



## Overview

Yogurt is a nutrient-rich food that has been nourishing people for centuries. Made by culturing milk, yogurt contributes essential nutrients such as protein, calcium, phosphorus, zinc, vitamin B12, pantothenic acid (B5) and riboflavin (B2) to recommended healthy eating patterns. Different yogurts help meet different people's health, taste and cooking needs. Yogurt varieties include low-fat, fat-free, flavored and sweetened options, plus different styles including Greek and Icelandic. The culturing process used to make yogurt helps break down lactose, which may make it easier for people with lactose intolerance (LI) to digest yogurt. Lactose-free yogurt is also available. Emerging evidence indicates that eating yogurt as part of a healthy diet may be associated with a lower risk for chronic diseases, long-term weight maintenance and reduced markers of chronic inflammation. The Dietary Guidelines for Americans (DGA) and the American Academy of Pediatrics (AAP) recommend eating low-fat or fat-free dairy foods like yogurt every day to help meet nutrient needs.

## Eating yogurt helps Americans meet dairy food recommendations

Dairy foods like yogurt are foundational foods in healthy eating patterns. Healthy eating patterns, which include low-fat and fat-free dairy foods, are associated with lower risk for cardiovascular disease (CVD) (strong evidence) and type 2 diabetes (T2D) (moderate evidence).<sup>1</sup> Dairy consumption is also linked to improved bone health, especially in children and adolescents.<sup>1</sup>

While milk should not be given to infants before 12 months, yogurt and cottage cheese (in  $\frac{1}{4}$  to  $\frac{1}{2}$  cup servings) can be introduced around 6 months, and cheese (in  $\frac{1}{2}$  ounce servings) can be introduced around 9 months, depending on developmental readiness.<sup>2</sup> The DGA recommends 3 daily servings<sup>i</sup> of low-fat or fat-free dairy foods for those 9 years and older,  $2\frac{1}{2}$  for children 4-8 years, and 2 for children 2-3 years in the Healthy U.S.-Style Eating Pattern.<sup>1</sup> Young children come the closest to meeting DGA recommendations. Girls and boys 2-5 years eat 2.2 servings of dairy foods per day, on average.<sup>3</sup> Dairy food consumption tends to fall below recommended amounts by the time children go to school, and this trend carries forward through adolescence and into adulthood.<sup>4</sup> American adults 19 years and older average fewer than 2 servings of dairy foods daily,<sup>4</sup> and less than 10% of adults report eating yogurt on any given day.<sup>4,5</sup> Encouraging adults and children to add 1 more daily serving of dairy foods like yogurt to their eating pattern is a practical way to help meet dairy recommendations.<sup>6</sup>

## Eating yogurt helps Americans meet nutrient recommendations

Yogurt contains nutrients important for the U.S. diet. Low-fat yogurt is an excellent source of calcium, a nutrient of public health concern in the U.S. due to low consumption<sup>1</sup> and also contains protein, phosphorus, zinc, vitamin B12, pantothenic acid (B5) and riboflavin (B2). A cross-sectional study of over 6,500 people indicated that adults who eat at least 1 serving of yogurt per week have better diet quality than those who do not eat yogurt.<sup>7</sup> This study also found that yogurt eaters have a higher consumption of potassium and are less likely to consume inadequate amounts of riboflavin (B2), vitamin B12, calcium, magnesium or zinc compared to non-eaters.<sup>7</sup> Some yogurts contain added sugar to help reduce the natural tartness of yogurt.<sup>1</sup>

<sup>i</sup> One serving refers to 1 cup-equivalent. For milk, 1 cup-equivalent equals 1 cup.

# SCIENCE SUMMARY: Yogurt & Health



The DGA notes that a small amount of added sugar can improve the palatability of nutrient-dense foods, such as low-fat and fat-free yogurt, within a healthy eating pattern.<sup>1</sup> Sweetened yogurt contributes about 1% of the added sugars to the diets of Americans 2 years and older.<sup>8</sup>

## Emerging research indicates yogurt may be linked to unique health benefits

Eating yogurt has been associated with health benefits, including a lower risk for CVD and T2D and less weight gain over time. Emerging evidence also indicates that eating yogurt may reduce markers of inflammation. Some of the studies underlying these findings are described below.

A meta-analysis found that eating 200 grams (~7 ounces) or more of yogurt per day is linked to a lower risk for CVD compared to eating less than 200 grams per day.<sup>9</sup> High-quality evidence also supports a link between eating yogurt and a lower risk for T2D.<sup>10</sup> In a study involving three large groups of American adults, eating yogurt was consistently associated with lower risk for T2D.<sup>11</sup> A meta-analysis further indicated that eating 1 serving of yogurt per day is linked with 18% lower risk for T2D in adults.<sup>11</sup> Yogurt consumption, as part of a healthy diet, has also been linked with less long-term weight gain. In a dietary and lifestyle factor study of over 120,000 men and women, adults who ate yogurt, vegetables, whole grains, fruits and nuts gained less weight over a 4-year period than people who did not eat those foods.<sup>12</sup>

Eating yogurt may also help lower inflammation levels. In a clinical study, healthy pre-menopausal women who ate 1½ servings of low-fat yogurt every day for 9 weeks had reduced markers of chronic inflammation compared to women who ate a yogurt (non-dairy) alternative.<sup>13</sup> While emerging links between yogurt and health benefits are promising, more research is needed.<sup>9</sup>

## What to know about lactose in yogurt

LI may lead some individuals to avoid or reduce dairy food consumption. Dairy avoidance can lead to inadequate consumption of important nutrients like calcium.<sup>14,15</sup> The cultures used to make yogurt produce the enzyme lactase, which breaks down lactose into lactic acid, producing the thick texture and tart flavor of yogurt. This process also reduces the lactose content of yogurt, which may make it easier for people with LI to digest. While LI should be diagnosed and treated by a doctor, the lower lactose content of yogurt and the presence of live cultures can make yogurt easier for people with LI to tolerate.<sup>16,17</sup> Greek- and Icelandic-style yogurts are strained after being cultured, resulting in even less lactose, more protein and less calcium than unstrained yogurts.<sup>18</sup> Lactose-free yogurt varieties are also available.

*Replacing nutrient-poor snacks with yogurt can help Americans meet dairy recommendations.<sup>1</sup>*

## Choosing yogurt as a snack can improve the nutrient-density of eating patterns

Recent studies indicate that yogurt is among the most nutrient-dense snacks eaten by Americans.<sup>19,20</sup> On average, only 14% of Americans choose yogurt as a snack.<sup>20</sup> Replacing nutrient-poor snacks with nutrient-rich yogurt could help Americans meet dairy recommendations and improve nutrient consumption.<sup>19</sup> Like milk and cheese, yogurt is a good source of high-quality protein. As part of a diet higher in protein, yogurt may help promote satiety when eaten as a snack.<sup>21,22,23</sup> Emerging research indicates that eating foods with more protein, including yogurt, as a snack may help delay the time until the next meal compared to eating a lower-protein snack.<sup>24,25,26</sup> Eating higher-protein foods may also help curb hunger and retain lean body mass when included in reduced calorie diets during weight loss.<sup>27,28</sup> Choosing yogurt as a snack can help Americans improve the nutrient-density of their eating patterns.

For more information, please visit: <https://www.nationaldairycouncil.org/science-summary>

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