

# Dairy and diabetes

## The science

**An alarming 1.5 million Americans are diagnosed with diabetes every year.<sup>1</sup> A healthy diet is crucial for Type 2 diabetes prevention, treatment and management.**

Authoritative health organizations – such as the American Diabetes Association,<sup>2</sup> Joslin Diabetes Center<sup>3</sup> and the Dietary Guidelines for Americans (DGA)<sup>4</sup> – acknowledge that there is no single healthy eating plan or “diabetes diet.” However, healthy eating patterns including – the Dietary Approaches to Stop Hypertension (DASH), Mediterranean and vegetarian / plant-based diets – are associated with reduced risk of chronic diseases, including Type 2 diabetes – and research shows dairy is an essential piece of the plate.

### Science Snapshot

**Consuming dairy foods as part of healthy eating patterns is associated with reduced risk of Type 2 diabetes**

A growing body of science supports the importance of dairy in healthy eating patterns. Foods such as milk, cheese and yogurt contribute nine essential nutrients – including calcium, vitamin D and potassium, three of the four dietary components of public health concern identified by the 2020-2025 DGA.<sup>4</sup>

- Consuming low-fat dairy foods and yogurt is associated with reduced risk of Type 2 diabetes in systematic reviews and meta-analyses.<sup>5-8</sup>
- Overall, prospective cohort studies indicate beneficial or neutral links between dairy intake and Type 2 diabetes.<sup>9-10</sup>
- Cohort studies on dairy fat markers or full-fat dairy intake suggest inverse or neutral associations with Type 2 diabetes.<sup>11-12</sup>
- Emerging research suggests that dairy fat consumption may improve glucose metabolism, possibly by improving insulin sensitivity and reducing liver fat – though more research is needed.<sup>13</sup>

## Potential Mechanisms

### Dairy's Key Nutrients

- **Vitamin D** deficiency has been associated with insulin resistance<sup>14</sup>
- **Calcium** may improve blood glucose control<sup>15</sup>
- **Magnesium** plays a role in regulating insulin action<sup>16</sup>
- **Protein** plays a role in weight management, satiety and blood glucose control<sup>2,17</sup>
- **Probiotic bacteria** found in fermented dairy foods – such as yogurt and kefir – may help lower fasting glucose, improve HbA1c and reduce insulin resistance<sup>8</sup>

## Patient Recommendations

### Putting Science Into Practice

- There is no one “diabetes diet.” There are many different healthy eating patterns, so patients can choose what’s right for them.
- Healthy eating patterns should aim for three servings of dairy daily, along with fruits, vegetables, whole grains and lean proteins.
- When choosing low-fat versus full-fat dairy, consider:
  - Personal taste and food preferences
  - Total calorie intake goals
  - Blood lipid profile

## What's a serving of dairy as it relates to diabetes food choices?



### As your carbohydrate choice

12-15 grams of carbs per serving

- Milk (1 cup)
- Yogurt (6-8 ounces)



### As your protein choice

7-8 grams of protein, very few carbs per serving

- Cheese (1 ounce)
- Cottage cheese (¼ cup)

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