

Dairy Foods Can Contribute to Healthy Weight Management in Adults



Overview

Maintaining a healthy weight in adulthood is critical for reducing risk and progression of chronic diseases such as obesity, type 2 diabetes and cardiovascular disease, while also supporting mobility and overall quality of life throughout the lifespan. Dairy foods, including milk, cheese and yogurt, offer a nutrient-rich package that can be valuable to healthy eating patterns for adults managing their weight. In addition to providing essential vitamins and minerals that can be hard to replace with other foods, the high-quality protein in dairy foods may contribute to satiety and maintaining a healthy metabolic rate during weight management efforts. The current body of science linking dairy foods with healthy weight management in adults is consistent with recommendations from the 2025-2030 Dietary Guidelines for Americans (DGA) that recognize nutrient-dense dairy foods as foundational to healthy eating patterns. By incorporating dairy foods into a balanced and calorie-appropriate diet, adults can benefit from their unique nutritional contributions to help achieve and sustain a healthy body composition and reduce chronic disease risk.

Dairy foods can be an important component of healthy eating patterns that may help adults manage their weight

As of 2022, nearly half (43%) of adults are overweight or obese worldwide,¹ and excess weight has been linked with negatively contributing to many of the top major non-communicable diseases globally.^{1,2} The U.S. Dietary Guidelines for Americans (DGA) recommends three servings of dairy foods (i.e., milk, cheese and yogurt) per day as part of a 2,000-calorie eating pattern due to their important nutrition and health contributions for Americans.³ Despite these recommendations, a majority (86%) of U.S. adults fall short, with consumption averaging less than two servings of dairy foods per day.^{4,5} Consuming dairy foods as part of healthy eating patterns can help ensure

adults meet recommended amounts of key nutrients that support weight management and overall health. The dairy food group can contribute significantly to a healthy eating pattern for adults across various calorie levels. Even at current consumption levels, dairy foods contribute an average of 16% of high-quality protein, 50% of calcium and 46% of vitamin D in the U.S. diet.⁶ Additionally, unflavored milk is one of the top 10 foods contributing to dietary potassium, another shortfall nutrient, in the U.S. diet.⁷

A growing body of observational and clinical research links dairy food consumption with weight management in adults

Systematic reviews and meta-analyses, spanning research from 1990 to 2023, indicate that consuming dairy foods does not contribute to weight gain and may even help reduce excess weight in adults.^{8-20,75} Four recent meta-analyses of observational studies reported beneficial associations between dairy food consumption and weight-related outcomes.^{11,13,14,75} A 2025 dose-response meta-analysis found highest compared to lowest total dairy food consumption was associated with 16% lower odds of abdominal obesity in adults.⁷⁵ Authors also found full-fat dairy food consumption was linked with lower odds of central obesity.⁷⁵ In 2022, Feng et al.¹¹ reported that for every 200 g/d (equivalent to about 1 serving of milk) increase of total dairy food consumption, the risk of being overweight or obese decreased by 25%. Risk also decreased by 12% and 13%, respectively, for every 200 g/d increase in milk consumption and for every 50 g/d (equivalent to about a third of a serving of yogurt) increase in yogurt consumption. In meta-analyses of randomized controlled trials (RCTs), one of five reported beneficial associations between dairy food consumption and weight-related outcomes,¹⁵ with the others reporting neutral effects. In addition, when examining results by study duration, pooled analysis of RCTs with interventions ≥ 12 weeks suggest that dairy food consumption may contribute to lower BMI and body fat, but not body weight or waist circumference, among adults who have overweight or obesity.¹⁵ The remaining meta-analyses that included RCTs shorter in duration (a minimum of 2, 4 or 8 weeks) reported neutral associations.^{10,12,19,20} An umbrella review of 47 meta-analyses of RCTs concluded that dairy food consumption without energy restriction typically yields neutral to adverse effects on body composition, whereas consumption within an energy-restricted diet often results in lower fat mass and weight.¹⁷ Differences in study design, intervention duration, background diet and total energy intake may contribute to the variability in results across these studies.

Observational studies published since 2020 provide evidence for the role of dairy food consumption in supporting weight management. Of the 22 recently published cross-sectional studies, 13 reported beneficial associations between dairy food consumption and weight-related outcomes, four reported neutral associations, and five reported adverse associations.^{14,22-42} Six of seven recently published longitudinal studies reported that consumption of total dairy and specific dairy foods (e.g., milk, cheese or yogurt) was associated with reduced risk of overweight or obesity, BMI and body weight.⁴³⁻⁴⁹ A 2023 analysis of the U.S. Nurses' Health Study II cohort, which followed over 38,000 perimenopausal women (mean age 45.8 years) for 12 years, found that consuming two or more daily

Study Spotlight: Dairy food consumption is linked with lower odds of abdominal obesity in adults

A global 2025 systematic review and dose-response meta-analysis examined the association between consumption of total dairy foods and abdominal obesity, a key risk factor for cardiometabolic diseases.⁷⁵ In total, 28 observational studies were included (6 cohort and 22 cross-sectional) with a total of 195,852 adults. Authors observed that the highest compared to lowest total dairy food consumption was associated with 16% lower odds of abdominal obesity in adults. Authors also found that full-fat dairy food consumption was linked with lower odds of having central obesity.

servings of dairy foods was linked with a 12% reduction in obesity risk compared to consuming less than one serving per day.⁴⁸

Similarly, analysis of recent RCTs suggests that dairy foods do not contribute to weight gain and may help reduce excess weight in adults with overweight and obesity or other metabolic impairments. Five of the 13 recently published RCTs reported beneficial effects of dairy food consumption on weight outcomes,⁵⁰⁻⁵⁴ seven reported neutral effects,⁵⁵⁻⁶¹ and one reported adverse effects.⁶² One recent RCT provided at least three daily servings of low-fat or high-fat dairy and enrolled 111 adults with type 2 diabetes (18-75 years old).⁶¹ After six months, no differences in BMI, body weight, waist circumference, hip circumference, waist: hip ratio, body fat, fat mass, fat free mass, trunk fat and visceral fat were found between the dairy groups, or when comparing these groups with a control group who maintained their habitual diet (<3 daily servings of dairy foods).⁶¹

The current evidence base indicates a favorable to neutral role of dairy food consumption on weight outcomes in adults. Future high-quality research that controls for factors such as overall diet and total energy intake may provide a deeper understanding of the role of nutrient-dense components of healthy eating patterns, such as dairy foods, in healthy weight maintenance across adulthood.

The nutrients and bioactive compounds in dairy foods are linked with metabolic benefits

The dairy food matrix is the complex interplay of nutrients, bioactive compounds and the physical structure found in milk, cheese and yogurt. This matrix can influence how food is digested, how nutrients are absorbed and how appetite-regulating hormones are released.⁶³

While individual nutrients in dairy foods like protein and calcium have long been studied for their benefits for weight, research suggests these health effects may be further influenced by the components within dairy's food matrix.⁶⁴ For example, calcium has been linked with supporting weight management by reducing fat accumulation, stimulating the breakdown of stored fat and decreasing energy absorption in the gut.⁶⁵ A recent meta-analysis comparing the effects of dairy foods to calcium supplements on body composition found a decrease in BMI and fat mass with dairy consumption, but not with calcium supplements alone.¹⁵ This finding suggests that other components in dairy foods may act with calcium to attenuate adiposity beyond that of calcium alone.¹⁵

The high-quality protein found in dairy foods may also help to support weight maintenance by promoting satiety (i.e., the feeling of fullness) and preserving lean muscle mass. These components may stimulate the release of satiety hormones as well as regulate food intake through the amino acid-sensing system in the brain and increasing diet-induced energy expenditure.^{66,67} In addition, protein intake is linked to benefits for preserving lean body and muscle mass during weight loss, which is important for sustaining a healthy metabolic rate for weight maintenance.⁶⁸ Beyond protein, mechanistic research in animal and in vitro models suggests specific fatty acids found in dairy foods, such as short- and medium-chain fatty acids and conjugated linoleic acids, may play a role in fat metabolism and body composition through the stimulation of satiety hormones, decrease of lipogenesis (fat storage) and increase of energy expenditure, lipolysis (fat breakdown) and fat oxidation.^{69,70} More clinical trials are needed to better understand the complex interplay of nutrients and bioactive compounds in each dairy food's unique matrix for overall weight management.

Study Spotlight: Milk and dairy foods offer high-quality protein at an affordable price

Dairy foods contain bioavailable proteins, such as whey and casein. These proteins are considered high-quality due to their digestibility, essential amino acid profile (rich in leucine), and may be more satiating compared to other protein sources.^{71,72} Dairy amino acids and bioactive peptides may promote satiety by stimulating key satiety hormones and may further promote healthy weight by increasing energy expenditure.^{66,67} Furthermore, maintaining high protein intake can help preserve lean body and muscle mass during weight loss.⁶⁸

An analysis conducted by Drewnowski et al.⁷³ in 2025 found that dairy milk, yogurt and cottage cheese all offer high-quality protein at an economical price, with non-fat and whole dairy milk among the most affordable foods to meet daily protein requirements. This study showed Americans can consume 50 grams of protein (meeting 100% of the Daily Value) for less than two dollars a day with fat-free milk or whole milk alone.*

After adjusting for protein quality, the results further underscored the value of high-quality protein foods like dairy foods, finding it would take eating a larger amount of lower-quality plant protein and spending more money on those higher-cost foods to meet daily protein needs.

* For illustrative purposes only; 50 g of protein from dairy milk alone would require ~6 servings of milk. Costs were determined using the most recent USDA data available from 2023.

Fermented dairy foods may offer unique benefits for body weight and composition in adults

The dairy food matrix may also help explain the link between consuming fermented dairy foods like yogurt and benefits for weight maintenance in adults. Recent observational studies and RCTs (8 of 11) found yogurt consumption was associated with improvements in body weight and body composition in adults^{29,34,42,45,47,48,59,60} or neutral effects (3 of 11).^{38,46,58} Probiotics that can be added to some fermented dairy foods have been linked with potential anti-obesity properties.⁷⁴ A pooled analysis of RCTs found that probiotics added to a dairy food significantly reduced BMI (six trials; 570 participants), waist circumference (six trials; 570 participants) and body fat (five trials; 481 participants).⁸ While these favorable changes in body composition were also observed with probiotic supplements in the form of powders or capsules, the addition of probiotics to a dairy food was shown to be more effective for non-weight related outcomes, such as benefits to lipid biomarkers indicative of cardiovascular disease risk.⁸ Additional research is needed to identify the specific components within the fermented dairy food matrix that can help prevent and manage excess weight.

Conclusion

A growing body of evidence links dairy foods with weight management for adults, which in turn can favorably contribute to the prevention of chronic diseases. Meta-analyses and individual studies indicate a beneficial to neutral influence of dairy food consumption on weight outcomes among adults, with pooled analyses linking greater dairy food consumption to a lower risk of excess weight and improved body composition. The components found in the dairy food matrix may play an important mediating role in the benefits of dairy food consumption, which encompasses specific fatty acids, high-quality milk proteins, micronutrients and probiotics when added to dairy foods. Nutrient-dense dairy foods within balanced, calorie-appropriate diets can be part of a food-first approach for adults to achieve and maintain a healthy weight and reduce long-term health risks.

Key Takeaways for Health & Wellness Professionals

- **Dairy foods can be part of a healthy eating pattern that supports weight management in adults.** Research has linked consumption of dairy foods (i.e., milk, cheese and yogurt) with beneficial to neutral impacts on body weight and body composition,^{11,13,14,75} particularly when included within calorie-controlled diets.¹⁷
- **Dairy foods (i.e., milk, cheese and yogurt) provide a nutrient-dense, high-quality protein package that can support satiety and metabolic health.** Milk, cheese and yogurt deliver protein, calcium and other key nutrients that may have a favorable role in supporting energy balance and body composition during weight management.^{15,63-72}
- **The dairy food matrix may help explain dairy's role in supporting weight-related outcomes.** The nutrients and bioactive compounds found in dairy foods may influence digestion, nutrient absorption and appetite-regulating hormones.^{63,65-67}
- **Fermented dairy foods may offer particular benefits for body weight and composition.** Studies link yogurt consumption with improvements in body weight and composition, potentially related to added probiotics or other components unique to the fermented dairy food matrix.^{8,29,34,42,45,47,48,59,60,74}
- **Dairy foods can offer an accessible and practical approach to supporting healthy weight and overall health.** Incorporating nutrient-dense milk, yogurt and cheese into balanced eating patterns can help support long-term weight management, which in turn can reduce risk for chronic diet-related diseases.^{3,6-20,75}

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