DAIRY INTAKE & BONE HEALTH ACROSS THE LIFESPAN

Wallace TC, Bailey RL, Lappe J, et al. Dairy intake and bone health across the lifespan: a systematic review and expert narrative. *Crit Rev Food Sci Nutr*. 2020;1-47. doi:10.1080/10408398.2020.1810624

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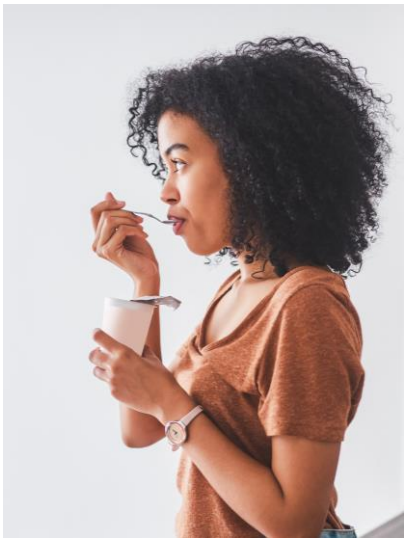
Good nutrition is critical for bone health across the lifespan. Dairy foods are important sources of bone-beneficial nutrients, including calcium, magnesium, phosphorus, vitamin D, zinc and protein.

This systematic review summarized the clinical and observational evidence regarding dairy consumption and bone health across the lifespan.* The researchers found that dairy food consumption is associated with fewer fractures in older adults and is important in adolescents for building strong bones. These results **reaffirm the beneficial role of dairy foods on bone health and reinforce the daily consumption of low-fat dairy foods across the lifespan as recommended in the Dietary Guidelines for Americans.**[1]

*Data from 91 publications including 30 randomized controlled trials, 28 prospective cohort studies, 23 cross-sectional studies and 10 case-control studies were reviewed and assigned a grade based on the body of evidence for each respective age group, infants and toddlers through older adults.



Did you know?

- Bones are living organs that are constantly changing throughout the lifespan. Bone development starts before birth and peak bone mass is typically reached between the ages of 25 and 30. Loss of bone mass usually begins between the ages of 35 and 40.
- To prevent the development of degenerative bone disease later in life, it is important to optimize peak bone mass and preserve bone mass through preventative measures including regular physical activity, especially resistance and high-impact activities and a healthy diet with plenty of calcium & vitamin D.[2]
- The prevalence of osteoporosis, the most common bone disease, is escalating with the aging population. [2,3]
- Dairy foods' role in bone health could have significant public health implications.

National Dairy Council's (NDC) mission it to bring to life the dairy community's shared vision of a healthy, happy, sustainable world with science as our foundation.
On behalf of America's dairy farmers, NDC strives to help people thrive at every age through science-based information on dairy's contributions to nutrition, health and sustainable food systems.

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Dairy food consumption is linked to improved bone health, especially in children and adolescents.

Age	Daily Dairy Food Recommendations[1,4,5]
6-8 months	Pasteurized cheese and plain whole milk yogurt as complementary feeding options
8-12 months	½ ounce pasteurized cheese and ½ cup plain whole milk yogurt as complementary feeding options
12-24 months	4-5, ½ cup servings of plain whole milk, ½ ounce cheese or ½ cup serving yogurt
2-3 years	2 cup-equivalent servings of low-fat or fat-free milk, cheese, yogurt or fortified soy beverage*
4-8 years	2 ½ cup-equivalent servings of low-fat or fat-free milk, cheese, yogurt or fortified soy beverage*
≥ 9 years	3 cup-equivalent servings of low-fat or fat-free milk, cheese, yogurt or fortified soy beverage*

* Soy beverages fortified with calcium, vitamin A and vitamin D are included as part of the dairy group because they are similar to milk based on nutrient composition and in their use in meals.[5]

Simple Peanut Butter Yogurt Dip with Apples

Makes 4 servings

Ingredients

2 cups plain yogurt
¼ cup creamy peanut butter (or nut or seed butter of choice)
1 tsp cinnamon
1 tsp vanilla
3 apples, sliced

Instructions

1. Mix yogurt, peanut butter, cinnamon and vanilla together until fully combined.
2. Serve dip with apple slices.

How Do Dairy Foods Support Bone Health?

Dairy foods are a source of several bone-beneficial nutrients. It has been suggested that the dairy matrix may exert beneficial effects on bone health beyond the individual nutrients.[6]

Protein	provides the structural matrix of bone.[7]
Vitamin D	helps with calcium absorption.
Calcium	plays a structural role in bone.
Phosphorus	promotes bone strength and the body's acid-base balance, maintaining homeostasis.
Magnesium	plays a role in the structure and size of the crystals within bones.
Zinc	stimulates collagen production, a key component for strong bones.

References

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