

The problem

While seasonal changes in mood are now widely accepted to occur, “seasonal affective disorder” (SAD) is not yet included in diagnostic classifications. Even so, a range of products are already available for sufferers. At this time of shortening days and gloomy weather, we wondered – is SAD a real phenomenon, or just good marketing by daylight lamp manufacturers?

The evidence

A systematic review¹ identified 24 high-quality studies in youth and adults assessed for depression, depressive symptoms, antidepressant use and hospitalisations for depression over at least one year, to gauge seasonal changes in prevalence. Assessment measures included a range of validated tools, but the studies were too heterogeneous to pool results statistically.

Number of high-quality studies (NOS score 6 or 7/7) reaching each conclusion	No seasonality	Worse in winter	Ambiguous or worse at other times
Depression prevalence (PHQ8/9, CIDI, MADRS, BDI, HADS, SF-36)	3	4	0
Depression symptoms (CES-D, GDS-15, POMS, SCL-90-D, HADS, Kessler-10)	3	1	0
Post-natal depression (EPDS, PHQ-2/9, PAS)	1	2	1
Antidepressant medication (prescription database)	0	1	1
Admissions and care (interview, clinical records)	3	0	4
Total	10	8	6



Prevalence of depression and post-natal depression was higher in winter in 6/11 high-quality studies



Depressive symptoms and hospitalisations were only shown to be worse in winter in 1/11 high-quality studies



Little convincing evidence for impact of seasonality in population-level depressive symptoms, and no agreement on which months might present higher risk for worsening clinical depression

BDI: Beck Depression Inventory; CES-D: Center for Epidemiologic Studies – Depression; CIDI: Composite International Diagnostic Interview; EPDS: Edinburgh Postnatal Depression scale; GDS-15: Geriatric Depression Scale; HADS: Hospital Anxiety and Depression Scale; K-10: Kessler-10; MADRS: Montgomery Aasberg Depression Rating Scale; NOS: Newcastle-Ottawa Score; PHQ: Patient Health Questionnaire; POMS: Profile of Mood States; SAD: Seasonal Affective Disorder; SCL-90-D: Symptom Checklist-90; SF-36: Short-form 36

For those with worse depression in winter, is anything effective?

- Bright light and infrared therapy were not significantly better than no light therapy at preventing SAD in one RCT of 46 people, with no other studies identified by a Cochrane review.²
- Melatonin-related agomelatine was not significantly more effective than placebo at preventing SAD in one study of 199 people.³
- Bupropion significantly reduced SAD recurrence** in 3 RCTs of 1100 people compared with placebo, but with greater **adverse events**.⁴

Author’s comments

Although depression is a serious condition that should receive appropriate medical support and can be worse at this time of year, SAD itself is not inevitable. Research on treatments to prevent seasonal depression is sparse and bupropion was the only therapy found to be effective in three Cochrane reviews, at the expense of more headaches, insomnia and nausea. I’ll see the shortest day pass with a mug of hot chocolate and knowledge that days will soon be getting longer!

References

- Øverland S, Woicik W, Sikora L. et al. (2020). Seasonality and symptoms of depression: A systematic review of the literature. *Epidemiology and Psychiatric Sciences* 29, e31, 1–15.
- Nussbaumer-Streit B, Forneris CA, Morgan LC et al. Light therapy for preventing seasonal affective disorder. *Cochrane Database of Systematic Reviews* 2019, Issue 3. Art. No.: CD011269.
- Nussbaumer-Streit B, Greenblatt A, Kaminski-Hartenthaler A et al. Melatonin and agomelatine for preventing seasonal affective disorder. *Cochrane Database of Systematic Reviews* 2019, Issue 6. Art. No.: CD011271.
- Gartlehner G, Nussbaumer-Streit B, Gaynes BN et al. Second-generation antidepressants for preventing seasonal affective disorder in adults. *Cochrane Database of Systematic Reviews* 2019, Issue 3. Art. No.: CD011268.