

The Effects of Alternate-Day Fasting On Sleep in Poor Sleepers

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ABSTRACT

Alternate day modified fasting is an intermittent fasting approach that provides an effective strategy for weight loss. While research has shown alternate day modified fasting to be an effective weight loss strategy, less is known about its impact on sleep quality. **PURPOSE:** The objective of this study was to examine the impact of a 14-day alternate day modified fast on sleep patterns in participants who were classified as 'poor sleepers.' **METHODS:** Forty two participants (24 male/18 female) completed 3 days of baseline testing followed by a 14-day treatment period where they followed a modified alternate day fasting regimen that consisted of fasting days alternated with normal eating days. On the fasting days the participants consumed 25% of their daily caloric requirements. Participants wore accelerometers on their wrists for 12 consecutive days during the intervention that tracked and assess their sleep patterns. **RESULTS:** There was no significant difference observed in time spent in bed between conditions, however participants spent 61.6 ± 28.4 minutes ($t\text{-value} = -2.17, p = 0.0314$) more in bed on non-fast days compared to fast days. Similarly, there was no significant difference in total time asleep between conditions, but participants slept 60.1 ± 25.3 minutes ($t\text{-value} = -2.37, p = 0.0188$) more on non-fast days compared to fast days. There was no significant difference between conditions for sleep efficiency. There was a significant fasting day status by gender interaction ($t\text{-value} = 1.99, p = 0.0479$) with men increasing sleep efficiency on fast days. **CONCLUSION:** These findings indicate that the practice of alternated day modified fasting does not alter the aggregate sleep time nor quality in men and women who are poor sleepers. However, when men and women are fasting, they tend to sleep less compared to non-fasting days. Future research is warranted to confirm these findings and to evaluate why sleep time changes with fasting.