actually help people lose weight. Other side effects may include sedation, dizziness, and cognitive slowing or memory difficulties. It should be avoided by people who have had kidney stones.

#### What are antidepressants?

Antidepressants treat the symptoms of depression. In bipolar disorder, antidepressants must be used together with a mood stabilizing medication. If used without a mood stabilizer, an antidepressant can cause a person with bipolar disorder to go into a manic state.

Many types of antidepressants are available with different chemical mechanisms of action and side effect profiles. Most research with antidepressants has been done in people with unipolar depression - people who have never had a manic episode. In unipolar depression, the available medications are about equally effective. There has been little research on the use of antidepressants in bipolar disorder, but most experts consider the following 3 types to be first choices:

- Bupropion (Wellbutrin)
- Selective serotonin reuptake inhibitors: fluoxetine (Prozac), fluvoxamine (Luvox), paroxetine (Paxil), sertraline (Zoloft)
- Venlafaxine (Effexor)

If these do not work, or if they cause unpleasant side effects, the other choices are:

- Mirtazapine (Remeron)
- Nefazodone (Serzone)
- Monoamine oxidase inhibitors: phenelzine (Nardil), tranylcypromine (Parnate). These are very effective but also require you to stay on a special diet to avoid dangerous side effects.
- Tricyclic antidepressants: amitriptyline (Elavil), desipramine (Norpramin, Pertofrane), imipramine (Tofranil), nortriptyline (Pamelor). Tricyclics may be more likely to cause side effects or to set off manic episodes or rapid cycling.

### What are antipsychotic medications?

Antipsychotic medications are used to control psychotic symptoms, such as hallucinations or delusions, that sometimes occur in very severe depressive or manic episodes.

Antipsychotics can be used in 2 additional ways in bipolar disorder, even if no psychotic symptoms are present. They may be used as sedatives, especially during early stages of treatment, for insomnia, anxiety and agitation. Researchers also believe that the newer atypical antipsychotic medications have mood stabilizing properties, and may help control depression and mania. Antipsychotic medications are therefore often added to mood stabilizers to improve the response in patients who have never had psychotic symptoms. Antipsychotics may also be used alone as mood stabilizers when patients cannot tolerate or do not respond to any of the mood stabilizers. There are 2 kinds of antipsychotics: older antipsychotics (often called "typical" or conventional antipsychotics) and newer antipsychotics (often called atypical antipsychotics). One serious problem with the older antipsychotics is the risk of a permanent movement disorder called tardive dyskinesia (TD). Older antipsychotic medicines may also cause muscle stiffness, restlessness, and tremors. The newer "atypical" antipsychotics have a much lower risk of causing TD (roughly 1% per year) and movement and muscle side effects. Because of this, the newer atypical antipsychotics are usually the first choice in any of the situations when an antipsychotic is needed.

Five atypical antipsychotics, are currently available:

- olanzapine (Zyprexa)
- quetiapine (Seroquel)
- risperidone (Risperdal)
- clozapine (Clozaril)
- aripiprazole (Abilify)

As mentioned earlier, research has shown that these atypical antipsychotics have mood stabilizing properties. Common side effects of the atypical antipsychotics include drowsiness and weight gain. Although it is very effective, clozapine is not a first choice medication because it can cause a rare and serious blood side effect, requiring weekly or biweekly blood tests.