

Why is dairy milk recommended for children and adolescents?

Plain pasteurized dairy milk is often recommended as part of a healthy dietary pattern in the U.S. because it is an affordable and readily available source of many key nutrients like protein, fat, calcium, vitamin D, vitamin A, vitamin B12, potassium, phosphorous, riboflavin, and niacin. Importantly, dairy milk is a good source of several key nutrients of public health concern that kids generally aren't getting enough of — potassium, calcium, and vitamin D.

What do I need to know about plant-based milk alternatives?

1. The best substitutes for dairy milk are soy milk, pea milk, or soy-pea protein blends. These options have similar protein, calcium, potassium, and vitamin D levels as dairy milk.
2. Other plant-based milk alternatives — whether made from nuts, oats, rice, or another plant food — are not nutritionally equivalent to dairy milk. While many are fortified with nutrients to similar levels of dairy milk, our bodies are not able to absorb these nutrients as easily from plant-based sources as we do from animal sources.
3. Sweetened varieties of plant-based milk alternatives generally contain added sugars and/or non-sugar sweeteners, which are not recommended for children and adolescents.

When are plant-based milk alternatives appropriate for children and adolescents?

If your child is allergic to the proteins in milk, or if your family has chosen not to eat animal products, you might be looking for an alternative to dairy milk. If these scenarios don't apply to your family, then experts recommend your children and adolescents stick to dairy milk.

Choose a scenario below to determine the steps for choosing a nutritionally appropriate alternative for your child.

Child doesn't like the taste of milk

- ▶ A child or adolescent can have a nutritionally adequate diet without drinking cow's milk if they are still consuming other dairy products in their diet
- ▶ Try other dairy products like:
 - Yogurt (unflavored, unsweetened)
 - Cheese
 - Cottage cheese
 - Smoothie made with milk and/or yogurt (no added sugars)
- ▶ Flavored milks or milk-based drinks with added sugars are not a good substitute for plain milk
- ▶ Replace drinking milk with water to meet daily hydration needs

Lactose Intolerant

- ▶ Try lactose-free or lactose-reduced milk. These products contain the same key nutrients as regular milk, but the enzyme lactase has been added to break down the lactose, making it easier to digest
- ▶ Try lactose-free or lactose-reduced versions of other dairy products, such as yogurt
- ▶ Many hard cheeses are naturally low in lactose

Dairy allergy

- ▶ Try unflavored and unsweetened fortified soy milk, pea protein milks, or a soy-pea blend first, as these are the most nutritionally similar to cow's milk
- ▶ If a child cannot tolerate soy or pea protein beverages — explore other unflavored and unsweetened plant-based milk alternatives
- ▶ To determine the next best option, consult with your pediatrician or a registered dietitian. The nutrient table below may be a helpful guide to start the conversation
- ▶ Determining which plant-based milk alternative is best depends on the rest of the child's diet, and identifying where there might be nutrient short-falls. A Registered Dietitian should assess the child's full diet to ensure nutrient needs are met

Vegan or cultural/religious reason

- ▶ Try unflavored and unsweetened fortified soy milk, pea protein milks, or a soy-pea blend first, as these are the most nutritionally similar to cow's milk
- ▶ If a child cannot tolerate soy or pea protein beverages — explore other unflavored and unsweetened plant-based milk alternatives
- ▶ To determine the next best option, consult with your pediatrician or a registered dietitian. The nutrient table below may be a helpful guide to start the conversation
- ▶ Determining which plant-based milk alternative is best depends on the rest of the child's diet, and identifying where there might be nutrient short-falls. A Registered Dietitian should assess the child's full diet to ensure nutrient needs are met
- ▶ Ask your healthcare provider whether supplementing with B12 is necessary. Many children and adolescents following a vegan diet are deficient in B12.
- ▶ Tell your provider about any other dietary restrictions your family follows, whether for cultural or religious reasons. Having all of this information will allow them to make the best possible nutrition recommendations for your family.



Nutritional comparison of plain pasteurized dairy milk to plant-based milk alternatives

Plant-based milk alternatives are growing in popularity and there are now more varieties than ever before. The nutrients in plant-based milk alternatives can vary widely by variety and brand. Some have added nutrients like vitamins, and many contain added sugars and/or non-sugar sweeteners which should be avoided. The best options for children and adolescents will have similar nutritional profiles to cow's milk and contain no added sugar or non-sugar sweeteners.

What are the best plant-based milk alternatives for children and adolescents?

- ▶ Soy Milk
- ▶ Pea Milk
- ▶ Soy-Pea Milk Blends

These options have similar protein, calcium, potassium, and vitamin D levels as dairy milk.

Talk with your child's pediatrician or a registered dietitian to make sure that your child's diet provides the nutrients that growing bodies need and to learn more about other sources of key nutrients found in dairy milk.

Check out this list of unflavored and unsweetened varieties of plant-based milk alternatives and how they rank from best (green) to worst (red) when it comes to children's and adolescent's nutritional needs. Many of these plant-based milk alternatives are fortified, so these amounts include both naturally occurring and added nutrients. Our bodies are not able to absorb added nutrients as easily as naturally occurring nutrients.

Nutritional Comparison (unflavored, unsweetened varieties)¹

	Dairy Milk				Plant-Based Milk Alternatives									
	Whole	2% or reduced fat	1% or lowfat	Skim or nonfat	Soy	Pea	Oat	Hazelnut	Hemp	Coconut	Cashew	Almond	Flax	Rice
Calories	152	122	106	91	80	80	90	90	60	40	25	30	25	70
Protein (g)	8	8.2	8.3	8	7	8	2	2	3	0	<1	1	0	0
Fat (g)	8	4.7	2.3	0	4	4.5	1.5	9	4.5	4	2	3	2.5	2.5
Added sugar (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcium (mg)	306	309	310	300	300	440	350	24	257	460	450	450	280	240
Vitamin D (mcg)	2.4	2.8	2.6	4.8	3	6	4	0	2	2	2.5	2.5	2.3	5
Potassium (mg)	374	390	391	430	350	405	400	105	100	310	0	170	0	10
Vitamin B12 (mcg)	1.34	1.4	1.5	1.4	3	2.5	0.2	—	—	0.9	—	—	1.4	0.6

Price Comparison²

	\$	\$	\$	\$	\$\$	\$\$\$	\$\$	\$\$\$\$	\$\$\$\$	\$\$	\$\$\$	\$\$	\$\$\$\$	\$\$
\$/gallon	3.39	3.39	3.39	3.39	8.19	14.64	9.45	21.20	23.88	8.19	11.94	6.29	31.92	7.38
\$/8 fl oz serving	0.21	0.21	0.21	0.21	0.51	0.92	0.59	1.33	1.49	0.75	0.75	0.39	2.00	0.46

1. Nutrition information is for unsweetened, unflavored varieties and is sourced from: <https://fdc.nal.usda.gov>. Specific products include: Dairy milk (all fat types) – store brands (Harris Teeter, Food Lion); Soy – Silk Organic Unsweet; Pea – Ripple Unsweetened Original; Oat – Planet Oat Original; Hazelnut – Elmhurst Unsweetened; Hemp – Pacific Foods Unsweetened Original; Coconut – Silk Unsweet; Cashew – Silk Unsweet; Almond – Silk Unsweet Original; Flax – Good Karma Unsweetened; Rice – Rice Dream Enriched Unsweetened.

2. Pricing information sourced from grocery stores in Durham, NC, July 2024. \$ = up to \$5, \$\$ = \$5-10, \$\$\$ = \$10-15, \$\$\$\$ = \$15+

Reminder!

Choose only unflavored, unsweetened varieties that contain 0g added sugar and do not contain any non-sugar sweeteners.

Key nutrients to consider when selecting a plant-based milk alternative for children and adolescents:

This chart explains the key nutrients in dairy milk that children and adolescents need for growth and development. We used this information to inform our recommendations on the best plant-based milk alternatives for children and adolescents.

WHAT	LOOK FOR	WHY
Protein	Select a plant-based milk alternative with 7-8 grams of protein per 8 fluid ounce serving when possible.	Toddlers and young kids need protein for growth and development. Children who eat a vegan diet may struggle to get enough protein in their diets.
Calcium	Choose plant-based milk alternatives fortified with calcium carbonate. This type of calcium is more easily absorbed by our bodies. Look for options that have at least 276mg per 8 fluid ounce serving.	Calcium is important for bone and teeth strength and is needed for your heart, muscles, and nerves to function properly. 5- to 8-year-olds need about 1000 mg of Calcium per day, while 9- to 18-year-olds need about 1300 mg.
Vitamin D	Choose plant-based milk alternatives fortified with Vitamin D. Look for options that have at least 100 IU per 8 fluid ounce serving.	Vitamin D is important for overall health and is necessary for calcium to be absorbed into bones. Children and adolescents need 600 IU of vitamin D per day.
Potassium	Look for plant-based milk alternatives with at least 349mg per 8 fluid ounce serving.	Potassium is a key mineral needed by your body to function properly. Potassium helps nerves and muscles communicate, helps move nutrients into cells and waste out, and is important for healthy growth.
Vitamin B12	Choose plant-based milk alternatives fortified with B12. Look for options that have at least 1.1 micrograms per 8 fluid ounce serving.	Vitamin B12 is important for red blood cell formation and brain function. Animal products naturally contain B12, so vegan children are at high risk for B12 deficiency.

