

March 2025 Nutrition News

Milk Consumption and Mental Health: Investigating the Link to Depression and Anxiety Is higher lactoferrin exposure beneficial for brain size in pre-term infants? Boosting Muscle Growth During Dieting: Do Protein or Carbs Work Better? The Role of Protein in Preserving Muscle During Weight Loss and Resistance Training Why Protein Quality Matters: The Role of Essential Amino Acids in Diet and Health

+ More

Milk Consumption and Mental Health: Investigating the Link to Depression and Anxiety

TThe impact of different types of milk on mental health remains unclear, with limited prospective evidence. This study analyzed data from the UK Biobank to examine the relationship between milk consumption and the risk of depression and anxiety, further exploring potential causality through Mendelian randomization (MR) analysis.

Among 357,568 participants followed for a median of 13.5 years, 13,065 developed depression and 13,339 developed anxiety. After adjusting for lifestyle and health factors, full-cream milk was associated with a lower risk of anxiety (HR = 0.84), while semi-skimmed milk was linked to a reduced risk of both depression (HR = 0.88) and anxiety (HR = 0.90). Skimmed milk showed no significant associations, whereas other milk types were linked to a higher risk of depression (HR = 1.14). MR analysis further supported a protective relationship between semi-skimmed milk and both depression (OR = 0.83) and anxiety (OR = 0.71).

These findings suggest that semi-skimmed milk may play a role in reducing the risk of depression and anxiety, highlighting its potential as part of a dietary approach to support mental well-being.

Wu et al. Front Nutr. 2024 Dec 5;11:1435435.





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Whey Protein Supplementation Enhances Cognitive Function in Older Adults with Mild Cognitive Impairment



Cognitive decline is a growing concern as populations age, and finding effective nutritional strategies to support brain health is increasingly important. Previous animal studies have shown that milk fat globule membrane (MFGM), a component found in dairy, may help alleviate Alzheimer's disease pathology. Building on this, researchers hypothesized that a whey protein powder enriched with MFGM, taurine, and B vitamins could positively impact cognitive function in older adults with mild cognitive impairment (MCI).

To test this, a 12-month randomized controlled trial was conducted with 107 participants, aged approximately 63 years, who were randomly assigned to either an intervention group receiving 15g of whey protein powder daily or a placebo group receiving an identical-looking supplement without active ingredients. Cognitive function was assessed using the Montreal Cognitive Assessment (MoCA) and other standardized cognitive tests at baseline, 6 months, and 12 months.

The results showed a clear benefit for the whey protein group. After one year, participants who consumed the whey supplement protein experienced а significantly greater improvement in MoCA scores compared to the placebo group, with a mean increase of 3.23 points versus 1.42 points, representing a significant difference between the groups. Additionally, secondary cognitive measures, such as the Digit Symbol Substitution Test, also showed notable enhancements in processing speed and executive function.

Importantly, the supplement was well tolerated, with minimal reported side effects and no significant difference in adverse events between the two groups. These findings suggest that daily supplementation with whey protein powder rich in MFGM, taurine, and B vitamins could be a simple and effective dietary strategy to support cognitive function and potentially slow cognitive decline in older adults with MCI. Further research could help determine the long-term benefits and optimal dosages for cognitive health interventions.

Li et al. Am J Clin Nutr. 2025 Feb;121(2):256-264.



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Boosting Muscle Growth During Dieting: Do Protein or Carbs Work Better?

When in an energy deficit, muscle protein synthesis (MPS) is reduced, possibly due to increased essential amino acid (EAA) needs and a greater reliance on stored energy. This study examined whether supplementing with additional EAAs or carbohydrates, combined with EAA-enriched whey protein, could better support MPS and whole-body protein balance after exercise.

Seventeen adults participated in a randomized study, completing two five-day energy conditions—one in energy balance (BAL) and one with a 30% energy deficit (DEF). After exercise, they consumed either whey protein with added EAAs (+EAA) or whey protein with added carbohydrates (+CHO).

Results showed that MPS was significantly higher in the +EAA group compared to the +CHO group during normal energy intake but was similar between groups in the energy deficit condition. Whole-body protein synthesis was also higher in the +EAA group, while protein breakdown was lower, leading to a greater net protein balance compared to +CHO.

These findings suggest that supplementing whey protein with additional EAAs, rather than carbohydrates, is more effective in maintaining post-exercise MPS during an energy deficit. This insight could help optimize nutrition strategies for preserving muscle mass when calorie intake is restricted.

Gwin et al. Med Sci Sports Exerc. 2025 Jan 1;57(1):70-80.



The Role of Protein in Preserving Muscle During Weight Loss and Resistance Training



When trying to lose weight, many people cut calories while engaging in resistance training (RT) to retain as much muscle as possible. This systematic review and meta-regression analyzed 29 studies to determine how daily protein intake influences the ability to maintain fat-free mass (FFM)—which includes muscle, bone, and water, but excludes body fat—during weight loss.

The findings showed a strong likelihood (>97%) of a positive relationship between higher protein intake and better muscle retention. This effect was even more pronounced when protein intake was measured relative to FFM rather than total body weight. Additionally, the benefits of higher protein intake were greater in men, in individuals with lower body fat percentages, and in programs lasting more than four weeks. While there was some variation between studies, these results highlight the importance of sufficient protein intake when trying to lose fat while maintaining muscle. For those following a calorie-restricted diet and resistance training program, ensuring adequate protein consumption can help preserve strength and muscle mass, making weight loss efforts more effective and sustainable.

 Refalo et al. Strength & Conditioning

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Why Protein Quality Matters: The Role of Essential Amino Acids in Diet and Health

Protein quality is determined by its ability to provide essential amino acids (EAAs), which the body cannot produce and must obtain from food. These amino acids play a crucial role in stimulating protein synthesis and supporting various metabolic functions. The best way to measure protein quality is through the Digestible Indispensable Amino Acid Score (DIAAS), which considers both EAA content and digestibility.

Current dietary guidelines often overlook protein quality, focusing only on total intake. While low-quality proteins can be combined to balance EAA deficiencies, adding high-quality protein to the diet is a more effective way to meet EAA needs without excessive calorie intake. This is particularly important for populations such as older adults, who require more EAAs to maintain muscle mass and overall health.

Despite the perception that protein intake is sufficient in high-income countries, many individuals may not be consuming optimal levels of EAAs. Ensuring high-quality protein sources in the diet can help meet nutritional needs more efficiently and support long-term health. Wolfe et al. Front Nutr. 2024 Nov 13;11:1389664.



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