Patients with seasonal bipolarity require different treatment from those with unipolar SAD
Ms. S., age 24, is referred to our team in early December by her primary care physician for “fatigue.” The patient describes going to bed and falling asleep before 9:30 these winter evenings, whereas in summer she went to bed at 11 PM. She craves bread, pasta, and sweets and reports increased appetite in winter compared with summer. Her mood is low, and she misses warm-weather activities of gardening and walking. Fatigue and difficulty concentrating are causing her problems at work and school.

Her history reveals mood elevation in spring as days become longer, with a clear change at approximately March 10 to 20. She reports “spring fever” and feeling “great” last year as soon as daylight saving time began. She slept only 3 hours a night and had a burst of ideas to expand her small business. She threw herself into her work, feeling she was making up for lost time and productivity. She also admits to making a large, misguided business investment during that time.

Upon questioning, she recalls that the previous spring she argued with her father and threw a cup of hot tea at him. When interviewed, Ms. S.’s mother describes her daughter at that time as having “a very short fuse,” speaking loud and fast, staying up late at night, and looking as though she was not herself.

Seasonal affective disorder (SAD) is an umbrella term for mood disorders that follow a seasonal pattern of recurrence. Bipolar I disorder (BD I) or bipolar II disorder (BD II) with seasonal pattern (BD SP) is the DSM-IV-TR diagnosis for persons with depressive episodes in the fall or winter and mania (BD I) or hypomania (BD II) in spring or summer (Table 1, page 44).

This article compares BD SP with major depressive disorder with...
seasonal pattern (MDD SP), in which depressive episodes usually occur in fall or winter and fully remit in spring or summer.\(^1\) Rather than being categorically distinct from each other, BD SP and MDD SP may represent extreme variants on a seasonal depression continuum from unipolar to bipolar.

**Overlap of MDD SP and BD SP**

The seasonal pattern specifier can be applied to a diagnosis of MDD, BD I, or BD II.\(^1\) Seasonality-focused assessments, described below, can help characterize seasonal patterns that do not meet full SP criteria but may deserve clinical attention.

**Symptom presentation.** MDD SP and BD SP share similar atypical depressive symptom presentations and seasonal recurrence patterns (Box 1). Hypersomnia, hyperphagia, and psychomotor retardation are more prevalent in major depressive episodes of bipolar disorders and SAD than in unipolar or nonseasonal mood disorders.\(^2\)\(^4\) Individuals with SAD also report fatigue and decreased physical activity,\(^1\) both of which are characteristic of bipolar depressive episodes.\(^5\)

Although psychosis and psychiatric hospitalizations are more common in BD I than unipolar disorders,\(^6\) individuals with BD SP are less likely to report psychosis than those with nonseasonal BD.\(^7\) Another study found that BD SP patients reported a higher rate of psychiatric hospitalizations than MDD SP patients (28% vs 9.4%).\(^6\)

**Recurrence pattern.** Major depressive episodes are highly recurrent in both MDD and BD, with or without a seasonal pattern. Approximately 75% of individuals with MDD experience ≥1 recurrence (mean, 10.8 episodes);\(^8\) MDD SP patients report a mean of 13.4 episodes.\(^9\) The mean lifetime episodes in BD SP is 20.74, compared with 11.67 in nonseasonal BD.\(^7\)

Cassidy and Carroll\(^10\) measured the frequency of mood episodes in 304 BD patients not assessed for seasonality. Manic episodes peaked in early spring, mixed episodes peaked in late summer or fall, and depressive episodes peaked in fall-winter.

**Irregular rhythm.** Both BD and MDD SP involve irregularities in daily or circadian rhythms, such as changes in the timing of sleep, melatonin release, and body temperature.\(^3\)\(^5\)\(^11\) Circadian phase delays—in which internal rhythms lag behind the sleep cycle—are correlated with symptom severity in BD\(^12\) and are implicated in the core pathology of BD\(^13\) (Box 2, page 46). In BD, life events that change social rhythms may disrupt circadian rhythms, triggering mood episodes.\(^5\)

Etiologic hypotheses for both BD and SAD propose that an external event (life stress in BD; decreased photoperiod in SAD) leads to circadian dysregulation and, in turn, mood episodes. Circadian-related hypotheses for SAD and BD are supported by evidence showing efficacy
of treatments that manipulate behavioral and circadian rhythms.

**CASE CONTINUED**

**Seasonal pattern revealed**

Ms. S was aware that she is vulnerable to depressive episodes in fall and winter but unaware of a pattern of hypomanic/manic episodes in spring and summer. Her family psychiatric history includes a sister diagnosed with BD I (with no seasonal specifier), and a maternal aunt who has attempted suicide several times.

Ms. S agrees to an assessment plan including a diagnostic interview, interviews measuring symptom severity and pattern of recurrence, routine laboratory examination, and self-report questionnaires. These show that she meets DSM-IV-TR criteria for BD I, depressed, moderate, with seasonal pattern.

Her assessment scores are 28 on the Structured Interview Guide for HDRS-seasonal affective disorder version (SIGH-SAD), 17 on the Hamilton Depression Rating Scale (HDRS), and 11 on the atypical subscale. The HDRS and atypical subscale are components of the SIGH-SAD reflecting typical (eg, insomnia, loss of appetite, etc.) and atypical (eg, hypersomnia, increased appetite, etc.) depression symptoms, respectively. Ms. S’s scores exceed the threshold scores defining a BD SP episode (>20 SIGH-SAD + >10 HDRS + >5 atypical subscale). Data from self-report questionnaires corroborate this assessment.

We plan to administer the Hypomania Interview Guide (including Hyperthymia) for Seasonal Affective Disorder (HIGH-SAD) during treatment and the following spring to monitor prospectively for hypomanic symptoms.

**Assessment tools**

After complete assessment for mood episodes and mood disorders based on DSM-IV-TR, an additional assessment for bipolarity and seasonality may be helpful.

**Screen for bipolarity in patients with SAD**

to avoid triggering mania or hypomania during treatment. Useful tools include:
Box 2

Proposed mechanisms for seasonal affective disorder

Etiologic hypotheses of seasonal affective disorder (SAD) include:

- **photoperiodic hypothesis** (shorter winter days cause SAD, perhaps mediated by a summer vs winter difference in duration of nightly melatonin release)
- **phase shift hypothesis** (less available light in winter may lead to an inability to synchronize circadian rhythms with sleep/wake rhythms).

Some case studies of rapid-cycling bipolar disorder (BD) suggest that mood is correlated with daily hours of sunshine and light therapy is antidepressant. Rapid-cycling patients may be hypersensitive to day-to-day changes in photoperiod, analogous to mood changes in response to changes in photoperiod across the seasons in SAD.

Circadian phase delays—in which internal rhythms lag behind the sleep cycle—are correlated with symptom severity in BD and are implicated in the core pathology of BD. Phase delays also are present in some individuals with SAD and are associated with severity and treatment response.

Preliminary evidence suggests that variation in circadian clock genes is related to both BD and SAD.

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

- HIGH-SAD
- the National Institutes of Health Life Chart Method to establish a recurrent pattern of mood episodes and track treatment efficacy
- assessments that characterize subthreshold bipolar symptoms, such as the Bipolar Spectrum Diagnostic Scale (see Box 3 with this article at CurrentPsychiatry.com) and the Bipolarity Index.

Also obtain collateral reports from significant others, review patient records, and use the same mania and hypomania scales for prospective assessment as the next spring approaches.

Assess seasonality in patients with BD to improve diagnosis and treatment. Characterizing a seasonal pattern may allow you and your patient to predict episodes and treat proactively. Commonly used assessments include the SIGH-SAD and the Structured Clinical Interview for DSM Disorders (SCID) seasonal pattern specifier module.

The SIGH-SAD measures symptom severity and provides recovery criteria based on changes in scores during treatment. Response is defined as a 50% reduction in symptoms; remission is >50% improvement in SIGH-SAD + HDRS <7 + atypical <7 or HDRS <2 + atypical <10.

CASE CONTINUED

Treatment begins

Considering Ms. S’s diagnosis of BD I SP and the risk of precipitating mania with light treatment, we recommend starting treatment with a mood stabilizer. We narrow our options to those that have a direct antidepressant effect, with the hope that this may reduce the need for future antidepressant medications. For patients diagnosed with BD II SP, we could consider a regimen without mood stabilizers.

We offer Ms. S lithium, a first-line mood stabilizer with evidence of usefulness in treatment before chronotherapeutic interventions and in preventing suicidal behavior. However, Ms. S prefers our second option, lamotrigine, because she is concerned about lithium’s side effects and required blood draws to check drug levels as well as thyroid and kidney status.

Despite causing some initial drowsiness, her lamotrigine dosage is successfully titrated after 2 weeks of treatment to 300 mg/d, without side effects. Only then do we initiate light treatment, which Ms. S wishes to try before antidepressant medications. She also begins sessions with a therapist trained in cognitive-behavioral therapy (CBT) for SAD.

For details of this comprehensive treatment, see the online-only Box 4 in this article at CurrentPsychiatry.com

Treating bipolar variant of SAD

Significant differences exist in the clinical management of BD SP and MDD SP, despite their commonalities (Table 2). BD SP treatment remains distinct because of the risk of switching with the use of light therapy or antidepressants and the importance of mood stabilizers, especially in BD I.
Consensus guidelines for treating SAD recommend mood stabilizers and close monitoring during light therapy for patients with BD SP (Table 3, page 48). Therapeutic sleep deprivation can quickly reverse depression during hospitalization but is not used often or recommended for outpatient treatment.

**Light therapy.** A small body of evidence suggests that depressive symptoms in BD SP improve with bright light therapy, a treatment with demonstrated efficacy in MDD SP. No differences in response have been reported between light therapy for winter depressive episodes among individuals with BD SP or MDD SP. Light therapy may increase the risk of switching to mania/hypomania in patients with BD SP, however. Clinical supervision is imperative, even for patients thought to have MDD SP, because of the risk of undiagnosed BD.

Regular monitoring by a physician is indicated for individuals taking medications or remedies with photosensitizing effects (such as lithium, thioridazine, or St. John’s wort). An ophthalmologist consultation and monitoring is necessary for patients with preexisting eye problems, those taking photosensitizing medications, and those who develop eye problems during light treatment.

The recommended starting dose for light therapy in MDD SP is 30 minutes daily in the early morning, but this dose may be too high for individuals with BD SP. To minimize the risk of switching, begin light therapy at 5 to 10 minutes daily and slowly increase while monitoring the clinical effect (see Related Resources, page 53, for more information about light therapy for affective disorders).

**Pharmacotherapy.** Pharmacologic treatments have not been studied for effectiveness in BD SP, and we hesitate to provide specific recommendations. Effective treatments may include those used for nonseasonal MDD, nonseasonal BD, and MDD SP. When using any medication for BD SP, weigh the risk of switching states against the potential beneficial effects.

Year-round mood-stabilizer treatment is indicated to minimize the risk of mood episodes in BD SP, especially in patients with BD I. When treating SAD, mood stabilizers with antidepressant effects—such as lamotrigine or lithium (for maintenance), and quetiapine or aripiprazole (for acute treatment)—are preferable to agents without an antidepressant effect in monotherapy. More-sedating mood stabilizers (such as valproate or carbamazepine) likely would not be as beneficial as less-sedating agents, considering that patients with SAD frequently experience fatigue.

Because of the lack of adequate clinical trials of treatments for BD SP, we suggest that clinicians choose medications and follow algorithms relevant to BD without a

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**Table 2**

<table>
<thead>
<tr>
<th>Differences</th>
<th>SAD</th>
<th>BD</th>
</tr>
</thead>
<tbody>
<tr>
<td>May be unipolar or bipolar</td>
<td>Increased risk of psychosis and psychiatric hospitalization</td>
<td></td>
</tr>
<tr>
<td>Defined by seasonality</td>
<td>Most BD is not seasonal</td>
<td></td>
</tr>
<tr>
<td>Light therapy and antidepressants indicated</td>
<td>Mood stabilizers indicated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of switching states with light therapy and antidepressants</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Atypical depressive symptom presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly recurrent</td>
<td>Predictable season of recurrence allows proactive treatment</td>
</tr>
<tr>
<td>Assess for mania and hypomania in both disorders</td>
<td>Light therapy requires clinical supervision</td>
</tr>
<tr>
<td>Light therapy requires clinical supervision</td>
<td>Psychotherapy may be beneficial</td>
</tr>
</tbody>
</table>

BD: bipolar disorder; SAD: seasonal affective disorder
Antidepressants that have shown efficacy in MDD SP include fluoxetine, bupropion, citalopram, and sertraline. For patients with BD SP, we initiate antidepressants when:

- light treatment fails
- the patient is unable to travel to the south
- light treatment is not available (often because patients cannot afford the cost, which is not covered by insurance)
- patient lacks time for light treatment.

An additional important consideration is history of response (such as a patient who did not respond well to light therapy in the past but responded very well to a particular antidepressant).

No studies have compared antidepressant classes or individual medications for MDD SP. Clinical wisdom is to base the antidepressant choice, dosages, decision points of when to switch, and schedule of switching (cross-tapering) on individual patients’ symptom clusters and comorbid conditions as well as the medication’s side effects.

Prophylactic treatment with bupropion would seem an appropriate initial choice for a prototypical SAD patient, considering this medication’s more activating effects and FDA approval for SAD treatment. For the minority of patients with SAD who present with agitation and increased sleepiness, a slightly sedating selective serotonin reuptake inhibitor such as citalopram would make more sense as a first-line treatment. Finally, we would recommend sertraline for patients with marked anxiety—especially panic attacks or obsessive-compulsive symptoms—but without insomnia.

For specific dosages, rely on the literature of treating nonseasonal depression (unipolar or bipolar). It is important to define decision-making points for dosage increases, augmentation, switching to another antidepressant, and cross-tapering, similar to how you would address a nonseasonal depression, typical or atypical.

In our view, treating a patient with BD I SP with an antidepressant alone—without a mood stabilizer—is almost always wrong. For BD II SP we leave it to the clinician to decide, based on individual patients, clinical experience, and ideally in consultation with a peer.

**Seasonal dosages.** You may wish to seasonally vary medications and dosages for patients with BD SP. Although no strong evidence exists, we recommend 2 options:

- Consider increasing mood-stabilizing medication in spring and summer, with a reduction (but no tapering for BD I) in fall and winter.
- Consider a complete antidepressant taper 2 weeks after daylight saving time begins in spring; taper under increased observation and not faster than 6 weeks, with close attention to emerging symptoms of depression or antidepressant withdrawal.

We do not taper antidepressants before daylight saving time, and we always consider stressors in our patients’ lives.
lenges in our patients’ lives before tapering antidepressants in spring or summer. We also assess and monitor compliance.

**Psychotherapy.** Referral can be made to clinicians trained in CBT for patients with a seasonal pattern and interpersonal and social rhythm therapy (IPSRT) for BD. Integrative models for SAD and BD propose that psychological and biologic vulnerability factors interact with environmental events (such as winter season or disruption of daily routine) to trigger mood episodes.

CBT adapted for SAD targets maladaptive thinking and behavioral disengagement through cognitive therapy and behavioral activation to counteract SAD symptoms. Preliminary trials by our group suggest that CBT for MDD SP is an effective acute treatment and may prevent future episodes.

IPSRT is an adaptation of interpersonal psychotherapy that aims to stabilize social relationships and rhythms in BD. IPSRT posits that irregularity in daily routines leads to circadian dysregulation, precipitating mood episodes in persons vulnerable to BD. The degree of regularity in social rhythms achieved in IPSRT is associated with reduced likelihood of recurrence post-treatment. If stabilizing social rhythms has a similar effect of regulating circadian rhythms in SAD, IPSRT may be effective in treating BD SP.

**Case Conclusion**

**Ongoing treatment required**

After several months of light therapy, Ms. S begins to feel better and reports having more energy. We taper her light therapy to 10 minutes daily in the morning from late February until 1 week after daylight saving time begins in mid-March. Weekly phone calls during this transition screen for signs of hypomania or mania. Lamotrigine is effective in preventing switches in spring.

Future plans include monitoring for hypomania through summer and possibly reinitiating light therapy in fall or winter. Because approximately one-half of individuals who undergo CBT for SAD do not experience another episode the winter after treatment, light therapy will be initiated only if depressive symptoms emerge. A booster session is scheduled with Ms. S’s CBT therapist in early fall to reinforce relapse prevention skills.

Antidepressant therapy will be recommended if full treatment response is not maintained with light therapy and continued use of CBT skills for SAD. During sessions, we emphasize compliance with lamotrigine. On several occasions Ms. S questions the need for ongoing therapy, but with education about the potential effects of mania she agrees to continue treatment as indicated.

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**Related Resources**

**Seasonality screening tools**


**Bipolarity screening tools**


**Light therapy**


**Psychotherapy**


**Drug Brand Names**

- Aripiprazole • Abilify
- Bupropion • Wellbutrin XL
- Carbamazepine • Tegretol
- Citalopram • Celexa
- Fluoxetine • Prozac
- Lamotrigine • Lamictal

- Lithium - Eskalith, Lithobid
- Quetiapine • Seroquel
- Sertraline - Zoloft
- Tiroididine - Mellaril
- Valproate - Depakote

**Disclosures**

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CBT skills for SAD
light therapy and maintained with full response is not recommended if therapy is antidepressant.

Antidepressant Clinical Point

SP patients). Discontinue light therapy and antidepressants in spring after daylight saving time begins. Psychotherapy can be a useful adjunct.

Provide year-round mood stabilizers for bipolar I SP patients (and some bipolar II SP patients). Discontinue light therapy and antidepressants in spring after daylight saving time begins. Psychotherapy can be a useful adjunct.

Seasonal patterns of major depressive disorder (MDD SP) and bipolar disorder (BD SP) require different treatment strategies. Assess patients for bipolar symptoms before starting light therapy because of the risk of switching to mania or hypomania. Provide year-round mood stabilizers for bipolar I SP patients (and some bipolar II SP patients). Discontinue light therapy and antidepressants in spring after daylight saving time begins. Psychotherapy can be a useful adjunct.

References