Fasting Review

Research Paper

Hosseini, E., Ammar, A., Josephson, J. K., Gibson, D. L., Askari, G., Bragazzi, N. L., ... & Mokhtari, Z. (2024). Fasting diets: what are the impacts on eating behaviors, sleep, mood, and well-being?. *Frontiers in Nutrition*, *10*, 1256101.

Overview

Fasting diets (FDs) are tools for improving eating behaviours, sleep, and mood. However, inconsistent findings and short-term studies limit understanding of their long-term effects. This review compares various fasting protocols; including intermittent fasting (IF, like the 5:2), alternate-day fasting (ADF), and time-restricted feeding (TRF, e.g. 8am to 5pm).

Key Findings & Insights

Eating Behaviours

Short-term fasting (e.g. 2 to 3 months of ADF or IF) appears to improve satiety and reduce hunger without compensatory overeating. However, findings on long-term effects remain mixed. ADF shows some promise for weight management, but rigid dietary restraint (an "all-or-nothing" mindset) may increase cravings for high-fat or sweet foods. Fasting may improve flexible eating restraint.

Sleep Patterns

FDs, particularly TRF that aligns with circadian rhythms (e.g. eating between 8am & 5pm), can improve sleep quality and duration in the short term. Misaligned fasting (e.g. late feeding windows) or disrupted schedules like Ramadan fasting (e.g. eating after sundown) often decrease total sleep time and delay bedtimes.

Mood and Well-being

Fasting protocols show positive effects on mood, reducing tension, anger, and fatigue while enhancing vigour and emotional well-being. Mechanisms may involve cortisol regulation and brain-derived neurotrophic factor (BDNF) pathways. Periodic fasting and religious fasting often show mood improvements over time. For example a 3-month IF study reduced mood disturbances, improving vigour and lowering anxiety.

Mechanism

Fasting probably works through the gut-brain axis, enhancing beneficial gut bacteria,

increasing short-chain fatty acids like butyrate, that help with inflammation & regulate neurotransmitters (e.g. serotonin). This improves gut barrier integrity, lowers neuroinflammation, supports brain function, emotional well-being, and mental clarity.

Methods

Studies reviewed included both short-term (2 to 12 weeks) and longer trials. TRF and ADF protocols featured prominently, with varied populations (healthy adults, obese individuals, and diabetics). Sleep quality was assessed using tools like the Pittsburgh Sleep Quality Index, while mood outcomes measured depression, fatigue, and well-being scores.

Conclusion

FDs can positively influence eating behaviours, sleep, and mood in the short term, particularly when aligned with circadian rhythms (e.g., early TRF). However, long-term impacts remain unclear, with inconsistent findings across studies. Future research should prioritize behaviour-based outcomes and individual differences to establish the full potential of fasting diets as tools for mental and physical well-being.





