# Dairy Every Day:

## An Evidence-Based Guide to Nourishing Brains, Bones & Bodies

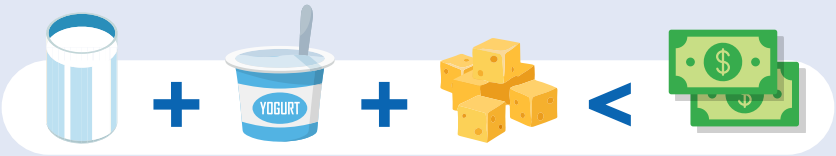
Nutrition plays a foundational role in how children grow, think, move and thrive from infancy through adolescence.

While dairy foods like **milk, cheese and yogurt** have long been recognized as an important source of calcium for strong bones and teeth, dairy does even more to support child and adolescent health.

Dairy foods provide a unique package of up to **13 essential nutrients** that work together to fuel growing brains and support whole-body wellness.[1-4]

Dairy foods are also **accessible, affordable and adaptable**, making them a practical way to help close common nutrient gaps.

**Dollar for dollar, dairy foods are one of the most economical sources of nutrition.[5,6] In fact, three servings of dairy foods can cost less than $2.00 a day.[7]**

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# Fueling Rapid Brain Development

The **first 1,000 days** between pregnancy and a child's second birthday are a brief but important window of opportunity to nourish early brain development.

The brain grows more quickly at this stage than any other time in life, placing high demands on energy and nutrition needs. Providing key nutrients during this critical period can **lead to lifelong benefits for intellectual ability and neurodevelopment**.[8]

**A baby's brain will double in size by 12 months and reach about 80% of adult size by 36 months.**[8-10]

**Dairy foods* can provide up to 7 of the 14 nutrients the American Academy of Pediatrics recognizes as important for early brain development.**[11]

= Nutrients provided by dairy foods

| | | | |
|---|---|---|---|
| Macronutrients | GLUCOSE | | |
| | PROTEIN | SPECIFIC FATS** | |
| Minerals | IRON | COPPER | |
| | ZINC | SELENIUM | IODINE |
| Vitamins & Vitamin-like Nutrients | CHOLINE† | VITAMIN K | FOLATE |
| | VITAMIN B6 | VITAMIN B12 | VITAMIN A |

Iodine needs increase by about 50% during pregnancy.[12] Because **iodine deficiency is the leading preventable cause of intellectual disability**,[13] consuming key sources of this vital nutrient – including milk, yogurt and cheese – can be a simple, powerful step to support a healthy brain.[14,15]

*Milk: protein, zinc, selenium, iodine, choline, vitamin B12, vitamin A. Yogurt: protein, zinc, selenium, iodine, vitamin B12. Cheese: protein, selenium, iodine, vitamin B12.
**Long-chain polyunsaturated fatty acids † One glass of milk provides ~8% DV choline

**Whole-milk dairy foods** may play an especially important role in early brain development. About 60% of the brain is made up of fat,[16] and dietary fat helps support the brain's rapid growth in infancy.

Dairy fat is the most complex fat found in nature, containing **more than 400 distinct fatty acids**.

Other nutrients found in dairy foods, including iodine for thyroid hormone regulation and neurodevelopment,[14,17] vitamin B12 for neurological function,[18] and high-quality protein that provides amino acids needed for neurotransmitter synthesis,[19] can help support this ongoing cognitive development.

## Q: Can full-fat dairy options be part of a healthy diet for children and teens?

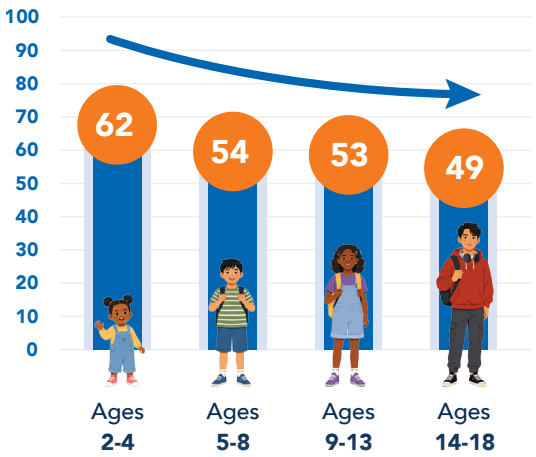
**A:** Yes. Regardless of fat content, dairy foods provide a unique combination of nutrients that help support strong bones and muscles, cardiometabolic health, cognitive health and overall well-being across every life stage.[7, 20-23]

Including dairy foods across a range of fat levels as part of an overall healthy diet gives families the flexibility to choose dairy foods that fit their personal preferences, culture and health goals, and can also make it easier for young children to meet their dairy servings and key nutrient needs.[24-26]

# Supporting Whole-Body Wellness

Throughout early childhood and the grade school years, it is critical to solidify healthy habits to support optimal growth and development. National survey data suggest there are opportunities to strengthen diet quality throughout childhood and adolescence. From infancy through adolescence, food choices can help shape microbial diversity and influence overall gut health.

## Healthy Eating Index Score




**By ages 2-4, the average Healthy Eating Index Score is 62 out of 100 and trends downward through age 18.[27]**

### Dairy foods can help support gut and immune health:

**Micronutrients:** Milk, cheese and yogurt can deliver several vitamins and minerals that help support epithelial barriers, cellular immunity and antibody production.[28,29]

**Probiotics:** Fermented dairy foods like yogurt and kefir can contain live and active cultures which can support gut and immune health by helping maintain a healthy gut barrier and promoting microbial balance.[30]

**With about 70% of the body's immune system located in the gut,[30] a healthy digestive tract can also support overall immunity.**

## Growth & Performance

Early childhood is a period with rapid advances in motor skills and muscle coordination.

As children grow, active play and organized sports increase demands on muscle repair and recovery, and puberty drives significant increases in lean body mass alongside higher overall calorie and protein needs.

**Including dairy foods after physical activity can support recovery, strength and energy.[31]**

- **Muscle Health:** The complete protein in dairy foods contains the essential amino acids needed for muscle synthesis and tissue repair. They can also supply potassium and magnesium that support muscular function and healthy blood pressure.
- **Hydration:** Milk naturally delivers fluids and electrolytes that support rehydration.[32]
- **Weight:** Research consistently shows that dairy consumption is associated with favorable to neutral body weight outcomes in children and adolescents.[33]

### Q: What are the healthiest beverages for children and teens?

**A:** The American Academy of Pediatrics, American Heart Association, Academy of Nutrition and Dietetics and American Association of Pediatric Dentistry agree that dairy milk and water should be the go-to beverages throughout childhood, from age 1–18.[34,35]

**TIP:**

**Encourage children to drink dairy milk with meals and water in between.**

# Building Strength for a Lifetime

Childhood and adolescence are the most important years to support lifelong bone health. And the connection between bone and muscle health cannot be overlooked, as musculoskeletal health is critical for all aspects of life.

In fact, **up to 90% of peak bone mass is achieved by late adolescence**. The more bone mass created during childhood and adolescence, the greater the chance of preventing osteoporosis and related injuries later in life.[36]

**The American Academy of Pediatrics acknowledges bone health attained in early childhood is the most modifiable determinant of lifelong skeletal health.[36]**

**Dairy foods* provide more bone-building nutrients per calorie than any other food group[37]**

## Protein

Provides the structural matrix of the bone

## Calcium

Plays a structural role in bone health

## Zinc

Stimulates collagen production, a key component for strong bones

## Phosphorus

Promotes bone strength and the body's acid-base balance

## Potassium

Promotes an alkaline environment helping to preserve calcium in bones

## Vitamin D

Required for calcium absorption

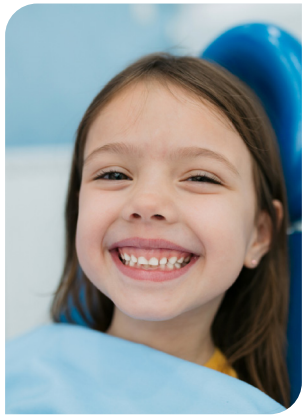
*Milk: protein, calcium, vitamin D, phosphorus, potassium, zinc. Yogurt: protein, calcium, phosphorus, zinc. Cheese: protein, calcium, phosphorus.

**Dairy foods can provide key nutrients that work together to help build strong bones and teeth.[37]**

## Evidence-Based Benefits:

Research consistently shows those who consume the recommended amounts of dairy:

- Have higher bone mineral content
- Have stronger bone density[38-41]



### Q: What about plant-based, non-dairy milk alternatives?

**A:** Experts agree, with the exception of fortified soy drinks, plant-based beverages are not a recommended replacement for real dairy milk unless medically indicated or to meet specific dietary preferences.[34,35]

That's because most plant-based drinks have inconsistent and incomplete nutrition profiles compared to dairy milk. For children and adolescents with lactose intolerance, experts recommend lower-lactose and lactose-free dairy options.[35,42]

### Q: What is lactose intolerance?

**A:** Lactose intolerance is the inability to fully digest lactose, which can result in digestive symptoms when lactose-containing foods are consumed. Although some may avoid dairy due to tummy troubles, the American Academy of Pediatrics recommends keeping dairy products on the menu for most children with lactose intolerance.[42]

Many options are available, including lactose-free dairy milk and yogurt which do not contain lactose. Additionally, hard cheeses naturally contain very little lactose, and yogurt may be easier to digest if it has live and active cultures.

# From Science to Guidance

## Putting Evidence-Based Recommendations into Practice

### How many dairy servings per day? [43–46]

| | |
|---|---|
| 6-12 mo | Up to 1 ⅔ |
| 1-3 yrs | 1¾–2½ |
| 3-5 yrs | 2–2½ |
| 5-12 yrs | 2½–3 |
| 12-18 yrs | 3 |

### What counts as a serving of dairy?*

**Milk/Lactose-Free Milk**
**1 cup**

**Yogurt**
**3/4 cup**

**Shredded Cheese**
**1/4 cup**

**Hard Cheese**
**1 ounce**

**Cottage Cheese**
**1/2 cup**

**Kefir**
**1 cup**

### Key Points for Parents

- ✓ Consuming dairy foods like milk, cheese and yogurt every day is a healthy way to nourish brains, bones and bodies.
- ✓ Health experts agree that dairy milk and water should be the go-to beverages from age 1–18. Encourage milk with meals and water in between.
- ✓ Dairy foods can provide up to 7 of the 14 nutrients that are important for early brain development, including iodine.
- ✓ Regularly consuming the recommended daily servings of dairy foods can help kids achieve maximum muscle and bone growth while optimizing their growth potential.
- ✓ Nourish your child's digestive and immune systems with the nutrients in dairy foods.

*Serving sizes are based on the Daily Servings by Calorie Level supplement to the 2025-2030 Dietary Guidelines for Americans and the Reference Amounts Customarily Consumed as defined by the Food and Drug Administration.

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