# Calorie-restrictive and low-fat diets linked to reduced depression and anxiety symptoms



Emerging research highlights the potential of certain dietary changes to alleviate symptoms associated with depression and anxiety, paving the way for alternative approaches to mental health treatment. A comprehensive review conducted by researchers at Bond University in Queensland, Australia, examined data from 25 studies encompassing over 57,000 adults. Their findings suggest that both calorie-restrictive and low-fat diets can lead to significant improvements in mental health, particularly for those at elevated cardiometabolic risk, including individuals suffering from obesity and insulin resistance.

A calorie-restrictive diet, which typically limits daily caloric intake to around 1,500 calories, primarily advocates for the avoidance of processed foods and high-sugar items. Similarly, a low-fat diet, defined as deriving less than 30% of energy from fats—guidelines endorsed by the World Health Organization—also demonstrates efficacy in mitigating anxiety levels. However, the researchers acknowledged in their publication in the *Annals of Internal Medicine* that the quality of evidence supporting these dietary modifications remains low, urging individuals to consult healthcare professionals before making significant changes.

The biological mechanisms behind diet's influence on mental health are complex and multifaceted. Previous studies, including one from 2017, have identified a beneficial correlation between diet and mood. In that research, participants adhering to the Mediterranean diet—which focuses on fresh fruits, vegetables, whole grains, and lean proteins—experienced notable improvements in depressive symptoms compared to those maintaining their usual eating habits. This aligns with data suggesting that long-term adherence to the Mediterranean diet could reduce the risk of developing depression by 16% over six years.

Professor Felice Jacka, a specialist in nutritional psychiatry and director of the Food and Mood Centre at Deakin University, firmly asserts the importance of diet in mental health. She posits that a fibre-rich diet, abundant in unprocessed foods, fosters a healthy gut microbiome—a critical factor in maintaining overall well-being. Her research underscores the benefits of dietary fibre, indicating that for individuals at risk of depression, each additional 5 grams of fibre consumed daily is linked to a 5% reduction in the likelihood of experiencing depressive symptoms. The NHS further supports the recommendation to aim for at least 30 grams of fibre daily to sustain optimal health.

Conversely, the consumption of ultra-processed foods (UPFs) appears to have detrimental effects on mental health, as highlighted by research co-authored by Professor Jacka. Their study established a concerning link: for each increment of 10% of UPFs in one’s diet, the risk of depressive symptoms increased by 10%. Professor Jacka advocates for eliminating soft drinks, ice cream, and crisps to enhance mental health outcomes.

While many studies demonstrate a prospective connection between dietary habits and mental health, some experts are cautious regarding the interpretation of these findings. They warn that correlations do not necessarily imply causation, particularly in the context of UPFs. Individuals consuming higher amounts of UPFs often experience poorer overall lifestyle choices, including a higher prevalence of obesity and lower levels of physical activity, which in turn may adversely impact their mental health.

Current data from mental health charities indicate that one in six Britons experience a common mental health issue like depression or anxiety. Symptoms can manifest in various ways, from persistent sadness and disinterest to physical complaints such as fatigue and sleep disturbances. As awareness around these conditions grows, the NHS encourages individuals experiencing symptoms to seek professional guidance.

In summary, while the reviewed studies offer promising insights into the relationship between diet and mental health, further research is crucial to clarify these associations. As professionals increasingly endorse dietary changes as a complementary treatment strategy, it remains vital for individuals to approach such modifications thoughtfully and under medical advice.

### Reference Map

1. Paragraph 1: Sources [[1]](https://www.dailymail.co.uk/health/article-14728141/Scientists-diets-relieve-depression-anxiety.html?ns_mchannel=rss&ns_campaign=1490&ito=1490)
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4. Paragraph 4: Sources [[1]](https://www.dailymail.co.uk/health/article-14728141/Scientists-diets-relieve-depression-anxiety.html?ns_mchannel=rss&ns_campaign=1490&ito=1490), [[3]](https://time.com/4314034/fasting-diet-weight-loss-sex/), [[6]](https://time.com/4030506/fish-omega3-depression/)
5. Paragraph 5: Sources [[1]](https://www.dailymail.co.uk/health/article-14728141/Scientists-diets-relieve-depression-anxiety.html?ns_mchannel=rss&ns_campaign=1490&ito=1490), [[4]](https://pubmed.ncbi.nlm.nih.gov/38899499/), [[7]](https://www.medscape.org/viewarticle/712523)
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## Bibliography

1. <https://www.dailymail.co.uk/health/article-14728141/Scientists-diets-relieve-depression-anxiety.html?ns_mchannel=rss&ns_campaign=1490&ito=1490> - Please view link - unable to able to access data
2. <https://pubmed.ncbi.nlm.nih.gov/30470803/> - A meta-analysis and systematic review examined the effects of very low-calorie diets (VLCDs) on subjective depressive symptoms and anxiety levels. The study found that VLCDs led to a significant decrease in depressive symptoms when combined with behavioral therapy, a diet duration of 8-16 weeks, low-intensity exercise, and a weight loss of over 14.1 kg. However, no significant changes in anxiety levels were observed. The authors suggest that healthcare providers consider these factors when implementing VLCDs for patients with depressive symptoms.
3. <https://time.com/4314034/fasting-diet-weight-loss-sex/> - A study published in JAMA Internal Medicine investigated the effects of calorie restriction on mood, sleep, and sexual function. Participants who reduced their calorie intake by 25% over two years experienced weight loss and improvements in mood, sleep quality, and sexual function. The study highlights the potential benefits of calorie restriction beyond weight loss, though it also notes the challenges of adhering to such diets in today's food-abundant environment.
4. <https://pubmed.ncbi.nlm.nih.gov/38899499/> - A systematic review and meta-analysis of randomized controlled trials assessed the impact of low-fat diets on depression scores in adults. The analysis included 10 trials with 50,846 participants and found no significant change in depression scores following low-fat diets compared to usual diets. However, improvements were observed in both groups when protein intake was 15-20% of calorie intake. The study suggests that adequate dietary protein may be more effective than manipulating dietary fat to improve depression scores.
5. <https://pmc.ncbi.nlm.nih.gov/articles/PMC4002245/> - Research on male rats investigated the effects of mild calorie restriction on anxiety and stress responses. The study found that rats on a 25% calorie-restricted diet for three weeks exhibited reduced anxiety levels compared to ad libitum-fed rats. Despite elevated basal glucocorticoid levels, the restricted diet did not affect the rats' hormonal and central responses to stress. The findings suggest that chronic mild calorie restriction may have subtle anxiolytic effects without altering stress responses.
6. <https://time.com/4030506/fish-omega3-depression/> - A study published in the Journal of Epidemiology & Community Health analyzed 26 observational studies involving 150,278 individuals and found that those who consumed the most fish had a 17% lower risk of depression compared to those who ate the least. The study suggests that omega-3 fatty acids in fish may influence mood by altering dopamine and serotonin levels, increasing blood flow, and reducing inflammation, though the exact mechanisms remain unclear.
7. <https://www.medscape.org/viewarticle/712523> - A study compared the effects of low-fat (LF) and low-carbohydrate (LC) diets on weight loss and mood improvement. Both diets led to similar weight loss and metabolic changes, but the LF diet was associated with a better improvement in mood. The study suggests that while both diets are effective for weight loss, the LF diet may offer additional benefits for mood enhancement.