

# AI Research Report

## QUERY: Impact of intermittent fasting on health

### SOURCE 1:

#### - Intermittent Fasting: A Popular Eating Strategy with Potential Benefits and

##### Considerations

- Intermittent fasting is an eating plan that alternates periods of eating and fasting, gaining popularity for its potential health benefits, although it's not a guaranteed weight loss solution.

#### - Flexible Approaches to Intermittent Fasting

- There are various models, including time-restricted eating (e.g., 8-hour eating window) and the 5:2 plan (normal eating for five days and significantly reduced calories on two days), but it's essential to consult a healthcare provider before starting.

#### - Potential Health Benefits

- Research indicates intermittent fasting may aid weight loss and improve health markers, with evidence from animal studies suggesting benefits for both heart health and overall well-being.

#### - Not Suitable for Everyone

- While promising, intermittent fasting may not be ideal for all individuals; much of the research is based on animal studies, and the effects on humans, particularly with less extreme models, are still being investigated.

#### - Concerns over Short Eating Windows

- Studies suggest potential risks, such as increased cardiovascular disease mortality, for individuals who limit their eating to less than eight hours a day compared to those who eat over a twelve-hour span.

[URL: https://www.massgeneralbrigham.org/en/about/newsroom/articles/pros-and-cons-of-intermittent-fasting](https://www.massgeneralbrigham.org/en/about/newsroom/articles/pros-and-cons-of-intermittent-fasting)

### SOURCE 2:

- **Impact of Intermittent Fasting on Health and Disease Processes:** The study explores how intermittent fasting (IF) and periodic fasting (PF) can improve health outcomes and counteract various age-related diseases, based on insights from both animal models and human studies.

- IF involves alternating periods of fasting (16-48 hours) and normal eating, while PF includes longer fasting durations (up to 21 days) or fasting-mimicking diets, both showing positive effects on metabolic health.

- Research indicates that IF and PF can improve indicators such as insulin resistance and cardiovascular health, potentially aiding in weight loss and reducing risks for diabetes and neurological disorders like Alzheimer's and Parkinson's diseases.

- The cellular benefits of IF include enhanced mitochondrial health, improved DNA repair mechanisms, and activation of autophagy, contributing to better overall health and cellular regeneration.

- Future randomized controlled trials are needed to definitively establish the efficacy of IF as a strategy for health improvement and disease prevention in aging populations.

URL: <https://pubmed.ncbi.nlm.nih.gov/27810402/>

### **SOURCE 3:**

- **Intermittent Fasting Overview:** Intermittent fasting is an eating pattern that alternates between periods of eating and fasting, with various methods such as alternate-day fasting, full-day fasting, and time-restricted eating.

- **Health Benefits:** Research suggests that intermittent fasting may lead to improvements in blood sugar levels, weight, cholesterol, blood pressure, and inflammation in the short term, though long-term effects remain unclear.

- **Side Effects and Concerns:** Potential negative effects include fatigue, dizziness, mood swings, headaches, constipation, and disruptions to menstrual cycles. It may also complicate diabetes management.

- **Not Suitable for Everyone:** Intermittent fasting may not be appropriate for individuals with eating disorders, pregnant or breastfeeding women, or those at high risk for bone loss. Consultation with a healthcare professional is recommended before starting.

- **Comparison with Caloric Restriction:** Some studies indicate that simply reducing calorie intake may offer similar health benefits to intermittent fasting, and the effectiveness of different fasting cycles is still under investigation.

URL: <https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/expert-answers/intermittent-fasting/faq-20441303>