Light therapy and fluoxetine both work in seasonal affective disorder

**Research question** Which is the better treatment for seasonal affective disorder, fluoxetine or light therapy?

**Answer** They both work equally well, although light therapy works slightly faster.

**Why did the authors do the study?** Both antidepressants and light therapy work better than a placebo for patients with seasonal affective disorder. But it’s unclear how they compare with each other. These authors wanted to find out by comparing the two treatments head to head. They also wanted to find out how light therapy performs in the medium term; previous trials lasted no more than five weeks.

**What did they do?** 96 Canadian adults took part in a randomised controlled trial. All had moderate or severe major depression with a strong seasonal component (seasonal affective disorder). They were untreated when they entered the trial, which was conducted over winter. For eight weeks, 48 participants had light therapy each morning plus a placebo pill; the other 48 had fluoxetine 20 mg daily plus placebo light therapy. Active light therapy was a light box emitting 10 000 lux. Placebo therapy was an identical box emitting only 100 lux. The trial was carefully double blinded.

The authors assessed the participants four times during the eight weeks. They looked for a response to treatment, defined as a reduction of at least 50% on the 24 item Hamilton depression scale. They also looked for remission, defined as a clinical response plus a score of 8 or less. Patients rated their own symptoms using the Beck depression inventory and were prompted to report any side effects. The authors used intention to treat analysis to compare the two treatment groups.

**What did they find?** Both treatments worked equally well. Two thirds of the participants in each group responded to treatment (67%), and about half in each group went in to remission. Those treated with light therapy improved slightly faster during the first week, but the fluoxetine group had caught up by week 2.

Participants who took fluoxetine reported significantly more agitation (12.5% v 0%), sleep disturbance (29% v 2%), and palpitations (10.5% v 0%) than those treated with light therapy. But there were similar numbers of dropouts in each group and similar numbers reporting at least one severe side effect (33% for bright light and 35% for fluoxetine).

**What does it mean?** Light therapy or 20 mg a day of fluoxetine seemed to work equally well in this study, which was big enough and powerful enough to detect any clinically meaningful differences between the treatments. Fluoxetine worked a little slower during the first week and was associated with a higher risk of some side effects but not others. Overall, about three quarters of the participants in both groups reported at least one side effect. As both treatments have already been tested against a placebo and found to work, the authors think it’s now reasonable to offer either therapy as a first line treatment to patients with seasonal affective disorder. The choice is largely up to them.