

## **Chronic fatigue syndrome and seasonal affective disorder: comorbidity, diagnostic overlap, and implications for treatment.**

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This study aimed to determine symptom patterns in patients with chronic fatigue syndrome (CFS), in summer and winter. Comparison data for patients with seasonal affective disorder (SAD) were used to evaluate seasonal variation in mood and behavior, atypical neurovegetative symptoms characteristic of SAD, and somatic symptoms characteristic of CFS. Rating scale questionnaires were mailed to patients previously diagnosed with CFS. Instruments included the Personal Inventory for Depression and SAD (PIDS) and the Systematic Assessment for Treatment Emergent Effects (SAFTEE), which catalogs the current severity of a wide range of somatic, behavioral, and affective symptoms. Data sets from 110 CFS patients matched across seasons were entered into the analysis. Symptoms that conform with the Centers for Disease Control and Prevention (CDC) case definition of CFS were rated as moderate to very severe during the winter months by varying proportions of patients (from 43% for lymph node pain or enlargement, to 79% for muscle, joint, or bone pain). Fatigue was reported by 92%. Prominent affective symptoms included irritability (55%), depressed mood (52%), and anxiety (51%). Retrospective monthly ratings of mood, social activity, energy, sleep duration, amount eaten, and weight change showed a coherent pattern of winter worsening. Of patients with consistent summer and winter ratings ( $n = 73$ ), 37% showed high global seasonality scores (GSS)  $\geq 10$ . About half this group reported symptoms indicative of major depressive disorder, which was strongly associated with high seasonality. Hierarchical cluster analysis of wintertime symptoms revealed 2 distinct clinical profiles among CFS patients: (a) those with high seasonality, for whom depressed mood clustered with atypical neurovegetative symptoms of hypersomnia and hyperphagia, as is seen in SAD; and (b) those with low seasonality, who showed a primary clustering of classic CFS symptoms (fatigue, aches, cognitive disturbance), with depressed mood most closely associated with irritability, insomnia, and anxiety. It appears that a subgroup of patients with CFS shows seasonal variation in symptoms resembling those of SAD, with winter exacerbation. Light therapy may provide patients with CFS an effective treatment alternative or adjunct to antidepressant drugs.