

Dispelling misconceptions
leads to rationale-based
steps for treating bipolar
depression



Antidepressants in bipolar disorder

7 myths and realities

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Few topics are as controversial as the role of antidepressants for patients with bipolar disorder. Although depression usually is the predominant, most enduring mood state in bipolar disorder, clinicians often face uncertainty about using antidepressants because of concerns about safety and efficacy. Whether and when to use antidepressants for bipolar depression hinges on complex parameters that preclude any single, simple rule.

Rather than asking *if* antidepressants are useful or detrimental for depressed patients with bipolar disorder, a more practical question might be: Under what circumstances are antidepressants likely to be beneficial, deleterious, or ineffective for an individual patient? Because “real world” patients often have idiosyncrasies that defy practice guidelines’ generic treatment recommendations, clinicians who practice in the proverbial trenches need strategies to tailor treatments to each patient that are informed—but not dictated—by evidence-based research.

Early suspicions

Concerns that antidepressants might precipitate mania were first described with tricyclic antidepressant (TCA) use in Europe in the 1960s. After bupropion and selective serotonin reuptake inhibitors (SSRIs) emerged, some clinicians believed they posed a lesser risk for this phenomenon compared with TCAs^{1,2} or monoamine oxidase inhibitors (MAOIs).³

Antidepressants’ potential to induce short-term mania/hypomania following acute exposure has been weighed against the longer-term risk for worsening illness course by increasing frequency of subsequent



Bipolar depression

Clinical Point

Antidepressants induce mania or accelerate cycling in a smaller minority of patients than was once thought

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episodes (so-called cycle acceleration). In the 1980s, some researchers suggested that rapid cycling might—at least in some instances—represent an iatrogenic phenomenon caused by long-term antidepressant use. These issues remain controversial, but more than 20 years of research suggest that antidepressants induce mania or accelerate cycling in a smaller minority of bipolar disorder patients than was once thought.

Table 1 and *Table 2* (page 44) summarize findings from randomized controlled studies that have examined antidepressants' efficacy for acute bipolar depression. Except for a study of fluoxetine plus olanzapine,⁴ no large-scale placebo-controlled trial has demonstrated superior antidepressant response to a mood stabilizer plus antidepressant compared with a mood stabilizer alone.

MYTH 1

Antidepressant-induced mania is a highly prevalent, widespread problem.

Reality: Although some might argue that the precise relative risk of antidepressant-induced mania or hypomania is unknown (eg, considering intervening factors such as the natural illness course), recent literature suggests that the emergence of mania or hypomania can be reasonably attributed to antidepressant use in no more than 10% to 25% of patients with bipolar disorder.^{5,6} Part of the difficulty in estimating the true prevalence of antidepressant-induced mania involves variability and inconsistency in defining mania induction.

A recent consensus statement proposed a graduated series of definitions for treatment-emergent affective switch:⁷

- "Definite" switch involves fulfilling DSM-IV syndromic criteria for a manic, hypomanic, or mixed episode for at least 2 days, within 8 weeks of antidepressant introduction.

- "Likely" switches call for at least 2 DSM-IV mania or hypomania symptoms plus a Young Mania Rating Scale (YMRS) score >12, occurring for at least 2 days, within 12 weeks of antidepressant introduction.

- "Possible" switches require a "clear change" in mood or energy with a YMRS

score >8, persisting ≥4 hours over 2 days, occurring within 12 weeks of antidepressant initiation.

Adverse effects such as agitation typically diminish or remit with dosage reductions or drug cessation, whereas true antidepressant-induced polarity switches persist even after the medication is discontinued. Moreover, it is often difficult—if not impossible—to know with certainty when a polarity switch results from treatment effects vs the natural illness course. In my experience, true manic or hypomanic syndromes soon after antidepressant exposure are less common than heterogeneous, nonspecific symptoms such as agitation, anxiety, insomnia, or worsening depression (ie, lack of efficacy).

MYTH 2

Antidepressant response rates are lower in bipolar depression.

Reality: It is difficult to draw broad conclusions about antidepressant response rates in unipolar vs bipolar depression because:

- few direct comparisons have been reported
- all relevant studies are retrospective
- small sample sizes in most studies may not have satisfactorily controlled for factors that could predispose to mood destabilization (*Table 3, page 46*).

A retrospective review of bipolar (n=41) and unipolar (n=37) depressed patients by Ghaemi et al⁸ found no significant difference in acute nonresponse rates between the groups. Similarly, Bottlender et al⁹ found no differences in treatment response when comparing naturalistic antidepressant outcomes for 50 unipolar and 50 bipolar patients matched for age, sex, and illness duration. Comparable antidepressant response outcomes also were reported in a retrospective study of 2,032 unipolar and bipolar inpatients conducted by Möller et al,¹⁰ and between unipolar (n=31) vs bipolar II (n=17) depressed patients receiving venlafaxine monotherapy for 6 weeks.¹¹

Antidepressant response may depend on factors such as episode chronicity or the number of failed medication trials within a

Table 1

Antidepressants for bipolar depression: SSRIs and SNRIs*

Acute efficacy	Reported switch risk
Fluoxetine (SSRI)	
86% response rate after 3 weeks in 6-week double-blind randomized comparison with imipramine or placebo ^a	0%
38% response rate after 8 weeks of placebo-controlled monotherapy in bipolar II or NOS subjects ^b	0%
56% response rate over 8 weeks in combination with olanzapine; significantly better than placebo plus olanzapine (30%) ^c	6%
Paroxetine (SSRI)	
Same as placebo when added to an antimanic drug (STEP-BD) for up to 26 weeks ^d	10.1% (reported only jointly for paroxetine or bupropion)
36% response rate (no different from placebo) when coadministered with therapeutically dosed lithium over 10 weeks ^e	7%
Same as divalproex plus lithium when coadministered with divalproex or lithium over 6 weeks (actual response rates not reported) ^f	0%
43% response (coadministered with lithium, divalproex, or carbamazepine) over 6 weeks ^g	3% (not statistically significantly different from venlafaxine comparison arm)
Sertraline (SSRI)	
41% improved (comparable to rates seen with bupropion [33%] or venlafaxine [36%] when coadministered with a mood stabilizer over 10 weeks) ^h	12%
Venlafaxine (SNRI)	
36% improved (comparable to rates seen with bupropion [33%] or sertraline [41%]) when coadministered with a mood stabilizer over 10 weeks ^h	6%
48% response (coadministered with lithium, divalproex, or carbamazepine) over 6 weeks ^g	13% (not statistically significantly different from paroxetine comparison arm)

*No data are available for citalopram, desvenlafaxine, duloxetine, escitalopram, fluvoxamine, or milnacipran

NOS: not otherwise specified; SNRI: serotonin/norepinephrine reuptake inhibitor; SSRI: selective serotonin reuptake inhibitor; STEP-BD: Systematic Treatment Enhancement Program for Bipolar Disorder

Source: For reference citations, see this article at CurrentPsychiatry.com

Clinical Point

True antidepressant-induced polarity switches persist even after the medication is discontinued

given episode, regardless of illness polarity. This was suggested by the remarkably low response rates after 2 failed initial antidepressant treatments in the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) unipolar depression trials. In my experience, antidepressant efficacy is more often a function of factors in addition to polarity, including:

- illness severity
- chronicity
- psychiatric, medical, or substance use comorbidity
- psychosocial skills, such as the capacity to tolerate distress, utilize effective coping techniques, and maintain appropriate relationships with others.

MYTH 3

Most antidepressants have been systematically studied for treatment of depression in bipolar disorder.

Reality: Only paroxetine,^{12,13} bupropion,¹² and imipramine¹³ have been studied in randomized, large-scale, adequately powered placebo-controlled trials. Studies of other antidepressants suffer from small sample sizes (inadequate statistical power), lack of placebo controls, or failure to control for possible confounding factors, such as lack of stratification for bipolar I vs II subtype or presence vs absence of rapid cycling.

One large randomized trial showed comparable antidepressant efficacy with a mood stabilizer plus adjunctive venlafaxine (43%)



Bipolar depression

Clinical Point

Using a medication that has been studied specifically for bipolar depression is preferable to using one that has not

Table 2

Antidepressants for bipolar depression: MAOIs, TCAs, and bupropion*

Acute efficacy	Reported switch risk
Tranylcypromine (MAOI)	
81% response (monotherapy) in bipolar I (n=24) or bipolar II (n=32) patients over 16 weeks ^a	21%
75% response among imipramine nonresponders (n=12) ^b	17%
Moclobemide (MAOI)	
46% response over 8 weeks in 156 bipolar patients (some, but not all, took concomitant mood stabilizers), not significantly different from imipramine comparator ^c	4%
Imipramine (TCA)	
57% response rate after 3 weeks in a 6-week double-blind randomized comparison with fluoxetine or placebo ^d	Not reported
48% response (monotherapy) in bipolar I (n=24) or bipolar II (N=32) patients over 16 weeks ^a	24%
53% response over 8 weeks in 156 bipolar patients (some, but not all, took concomitant mood stabilizers), not significantly different from moclobemide comparator ^c	11%
41% (coadministered with therapeutically dosed lithium) ^e	8%
Desipramine (TCA)	
50% (5/10) response rate (coadministered with a mood stabilizer over 8 weeks) ^f	50%
Bupropion	
55% response (5/9) (coadministered with a mood stabilizer over 8 weeks) ^f	11%
33% response rate (coadministered with mood stabilizers over 10 weeks) ^g	20%
*No data are available for isocarboxazid, mirtazapine, nefazodone, phenelzine, or selegiline transdermal	
MAOI: monoamine oxidase inhibitor; TCA: tricyclic antidepressant	
Source: For reference citations, see this article at CurrentPsychiatry.com	

vs sertraline (55%) vs bupropion (49%) over 10 weeks,¹⁴ but the lack of a mood stabilizer monotherapy comparison group limits the ability to anticipate whether adjunctive antidepressants increase response or remission rates more than mood stabilizers alone. Adjunctive imipramine,¹³ paroxetine,^{12,13,15} and bupropion¹² yield no greater improvement in depressive symptoms than is seen with optimally dosed mood stabilizers alone.

Mirtazapine, a serotonergic/noradrenergic antidepressant that is sometimes prescribed off-label as a sleep aid, has not been systematically studied for safety or efficacy in bipolar depression. In case reports, mirtazapine has induced mania in patients with unipolar depression.¹⁶⁻¹⁸ Using mirtazapine to counteract insomnia may be safer in patients with unipolar depression than in those with bipolar disorder. Because poor sleep is a core feature of mania, be certain to differentiate complaints that reflect simple insomnia from a loss of need for sleep:

- daytime fatigue is more common in insomnia than loss of need for sleep
- nocturnal hyperactivity is more often associated with loss of need for sleep.

Using an antidepressant to treat sleep problems that may derive from emerging mania or hypomania runs counter to basic pharmacodynamic principles and may pose greater risk than benefit.

Generally, using a medication that has been studied for treating a specific clinical entity such as bipolar depression is preferable to using one that has not. Avoid medications that have multiple negative placebo-controlled trials—such as paroxetine—unless you have evidence of efficacy in an individual patient.

MYTH 4

Risk for inducing mania is higher with noradrenergic antidepressants.

Reality: This popular belief arose from a unifying hypothesis offered by Sachs et al¹

and Leverich et al¹⁴ to explain higher rates of mania following treatment with desipramine than bupropion,¹ SSRIs compared with TCAs,² or venlafaxine compared with bupropion or sertraline.¹⁴ However, while plausible, this hypothesis does not fully account for the putative noradrenergic properties of bupropion—presumably via increased presynaptic norepinephrine outflow, rather than noradrenergic reuptake inhibition¹⁹—which reportedly has a lower risk of switching than desipramine¹ or venlafaxine.¹⁴

The risk for venlafaxine monotherapy to induce mania or hypomania in patients with bipolar II depression has been reported to be nonexistent¹¹ or no higher than seen with lithium.²⁰ Also, some noradrenergic agents, such as duloxetine, have not been shown to induce mania in major depression,²¹ although duloxetine's potential to destabilize mood is unknown because of the absence of data in bipolar disorder. Finally, although large-scale clinical trials have not examined the safety and efficacy of the noradrenergic reuptake inhibitor atomoxetine, several case reports have suggested its potential for inducing mania or hypomania.^{22,23}

Likely, all-or-none admonitions against using noradrenergic antidepressants are oversimplifications.

MYTH 5

Coadministering an antimanic mood stabilizer reliably prevents antidepressant-induced mania.

Reality: Most practice guidelines advise administering antimanic mood stabilizers before initiating an antidepressant. Clinicians widely interpret this recommendation as reinforcing the assumption that a mood stabilizer will diminish mania risk when introducing an antidepressant. (Less often, clinicians interpret it as meaning that a mood stabilizer itself may provide antidepressant efficacy.) In fact, whether (and which) antimanic agents mitigate the risk for antidepressant-induced mania has received little empirical study. The largest dataset on this topic—the randomized controlled data from Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD)¹²—found that the risk for treatment-emergent

manic switch with paroxetine or bupropion was almost identical (about 10%) with or without an FDA-approved antimanic agent.

In a retrospective study, Henry et al⁶ found that cotherapy with lithium but not divalproex or carbamazepine protects against antidepressant-induced mania, and that switch rates to mania were the same whether or not an antidepressant was taken with an anticonvulsant. In a naturalistic retrospective study (n=158), Bottlender et al²⁴ revealed that mood stabilizers (lithium, carbamazepine, or divalproex) prevented switches from depression to mania during treatment with TCAs but not SSRIs or MAOIs.

I favor incorporating lithium or other antimanic agents in the regimens of patients with bipolar depression not primarily to guard against antidepressant-induced mania but more for pharmacodynamic synergy—complementary mechanisms of action that collectively may produce more substantial antidepressant effects—especially when the patient's illness course has included manic or hypomanic features in the preceding year.

MYTH 6

Antidepressants cause or worsen rapid cycling.

Reality: Wehr et al²⁵ reported that antidepressants may accelerate cycling frequency (ie, inter-episode durations become shorter) in a small subgroup (N=10) of patients. By contrast, use of TCAs was not more likely in the weeks preceding shifts from depression to mania or hypomania in a 14-year follow-up study of bipolar rapid cycling from the NIMH Collaborative Depression Study.²⁶ In fact, rapid-cycling patients spent more weeks depressed when taking lithium without a TCA than with 1.

Findings from STEP-BD indicate that prospectively observed rapid cycling, as defined by DSM-IV criteria, is relatively rare, although subjects taking antidepressants often had multiple episodes per year.²⁷ These naturalistic data could suggest that antidepressant use leads to more depressive episodes, or that more depressive episodes lead to more antidepressant use. Causal relationships cannot be inferred from the

Clinical Point

Likely, all-or-none admonitions against using noradrenergic antidepressants are oversimplifications



Bipolar depression

Clinical Point

I believe that, in general, antidepressants are unlikely to improve a truly rapid-cycling illness course

Table 3

What increases risk of antidepressant-induced mania?

Factor	Findings
History of antidepressant-induced mania or hypomania	Confers an approximate 2- to 5-fold increased risk for subsequent antidepressant-induced mania/hypomania, regardless of antidepressant ^a
Recent mania preceding current depressive episode	Higher risk for antidepressant-associated mania if current depressive episode was preceded by manic phase ^b
Bipolar I vs bipolar II subtype	Greater risk for switch in bipolar I ^{c,d}
Comorbid alcohol or substance use disorder	5- to 7-fold increased risk for antidepressant-associated mania ^e
Noradrenergic vs serotonergic antidepressants	Possible higher risk for mania induction with TCAs or SNRIs than with bupropion ^f or SSRIs ^g
Concurrent mania symptoms during a depressive episode	Mild or subthreshold mania symptoms during a depressive episode increase risk for mania ^{h,i}
Hyperthymic temperamental traits	Associated with increased likelihood of antidepressant-induced mania ^j

SNRIs: serotonin/norepinephrine reuptake inhibitors; SSRIs: selective serotonin reuptake inhibitors; TCAs: tricyclic antidepressants

Source: For reference citations, see this article at CurrentPsychiatry.com

nonrandomized study design. Nevertheless, antidepressant use was not associated with reduced depressive episodes over 1 year.

I believe that, in general, antidepressants are unlikely to improve a truly rapid-cycling illness course. In this scenario, a more “panoramic” understanding of the need to treat multiple relapses and polarity changes over time likely warrants using multiple anti-cycling agents. Rapid cycling is treated over the course of 1 year, rather than 1 episode.

MYTH 7

Antidepressants should never be used without a mood stabilizer for bipolar depression.

Reality: This admonition is widely cited as a general recommendation from modern practice guidelines; however, it mainly pertains to depression treatment in patients with bipolar I disorder, for whom most controlled trial data exist. For example, relatively high rates of treatment-emergent mania have been reported with TCA or MAOI monotherapy in bipolar I disorder patients (*Table 2, page 44*). Yet for bipolar II disorder, controlled trials demonstrate superior outcomes with venlafaxine monotherapy compared with lithium monotherapy, with no increase in mood destabilization.²⁰

Neither the safety nor the efficacy of antidepressants with vs without mood stabilizers has been studied systematically in cyclothymic or mood disorder patients who may fall within the so-called bipolar spectrum but have never met DSM-IV criteria for a lifetime manic or hypomanic episode (ie, bipolar disorder not otherwise specified). Extrapolation from findings based on bipolar I disorder patients may not be valid for all bipolar subtypes.

Clinical strategies

In constructing a rationale-based approach to bipolar depression, consider these steps:

Step 1: Assess candidacy for antidepressant use. A number of key features can help you delineate the current illness state and context in which depressive symptoms arise—features that may influence you patient’s vulnerability to mood destabilization, and therefore are pertinent for gauging the likelihood that antidepressants may help or harm (*Table 4*).

Step 2: Consider mood stabilizers with antidepressant properties. Determine whether your patient is taking any mood stabilizers that possess robust antidepressant

Table 4

Assessing antidepressant candidacy in bipolar depression

Favors antidepressant use	Discourages antidepressant use
Bipolar II disorder	Bipolar I disorder ^a
Depressed (non-mixed) states	Mixed manic and depressive features ^{b,c}
Absence of rapid cycling	Presence of rapid cycling ^{d,e}
Absence of recent mania or hypomania (preceding 2 to 3 months)	Mania or hypomania in past 2 to 3 months ^f
Absence of comorbid alcohol or substance use disorder	Presence of comorbid alcohol or substance use disorder ^{g,h}
Prior favorable antidepressant response	Suboptimal responses to prior antidepressants
No history of antidepressant-induced mania or hypomania	History of antidepressant-induced mania or hypomania ⁱ

Source: For reference citations, see this article at CurrentPsychiatry.com

sant properties, or whether it may be beneficial to introduce one of these agents before initiating adjunctive antidepressants. Mood stabilizers with antidepressant efficacy are compelling options for patients presenting with any of the features listed in the right-hand column of *Table 4*, as well as those with:

- psychotic features
- marked agitation
- multiple prior antidepressant non-responses
- high depression recurrence rates regardless of episode duration (ie, cyclicality, irrespective of ≥ 4 discrete episodes per year).

Prospective mood charting may help to establish the latter, in which case recurrence (rather than polarity) may cause waxing and waning depressed mood states.

Psychotropic agents or combinations that have shown to be effective for bipolar depression (supported by at least 1 randomized controlled trial) without destabilizing mood include quetiapine, olanzapine, olanzapine-fluoxetine combination, lamotrigine, and lithium plus lamotrigine. Those with some—but less robustly demonstrated—antidepressant action include lithium, divalproex, and carbamazepine. Other than quetiapine and olanzapine, second-generation antipsychotics have not demonstrated antidepressant effects in bipolar depression.

In general, optimize therapy with 1 or more mood stabilizers with antidepressant properties before deciding it is necessary to add antidepressants.

Step 3: Use antidepressants in suitable patients. For patients with no risk factors for mood destabilization from antidepressants (*Table 3*), these drugs may be worth incorporating, keeping in mind the following guiding principles:

- In patients with bipolar I depression, it is preferable to add an antidepressant to an antimanic mood stabilizer (ie, lithium, divalproex, carbamazepine, or an antipsychotic) rather than prescribing antidepressant monotherapy. There is greater diversity of opinion about the safety of antidepressant monotherapy for bipolar II depression.

- Consider using antidepressants that have at least 1 positive randomized controlled trial in bipolar disorder and low risk for mood destabilization (bupropion,^{12,14} sertraline,¹⁴ fluoxetine,^{4,5} tranylcypromine,^{3,28} or venlafaxine in bipolar II depression²⁰) before using those with reported increased risk for inducing mania or hypomania (TCAs^{1,2} or venlafaxine in bipolar I depression¹⁴), multiple negative controlled trials (paroxetine^{12,13}), or no controlled data in bipolar depression (citalopram, escitalopram, fluvoxamine, mirtazapine, duloxetine, desvenlafaxine, nefazodone, and selegiline transdermal). Combinations of antidepressants have not been adequately studied in bipolar depression.

- The optimal duration of antidepressant therapy is unknown. However, longer-term treatment may be worthwhile in patients who show robust acute antidepressant response and experience infrequent mania or

Clinical Point

In general, optimize therapy with 1 or more mood stabilizers before deciding it is necessary to add antidepressants



Bipolar depression

Clinical Point

Under certain circumstances it is reasonable to continue an antidepressant until new hypomania or mania signs emerge

Related Resources

- Goldberg JF. Treating depression in bipolar disorder. <http://thedoctorschannel.com/video/3077.html>.
- Goldberg JF. Pharmacologic treatment of acute mania. <http://thedoctorschannel.com/video/3032.html>.

Drug Brand Names

Atomoxetine • Strattera	Mirtazapine • Remeron
Bupropion • Wellbutrin	Moclobemide • Aurorix,
Carbamazepine • Tegretol,	Manerix
Equetro	Modafinil • Provigil
Citalopram • Celexa	Nefazodone • Serzone
Desipramine • Norpramin	Olanzapine • Zyprexa
Desvenlafaxine • Pristiq	Olanzapine-fluoxetine •
Divalproex • Depakote,	Symbyax
Depakene	Paroxetine • Paxil
Duloxetine • Cymbalta	Phenelzine • Nardil
Escitalopram • Lexapro	Pramipexole • Mirapex
Fluoxetine • Prozac	Quetiapine • Seroquel
Fluvoxamine • Luvox	Riluzole • Rilutek
Imipramine • Tofranil	Selegiline transdermal •
Isocarboxazid • Marplan	EMSAM
Lamotrigine • Lamictal	Sertraline • Zoloft
Lithium • Lithobid, Eskalith	Tranylcypromine • Parnate
Milnacipran • Ixel, Savella	Venlafaxine • Effexor

Disclosure

Dr. Goldberg is a consultant to Eli Lilly and Company and a speaker for AstraZeneca, Eli Lilly and Company, GlaxoSmith-Kline, Merck, and Pfizer Inc., and has received speaking honoraria from Janssen-Cilag.

hypomania. Long-term antidepressant use is less compelling in patients with a poor initial response²⁹ or rapid cycling.³⁰ Abrupt antidepressant cessation also may induce mania, potentially by disrupting homeostasis.³¹ In the absence of rapid cycling, manic/hypomanic features, or worsening suicidal features, and in the presence of an unequivocal acute response and a greater predisposition to depression than mania, it is reasonable to continue an antidepressant indefinitely until new signs of mania or hypomania emerge.

- Emerging signs of mania or hypomania should signal the need to discontinue the antidepressant. Dosage reductions alone may not diminish emerging manic or hypomanic symptoms, and “counterbalancing”

maneuvers (ie, adding antimanic agents while continuing an antidepressant) may not effectively stabilize mood.

Step 4: Consider novel strategies. In the absence of a response to the strategy outlined above—particularly among poor candidates for continued antidepressant therapy—other novel strategies have support from at least 1 randomized controlled trial, including pramipexole,^{32,33} modafinil,³⁴ riluzole,³⁵ and n-acetyl cysteine.³⁶ Other interventions worth considering include:

- adjunctive thyroid hormone
- cognitive therapy
- light therapy (if a seasonal component is evident)
- electroconvulsive therapy.

References

1. Sachs GS, Lafer B, Stoll AL, et al. A double blind trial of bupropion versus desipramine for bipolar depression. *J Clin Psychiatry*. 1994;55:391-393.
2. Peet M. Induction of mania with selective serotonin re-uptake inhibitors and tricyclic antidepressants. *Br J Psychiatry*. 1994;164:549-550.
3. Himmelhoch JM, Thase ME, Mallinger AG, et al. Tranylcypromine versus imipramine in anergic bipolar depression. *Am J Psychiatry*. 1991;148:910-916.
4. Tohen M, Vieta E, Calabrese J, et al. Efficacy of olanzapine and olanzapine-fluoxetine combination in the treatment of bipolar I depression. *Arch Gen Psychiatry*. 2003;60:1079-1088.
5. Goldberg JF, Truman CJ. Antidepressant-induced mania: an overview of current controversies. *Bipolar Disord*. 2003; 5:407-420.
6. Henry C, Sorbara F, Lacoste J, et al. Antidepressant-induced mania in bipolar patients: identification of risk factors. *J Clin Psychiatry*. 2001;62:249-255.
7. Tohen M, Frank E, Bowden CL, et al. The International Society for Bipolar Disorders (ISBD) Task Force report on the nomenclature of course and outcome in bipolar disorders. *Bipolar Disord*. 2009;11:453-473.
8. Ghaemi SN, Rosenquist KJ, Ko JY, et al. Antidepressant treatment in bipolar versus unipolar depression. *Am J Psychiatry*. 2004;161:163-165.
9. Bottlender R, Rudolf D, Jäger M, et al. Are bipolar I depressive patients less responsive to treatment with antidepressants than unipolar depressive patients? Results from a case control study. *Eur Psychiatry*. 2002;17:200-205.
10. Möller HJ, Bottlender R, Grunze H, et al. Are antidepressants less effective in the acute treatment of bipolar I compared to unipolar depression? *J Affect Disord*. 2001; 67(1-3):141-146.
11. Amsterdam J. Efficacy and safety of venlafaxine in the treatment of bipolar II major depressive episode. *J Clin Psychopharmacol*. 1998;18:313-317.
12. Sachs GS, Nierenberg AA, Calabrese JR, et al. Effectiveness

Bottom Line

The greatest risk of using antidepressants to treat bipolar depression appears to be lack of efficacy. A minority of patients may be at higher risk for mood destabilization based on bipolar I subtype, mixed episodes, recent mania, past antidepressant-induced mania, comorbid substance abuse, and other characteristics. Guideline-based recommendations for using or avoiding antidepressants are largely arbitrary and should not be considered a proxy for empirically based findings.

This month's instant poll



- of adjunctive antidepressant treatment for bipolar depression. *N Engl J Med.* 2007;356:1711-1722.
13. Nemeroff CB, Evans DL, Gyulai L, et al. Double-blind, placebo-controlled comparison of imipramine and paroxetine in the treatment of bipolar depression. *Am J Psychiatry.* 2001;158:906-912.
 14. Leverich GS, Altshuler LL, Frye MA, et al. Risk of switch in mood polarity to hypomania or mania in patients with bipolar depression during acute and continuation trials of venlafaxine, sertraline, and bupropion as adjuncts to mood stabilizers. *Am J Psychiatry.* 2006;163:232-239.
 15. Young LT, Joffe RT, Robb JC, et al. Double-blind comparison of addition of a second mood stabilizer versus an antidepressant to an initial mood stabilizer for treatment of patients with bipolar depression. *Am J Psychiatry.* 2000;157:124-126.
 16. Soutullo CA, McElroy SL, Keck PE Jr. Hypomania associated with mirtazapine augmentation of sertraline. *J Clin Psychiatry.* 1998;59(6):320.
 17. Bhanji NH, Margolese HC, Saint-Laurent M, et al. Dysphoric mania induced by high-dose mirtazapine: a case for "norepinephrine syndrome"? *Int Clin Psychopharmacol.* 2002;17(6):319-322.
 18. Goyal N, Sinha VK. Mirtazapine-induced manic switch in adolescent unipolar depression. *Aust N Z J Psychiatry.* 2008;42(12):1070-1071.
 19. Dong J, Blier P. Modification of norepinephrine and serotonin, but not dopamine, neuron firing by sustained bupropion treatment. *Psychopharmacol (Berl).* 2001;155:52-57.
 20. Amsterdam JD, Wang CH, Shwarz M, et al. Venlafaxine versus lithium monotherapy of rapid and non-rapid cycling patients with bipolar II major depressive disorder: a randomized, parallel group, open-label trial. *J Affect Disord.* 2009;112(1-3):219-230.
 21. Dunner DL, D'Souza DN, Kajdasz DK, et al. Is treatment-associated mania rare with duloxetine: secondary analysis of controlled trials in non-bipolar depression. *J Affect Disord.* 2005;87:115-119.
 22. Henderson TA. Mania induction associated with atomoxetine. *J Clin Psychopharmacol.* 2004;24(5):567-568.
 23. Henderson TA, Hartman K. Aggression, mania, and hypomania induction associated with atomoxetine. *Pediatrics.* 2004;114(3):895-896.
 24. Bottlender R, Rudolf D, Strauss A, et al. Mood-stabilisers reduce the risk of developing antidepressant-induced manic states in acute treatment of bipolar I depressed patients. *J Affect Disord.* 2001;63:79-83.
 25. Wehr TA, Sack DA, Rosenthal NE, et al. Rapid cycling affective disorder: contributing factors and treatment responses in 51 patients. *Am J Psychiatry.* 1988;145:179-184.
 26. Coryell W, Solomon D, Turvey C, et al. The long-term course of rapid-cycling bipolar disorder. *Arch Gen Psychiatry.* 2003;60:914-920.
 27. Schneck CD, Miklowitz DJ, Miyahara S, et al. The prospective course of rapid-cycling bipolar disorder: findings from the STEP-BD. *Am J Psychiatry.* 2008;165:370-377.
 28. Thase ME, Malinge AG, McKnight D, et al. Treatment of imipramine-resistant recurrent depressions, IV: a double-blind crossover study of tranylcypromine for anergic bipolar depression. *Am J Psychiatry.* 1992;149:195-198.
 29. Altshuler LL, Post RM, Helleman G, et al. Impact of antidepressant continuation after acute positive or partial treatment response for bipolar depression: a blinded, randomized study. *J Clin Psychiatry.* 2009;70(4):450-457.
 30. Ghaemi SN, Ostacher MM, El-Mallakh RS, et al. Antidepressant discontinuation in bipolar depression: a STEP-BD randomized clinical trial of long-term effectiveness and safety. *J Clin Psychiatry.* In press.
 31. Goldstein TR, Frye MA, Denicoff KD, et al. Antidepressant discontinuation-related mania: critical prospective observation and theoretical implications in bipolar disorder. *J Clin Psychiatry.* 1999;60(8):563-567.
 32. Goldberg JF, Burdick KE, Endick CE. A preliminary randomized, double-blind, placebo-controlled trial of pramipexole added to mood stabilizers for treatment-resistant bipolar depression. *Am J Psychiatry.* 2004;161:564-566.
 33. Zarate CA Jr, Payne JL, Singh J, et al. Pramipexole for bipolar II depression: a placebo-controlled proof of concept study. *Biol Psychiatry.* 2004;56:54-60.
 34. Frye MA, Grunze H, Suppes T, et al. A placebo-controlled evaluation of adjunctive modafinil in the treatment of bipolar depression. *Am J Psychiatry.* 2007;164(8):1242-1249.
 35. Zarate CA Jr, Quiroz JA, Singh JB, et al. An open-label trial of the glutamate-modulating agent riluzole in combination with lithium for the treatment of bipolar depression. *Biol Psychiatry.* 2005;57(4):430-432.
 36. Berk M, Copolov DL, Dean O, et al. N-acetyl cysteine for depressive symptoms in bipolar disorder—a double-blind, randomized placebo-controlled trial. *Biol Psychiatry.* 2008;64(6):468-475.

You've been treating Ms. S, age 27, for bipolar II disorder for 2 years. She has been taking divalproex, 1,500 mg/d, with a 14-hour serum level of 78 µg/mL. She had been relatively euthymic until several weeks ago when she began feeling sad and irritable for no clear reason. Ms. S has been able to continue to work as an accountant despite difficulty concentrating, and reports insomnia with daytime fatigue. How would you treat her current clinical state?

- Continue divalproex and add bupropion
- Continue divalproex and add quetiapine
- Discontinue divalproex and begin lamotrigine
- Discontinue divalproex and begin antidepressant monotherapy

See 'Antidepressants in bipolar disorder: 7 myths and realities' page 40-49



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Table 1

References

- a. Cohn JB, Collins G, Ashbrook E, et al. A comparison of fluoxetine, imipramine and placebo in patients with bipolar depressive disorder. *Int Clin Psychopharmacol.* 1989;4:313-322.
- b. Amsterdam JD, Shults J. Fluoxetine monotherapy of bipolar type II and bipolar NOS major depression: a double-blind, placebo-substitution, continuation study. *Int Clin Psychopharmacol.* 2005;20:257-264.
- c. Tohen M, Vieta E, Calabrese J, et al. Efficacy of olanzapine and olanzapine-fluoxetine combination in the treatment of bipolar I depression. *Arch Gen Psychiatry.* 2003;60:1079-1088.
- d. Sachs GS, Nierenberg AA, Calabrese JR, et al. Effectiveness of adjunctive antidepressant treatment for bipolar depression. *N Engl J Med.* 2007;356:1711-1722.
- e. Nemeroff CB, Evans DL, Gyulai L, et al. Double-blind, placebo-controlled comparison of imipramine and paroxetine in the treatment of bipolar depression. *Am J Psychiatry.* 2001;158:906-912.
- f. Young LT, Joffe RT, Robb JC, et al. Double-blind comparison of addition of a second mood stabilizer versus an antidepressant to an initial mood stabilizer for treatment of patients with bipolar depression. *Am J Psychiatry.* 2000;157:124-126.
- g. Vieta E, Martinez-Aran A, Goikolea JM. A randomized trial comparing paroxetine and venlafaxine in the treatment of bipolar depressed patients taking mood stabilizers. *J Clin Psychiatry.* 2002;63:508-512.
- h. Leverich GS, Altshuler LL, Frye MA, et al. Risk of switch in mood polarity to hypomania or mania in patients with bipolar depression during acute and continuation trials of venlafaxine, sertraline, and bupropion as adjuncts to mood stabilizers. *Am J Psychiatry.* 2006;163:232-239.

Table 2

References

- a. Himmelhoch JM, Thase ME, Mallinger AG, et al. Tranylcypromine versus imipramine in anergic bipolar depression. *Am J Psychiatry.* 1991;148:910-916.
- b. Thase ME, Mallinger AG, McKnight D, et al. Treatment of imipramine-resistant recurrent depressions, IV: a double-blind crossover study of tranylcypromine for anergic bipolar depression. *Am J Psychiatry.* 1992;149:195-198.
- c. Silverstone T. Moclobemide vs. imipramine in bipolar depression: a multicentre double-blind clinical trial. *Acta Psychiatr Scand.* 2001;104:104-109.
- d. Cohn JB, Collins G, Ashbrook E, et al. A comparison of fluoxetine, imipramine and placebo in patients with bipolar depressive disorder. *Int Clin Psychopharmacol.* 1989;4:313-322.
- e. Nemeroff CB, Evans DL, Gyulai L, et al. Double-blind, placebo-controlled comparison of imipramine and paroxetine in the treatment of bipolar depression. *Am J Psychiatry.* 2001;158:906-912.
- f. Sachs GS, Lafer B, Stoll AL, et al. A double blind trial of bupropion versus desipramine for bipolar depression. *J Clin Psychiatry.* 1994;55:391-393.
- g. Leverich GS, Altshuler LL, Frye MA, et al. Risk of switch in mood polarity to hypomania or mania in patients with bipolar depression during acute and continuation trials of venlafaxine, sertraline, and bupropion as adjuncts to mood stabilizers. *Am J Psychiatry.* 2006;163:232-239.

Table 3

References

- a. Truman CJ, Goldberg JF, Ghaemi SN, et al. Self-reported history of manic/hypomanic switch associated with antidepressant use: data from the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *J Clin Psychiatry.* 2007;68:1472-1479.
- b. MacQueen GM, Young LT, Marriott M, et al. Previous mood state predicts response and switch rates in patients with bipolar depression. *Acta Psychiatr Scand.* 2002;105:414-418.
- c. Himmelhoch JM, Thase ME, Mallinger AG, et al. Tranylcypromine versus imipramine in anergic bipolar depression. *Am J Psychiatry.* 1991;148:910-916.
- d. Altshuler LL, Suppes T, Black DO, et al. Lower switch rate in depressed patients with bipolar II than bipolar I disorder treated adjunctively with second-generation antidepressants. *Am J Psychiatry.* 2006;163:313-315.
- e. Goldberg JF, Truman CJ. Antidepressant-induced mania: an overview of current controversies. *Bipolar Disord.* 2003;5:407-420.
- f. Sachs GS, Lafer B, Stoll AL, et al. A double blind trial of bupropion versus desipramine for bipolar depression. *J Clin Psychiatry.* 1994;55:391-393.
- g. Peet M. Induction of mania with selective serotonin re-uptake inhibitors and tricyclic antidepressants. *Br J Psychiatry.* 1994;164:549-550.
- h. Frye MA, Hellmann G, McElroy SL, et al. Correlates of treatment-emergent mania associated with antidepressant treatment in bipolar depression. *Am J Psychiatry.* 2009;166:164-172.
- i. Bottlender R, Rudolf D, Strauss A, et al. Mood-stabilisers reduce the risk of developing antidepressant-induced manic states in acute treatment of bipolar I depressed patients. *J Affect Disord.* 2001;63:79-83.
- j. Henry C, Sorbara F, Lacoste J, et al. Antidepressant-induced mania in bipolar patients: identification of risk factors. *J Clin Psychiatry.* 2001;62:249-255.



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Table 4
References

- a. Altshuler LL, Suppes T, Black DO, et al. Lower switch rate in depressed patients with bipolar II than bipolar I disorder treated adjunctively with second-generation antidepressants. *Am J Psychiatry*. 2006;163:313-315.
- b. Frye MA, Hellmann G, McElroy SL, et al. Correlates of treatment-emergent mania associated with antidepressant treatment in bipolar depression. *Am J Psychiatry*. 2009;166:164-172.
- c. Goldberg JF, Perlis RH, Ghaemi SN, et al. Adjunctive antidepressant use and symptomatic recovery among bipolar depressed patients with concomitant manic symptoms: findings from the STEP-BD. *Am J Psychiatry*. 2007;164(9):1348-1355.
- d. Schneck CD, Miklowitz DJ, Miyahara S, et al. The prospective course of rapid-cycling bipolar disorder: findings from the STEP-BD. *Am J Psychiatry*. 2008;165:370-377.
- e. Ghaemi SN, Ostacher MM, El-Mallakh RS, et al. Antidepressant discontinuation in bipolar depression: a STEP-BD randomized clinical trial of long-term effectiveness and safety. *J Clin Psychiatry*. In press.
- f. MacQueen GM, Young LT, Marriott M, et al. Previous mood state predicts response and switch rates in patients with bipolar depression. *Acta Psychiatr Scand*. 2002;105:414-418.
- g. Goldberg JF, Whiteside JE. The association between substance abuse and antidepressant-induced mania in bipolar disorder: a preliminary study. *J Clin Psychiatry*. 2002;63:791-795.
- h. Manwani SG, Pardo TB, Albanese MJ, et al. Substance use disorder and other predictors of antidepressant-induced mania: a retrospective chart review. *J Clin Psychiatry*. 2006;67:1341-1345.
- i. Truman CJ, Goldberg JF, Ghaemi SN, et al. Self-reported history of manic/hypomanic switch associated with antidepressant use: data from the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *J Clin Psychiatry*. 2007;68:1472-1479.