

Alternative Milks

Many parents are interested in using dairy alternative, plant based milks for their children. Without getting into the reasons behind avoiding dairy, here is some information on how to make informed choices for dairy substitutes.

When we transition children from formula or breast milk (typically at the age of one), we recommend milk as a good source of fat, protein, vitamin D and calcium. If you are looking to avoid dairy, we simply need to make sure that we provide foods/beverages that supply these nutrients.

At one year we aim for toddlers to consume approximately 2 servings of whole fat dairy per day (16 ounces of cow's milk or its equivalent, such a golf ball sized piece of cheese or cup of whole fat yogurt.)

At age 2, we recommend 2.5 servings of dairy (or its equivalent). You can switch to low fat dairy at this point, but there is no need to do so if your child does not have a lot of saturated fat in their diet.

Recommended Dietary Allowances for Calcium and Vitamin D

Age	Amount of Calcium Per Day	Amount of Vitamin D Per Day
0 to 6 months	200 mg	400 IU
7 to 12 months	260 mg	400 IU
1 to 3 years	700 mg	600 IU
4 to 8 years	1000 mg	600 IU
9 to 18 years	1300 mg	600 IU

Plant based milks are not complete substitutes for cow milk, but you can provide other foods in your child's diet to supply required nutrients.

Fat/protein:

Nut butters

Eggs

Fish

Seeds (chia, flax)

Avocado

Vitamin D:

Vitamin D is the only nutrient your body produces when exposed to sunlight, however in the Northeast we rarely get enough direct sunlight to produce enough D, and sunscreen also interferes with its production.

Calcium:

Edamame

Tofu

Almonds/almond butter (no whole nuts until at least 3 years of age)

White beans

Fortified orange juice

Salmon and sardines

Fortified cereals and breads

Leafy greens like spinach and kale (although the calcium is not as well absorbed as from other sources)

Figs

Dairy Milk:

- Dairy milk is a great source of amino acids (protein basics), fat and calcium, vitamins D and B12.
- Grass fed is the better option, as it provides more omega-3-fatty acids and CLA (conjugated linoleic acid) than grain raised cows. However, if you cannot afford grass fed milk, regular milk is still a healthy and nutritionally strong choice for your child.

- We recommend WHOLE MILK until at least age 2 (growing brains need the extra fat).
- Lactose intolerance is very rare until puberty (breast milk is based on lactose sugar.) Temporary lactose intolerance can occur after a bout of bad diarrhea, but typically self resolves within a few days to weeks. If you believe lactose upsets your child's stomach, you can try lactose reduced versions of milk.
- Allergy to milk PROTEINS (casein and whey) are much more common than lactose deficiency in young children. If your child has a dairy protein allergy, we may recommend gradual introduction starting between 9-12 months, beginning with dairy in baked goods (the protein is denatured, or changed, by heat), then proceeding to small amounts of hard cheeses, yogurt, and then milk (this should be discussed with your doctor.)

Plant based milk options:

- Tastes/textures will run the gamut- some add fats like canola oil and thickening, emulsifying and binding agents (like xanthan gum, carrageenan or sunflower lecithin) to smooth the texture and keep the mouthfeel creamy.
- Look for unsweetened versions, as there are often added sugars. Oat milk has more sugar than other milks.
- Look for fortification with calcium, vitamin D and vitamin B12 (all found naturally in cow milk.)
- Soy, oat and pea protein based milks have more comparable to milk than nut milks
- If you are looking for a substitute for baking, Vance's DariFree (a potato based milk) works well (and is also vegan and soy free, but is NOT a source of Calcium or Vitamin D)

<https://www.darifree.info>

Pea Milk

Sold as “Ripple.” High in protein (8 gm, equivalent to cow’s milk), low in saturated fat (total fat 4.5 gm), and good source of calcium. Has added omega-3 fatty acids. Avoid the sweetened version.

Soy Milk

Higher in protein (8 gm), has some fat. (4 gm) Often sweetened, and needs to be fortified with calcium, vitamin D and vitamin B12. Has a good smooth, silky texture but flavor may not be great in recipes.

Oat Milk

Some protein (3 mg) and fat (7 gm), but high in sugar. Does well in hot beverages (emulsifies well).

Almond/Cashew Milk

Low in calories, protein (1 gm) and fat (2.5 – 7 gm, varies by type). Almond milk can be a good source of calcium, especially if additionally fortified. Cashew milk needs fortification.

Hemp Milk

Rich in omega-3 fatty acids, has some fat (5 gms)/protein (3 gms) but needs to be fortified with calcium, vitamin D and vitamin B12.

Coconut Milk

Creamy texture, but no protein and high in fat (and a lot of saturated fat). Also needs to be fortified with calcium, vitamin D and vitamin B12. Can be used for baking in place of milk/half and half, and you can use coconut cream in place of heavy cream to make whipped cream!

Rice Milk

Fairly nutrition free- high in sugar, but minimal fat (2.5 gm) and NO protein; needs to be fortified with calcium, vitamin D and vitamin B12.

Comparison of Common Unflavored Milk Alternatives

	Whole Milk (1 cup)	Rice Milk (1 Cup)	Soy Milk (1 cup)	Coconut Milk (1 cup)	Almond Milk (1 cup)	Oat Milk (1 cup)	Hemp Milk (1 cup)
Energy (kcal)	149	115	105	76	37	130	70
Protein (g)	7.69	0.68	6.34	0.51	1.44	4	3
Total fat (g)	7.93	2.37	3.59	5.08	2.68	2.5	5
Saturated fat (g)	4.55	0	0.5	5.083	0	0	0.5
Cholesterol (mg)	24	0	0	0	0	0	0
Carbohydrate (g)	11.71	22.37	12	7.12	1.42	24	1
Calcium (mg)	276	288	300	459	481	350	300
Iron (mg)	0.07	0.49	1.02	0.73	0.85	1.8	1.8
Vitamin D (IU)	128	96	108	96	96	100	100

Note: Homemade almond milk or other homemade milk alternatives do not contain the same number of vitamins, because they are not fortified.

Whether you believe people should or should not drink milk or whether you are allergic to milk or have lactose intolerance, here are some alternatives with nutritional information as well as what these options have to offer:

Milk

- The best source and absorption of Calcium and Vitamin D (out of all options noted below)
- Contains a good amount of protein (8 grams/8 oz)
- Contains about 12 grams of sugar, however, it is from a natural source called lactose
- Contains a good amount of phosphorus, magnesium, riboflavin and B12

Soy Milk

- Second best to milk. Typically fortified with Calcium and Vitamin D
- Contains a very similar content of protein (7 grams/8 oz)
- Sugar content is typically added
- Contains antioxidants and phytochemicals that have been shown to decrease heart disease, lower cholesterol and decrease certain types of cancers

Ripple Milk

- An equally good alternative to milk as soy. Fortified with more Calcium and Vitamin D than dairy.
- Contains similar protein to dairy milk (8 g/8 oz)
- Sugar content is typically added (6 g sugar/8 oz)
- About half the fat as whole milk (4.5g/8oz) Almond milk

- Can be a good alternative to milk if you are looking to cut the calorie content
- Hardly contains any protein (1 gram/8 oz)
- Sugar content is typically added
- Rich with Vitamin E, A and B12

Rice, oat or hazelnut milk

- Not the best milk alternative
- Hardly contains any protein (1 gram/8 oz)
- Typically contains a high amount of added sugars
- Compared to the other milk alternatives it's nutritionally poor
- Fortified with Vitamin A, D and B12

Coconut milk

- Contains as much fat as whole milk (in most products)
- Contains hardly any protein (<1 gram/8 oz)
- Typically fortified with Vitamin D and B12
- Not much added sugars

Hemp milk

- A good alternative for people with allergies
- Protein content is closer to half that of milk (3 grams/8 oz)
- May contain a minimal or a high amount of added sugar
- Contains a good amount of omega 3
- Rich with B12, Magnesium, Phosphorus and Riboflavin and fortified with Calcium and Vitamin D

What to choose?

Choose higher protein content, no (or low) added sugars (stick to original or unsweetened) and fortified with vitamins and minerals (at least 30% Calcium and 25% Vitamin D of daily value, per 8-oz serving)

Type of Milk (1 cup)	Calories	Fat	Sat. Fat	Chol.	Protein	Carbs	Sugars
Whole cow's milk	150	8 g	5 g	35 mg	8 g	12 g	12 g
2% cow's milk	130	5 g	3 g	20 mg	8 g	13 g	12 g
1% cow's milk	110	2.5 g	1.5 g	15 mg	8 g	13 g	12 g
Skim cow's milk	90	0 g	0 g	<5 mg	8g	13 g	12 g
Ripple Milk, original	100	4.5 g	0.5 g	0 mg	8 g	6 g	6 g
Soy, unsweetened	80-90	4-4.5 g	0.5 g	0 mg	7-9 g	4-5 g	1-2 g
Soy, plain/original	70-130	2-4 g	0-0.5 g	0 mg	5-8 g	8-16 g	6-9 g

Almond, unsweetened	30-50	2.5 g	0 g	0 mg	1 g	1-5 g	0-1 g
Almond, original	50-60	2.5 g	0 g	0 mg	1 g	6-8 g	5-6 g"
Hemp, unsweetened	70	6 g	0.5 g	0 mg	2 g	1 g	0 g
Hemp, original	100-140	5-6 g	0.5 g	0 mg	2-4 g	8-20 g	6-14 g
Rice, plain	80-130	2-2.5 g	0 g	0 mg	1 g	16-27 g	8-14 g
Oat, original	110-130	1.5-2.5 g	0 g	0 mg	4 g	24 g	19 g
Hazelnut, original	110	3.5 g	0 g	0 mg	2 g	18 g	14 g
Coconut, unsweetened	50	5 g	5 g	0 mg	1 g	1 g	0 g
Coconut, original	80	5 g	5 g	0 mg	1 g	7 g	6 g

CALCIUM REQUIREMENTS

Carbonated soft drinks including diet sodas contain Phosphoric Acid, which interferes with Calcium absorption; as a result most of the Calcium ingested in the diet is passed through in the urine.

- **exercise** in combination with adequate Calcium intake is the ideal combination to help lay down strong bone in growing children.
- Taking calcium **with food** in **dosages of 500 mg or less** increases absorption.
- **Calcium Citrate** is absorbed better than Calcium Carbonate.
- **Read labels** and purchase foods with added Calcium

Food Sources of Calcium

Serving Size Food Amount of Calcium Serving Size Food Amount of Calcium

1 cup Yogurt plain, low fat 415 5 oz Tapioca pudding 119

1 cup Yogurt fruit, low fat 314 1 cup Cheerios 122

1 cup Skim milk 302 1 English muffin 103

1 cup 2% milk 291 1 cup Tofu 260

1 cup Orange juice with Ca 300 1 cup Spinach 245

1 oz American cheese 174 1 cup Broccoli 94

1 oz Mozzarella cheese 143 1 cup Kidney beans, can 69

1 oz Cheddar cheese 204 1 cup Soybeans 261

1 oz Swiss cheese 272 1 Orange 52

1 cup Cottage cheese 155 1 cup Raisins 73

1 cup Ricotta cheese, part skim 669 1 cup Almonds 332

½ cup Frozen yogurt, low fat 103 1 slice Cheese pizza, 10" 290
½ cup Ice cream, low fat 90 1 cup Mac & cheese 100
10 fl oz Vanilla shake 344 3 oz Salmon 180

Calcium Supplements

Type/Brand Name Elemental Calcium(mg)

Tums/Tums EX 200 or 300

Tums Ultra/Tums 500 400 or 500

Caltrate 600 600

Caltrate 600+D 600mg/400 IU Vit D

Os-Cal 500 500

Os-Cal D 500mg/200 IU Vit D

Viactiv 500mg/100 IU Vit D

OneADay Women's 450mg/400 IU Vit D

Websites to help calculate daily calcium intake:

- www.lightnfit.com
- www.mypyramid.gov

PLANT-BASED MILKS FOR TODDLERS



Pea Protein Milk
OK for toddlers? ✓
Protein: 8 g
Fat: 4.5 g



Soy Milk
OK for toddlers? ✓
Protein: 8 g
Fat: 4 g

Kids Eat in Color

PLANT-BASED MILKS FOR TODDLERS



Oat/Nut "plus protein"
A form of pea protein milk.
OK for toddlers? ✓
Protein: 8 g
Fat: 7 g (varies by type)



Almond Milk
OK for toddlers? ✗
Protein: 1 g
Fat: 2.5 g

Kids Eat in Color

PLANT-BASED MILKS FOR TODDLERS



Cashew Milk
OK for toddlers? ✗
Protein: 1 g
Fat: 7 g (varies by type)



Oat Milk
OK for toddlers? 🚦
Protein: 3 g
Fat: 7 g

Kids Eat in Color

PLANT-BASED MILKS FOR TODDLERS



Hemp Milk
OK for toddlers? 🚦
Protein: 3 g
Fat: 5 g

Rice Milk
OK for toddlers? ✗
Protein: 0 g
Fat: 2.5 g

Coconut Beverage
OK for toddlers? ✗
Protein: 0 g
Fat: 4 g

Kids Eat in Color