diagnostic criteria for sleep disorders due to another mental disorder are listed in the following Diagnostic Criteria feature.

**Schizophrenia**

Significant sleep disruption often occurs in conjunction with an exacerbation of schizophrenia (AASM, 2005). Great difficulty in getting to sleep may accompany extreme anxiety and concern about delusional and hallucinatory phenomena. (Schizophrenia is discussed in detail in Chapter 16.) The overall circadian cycle may also be disrupted. Clients with schizophrenia have reduced REM sleep and do not experience REM rebound. Deficit of slow-wave sleep, particularly stage 4, has been found in acute and chronic schizophrenia (Kryger et al., 2005). A link with serotonin, a neurotransmitter associated with non-REM sleep, has been hypothesized. Depressed, alcoholic, and older adult clients also have reduced stage 4 sleep. Low nighttime levels of melatonin have been observed in persons with schizophrenia. A recent study (Suresh Kumar, Andrade, Bhakta, & Singh, 2007) of stable schizophrenic outpatients with insomnia concluded that melatonin may be a useful short-term hypnotic for clients in whom conventional hypnotic medication therapy or higher sedative antipsychotic medication doses may be problematic.

A careful sleep history should be undertaken for clients with schizophrenia whose psychosis is refractory (fails to respond) to antipsychotic medications, or only partially responds to antipsychotic medications. Karanti and Landen (2007) relate an instance in which a woman diagnosed with schizophrenia developed treatment-resistant auditory hallucinations along with extreme daytime fatigue and obesity. A careful sleep history led to a diagnosis of obesity-hypoventilation syndrome relieved by CPAP and followed by the complete remission of hallucinations.

**Mood Disorders**

As you learned in Chapter 17, insomnia of the maintenance or early wakening type commonly occurs in major depressive episodes. Insomnia is also among the most commonly reported residual symptoms (17–26%) after remission from depression (Carney, Segal, Edinger, & Krystal, 2007), suggesting that treatment to address insomnia after remission from depression is needed.

The sleep pattern disturbance may actually precede other symptoms of depression and likewise may respond to antidepressant medication more rapidly than the depression (AASM, 2005). Partial sleep deprivation, particularly of REM sleep, has been associated with modest improvement in depression, but the mechanism for this process is not well understood. Most antidepressants suppress REM sleep and lengthen latency to the first REM period.

Seasonal affective disorder (SAD) is related to fluctuations in melatonin levels by variation in the hours of sunlight. The positive response of SAD to light therapy lends strength