

## PEDIATRIC MILK SUBSTITUTE GUIDELINES

Cow Milk or Milk Substitute	Calories/ 8 ounces	Protein grams	Fat Grams	Ca mg/ Vit D IU	Vitamins & Minerals
Whole Milk	150	8	8	300/100	<b>Good source of:</b> Riboflavin, Vitamin B12 and Phosphorus <b>Fortified with:</b> Calcium, Vitamin A & vitamin D
Soy	100	7	4	350/100	<b>Good source of:</b> Vitamin E, B1, B2, B6 and Iron, Potassium, Zinc and Selenium <b>Minerals:</b> Calcium and Magnesium
Oat	120	4	3	300/100	<b>Fortified with:</b> 10 vitamins, 15 minerals
Hemp	100	2 to 4	6	400/80	<b>Fortified with:</b> A, D, E and B12, folic acid, potassium, fiber, phosphorous, riboflavin, thiamin, niacin, magnesium, iron and zinc, Calcium (more than cow's milk)
Rice	120	1	2.5	300/100	<b>Fortified with:</b> calcium, iron, niacin, phosphorus, Vitamins A, D, C and B12
Almond	50	1	2.5	300/100	<b>Fortified with:</b> Calcium (50% more than cow's milk) and Vitamin D <b>Rich source of:</b> Potassium, Manganese, Magnesium, Vitamin E, Copper, Selenium, Vitamin E, Folic Acid and Iron <b>*Lacks B Vitamins</b>
Coconut	80	0	5	45%/25%	<b>Rich source of:</b> <ul style="list-style-type: none"> <li>• Mg, P, K, Fiber</li> <li>• Vitamins C, E, B1, B3, B5 and B6</li> <li>• Fe, iron, selenium, sodium, calcium, magnesium and phosphorous</li> </ul>
Potato	70	0	0		<b>Fortified with:</b> calcium (as much as cow's milk)

### AMERICAN ACADEMY OF PEDIATRICS RECOMMENDATIONS

- People absorb nutrients and milk products better in animal-based milk, than in plant-based milks.
- All milk other than mother's breast milk NOT recommended < 1 year of age

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MILK	PROS	CONS	ALLERGY & FLAVORS	BRANDS & PRICING
<b>Almond</b>	<p><b>HIGH</b> in monounsaturated fat:</p> <ul style="list-style-type: none"> <li>Reduce risk of heart disease</li> </ul> <p><b>NO</b> saturated, trans fats or cholesterol</p> <p>Omega-3 &amp; 6 Fatty Acids and Medium Chain Triglycerides:</p> <ul style="list-style-type: none"> <li>Lower LDL cholesterol</li> <li>Maintain HDL cholesterol</li> </ul> <p>Flavorproteins &amp; antioxidants:</p> <ul style="list-style-type: none"> <li>Protect against heart disease &amp; cancers</li> </ul> <p><b>LOW</b> glycemic index:</p> <ul style="list-style-type: none"> <li>Does not raise blood sugar levels rapidly</li> </ul> <p>*commercial brands add sugar</p>	<p><b>LOW</b> protein:</p> <ul style="list-style-type: none"> <li>Not great for cooking</li> <li>Adequate for sauces</li> </ul> <p><b>LOW</b> Fat:</p> <ul style="list-style-type: none"> <li>Essential for brain development in young children</li> <li>Aids in nutrient absorption</li> </ul> <p><b>Lacks</b> B Vitamins/LOW vits:</p> <ul style="list-style-type: none"> <li>Nervous system health</li> <li>Metabolism of fats, carbohydrates, &amp; amino acids</li> </ul>	<p><b>Nut Allergen</b></p> <p><b>Free of:</b></p> <ul style="list-style-type: none"> <li>Lactose</li> <li>Gluten</li> <li>Soy</li> </ul> <p><u>Flavors:</u> Original, Unsweetened, Reduced Sugar, Vanilla, Chocolate, Iced Coffee</p>	<p><b>Almond Breeze</b> (12 - 32 oz at \$23.95)</p> <p><b>Almond Dream</b> (64 oz at \$7.09)</p> <p><b>Pacific Foods</b> (12 – 32 oz at \$40.64)</p> <p><b>Silk PureAlmond</b> (32 oz carton at \$3.39)</p> <p><b>So Delicious</b> (12 – 32 oz at \$32.79)</p>
<b>Coconut</b>	<p><b>Cooking:</b></p> <ul style="list-style-type: none"> <li>Good substitute for yogurt or cream</li> </ul> <p><b>HIGH</b> saturated fat:</p> <ul style="list-style-type: none"> <li>essential for brain development in young children</li> <li>aids in nutrient absorption</li> <li>boosts immune system</li> <li>has anti-viral, anti-bacterial, anti-microbial and anti-fungal benefits</li> <li>Great source of Medium Chain Triglycerides</li> <li>raises HDL cholesterol levels</li> </ul> <p><b>GOOD</b> source of fiber</p> <p><b>LOW</b> protein</p> <p><b>NO</b> cholesterol</p>	<p>Coconut “beverages” are moderately fortified</p> <ul style="list-style-type: none"> <li>Canned milk is not</li> </ul>	<p><b>Free of:</b></p> <ul style="list-style-type: none"> <li>Lactose</li> <li>Soy</li> <li>Gluten</li> <li>Tree Nut</li> </ul> <p><u>Flavors:</u> Original, Unsweetened, Reduced Sugar, Vanilla, Chocolate, Mint Chocolate, Iced Coffee</p>	<p><b>Aroy D</b> (33.8 fl oz at \$7.98)</p> <p><b>Coconut Dream</b> (12 - 32 oz at \$33.50)</p> <p><b>Grace Coconut Milk Powder</b> (1.75 oz at \$1.15)</p> <p><b>365 Organic</b> (Whole Foods Market)</p> <p><b>Silk PureCoconut</b> (64 oz carton at \$3.25)</p> <p><b>So Delicious</b> (12 – 32 oz at \$32.79)</p> <p><b>Thai Kitchen’s Organic</b> (13.66 fl oz can at \$4.07)</p>
<b>Cow’s (Whole)</b>	<p><b>BEST</b> source of Calcium &amp; Vitamin D in diet</p> <p>Full Fat</p> <p><b>Good</b> source of saturated fat:</p> <ul style="list-style-type: none"> <li>essential for brain development in young children</li> <li>aids in nutrient absorption</li> <li>boosts immune system</li> </ul>	<p><b>*NOT recommended &lt; 1 year of age (AAP)</b></p> <p><b>HIGH</b> portion of calories come from sugars</p> <p>Protein composition opposite of breast milk:</p> <ul style="list-style-type: none"> <li>LOW % Whey</li> <li>HIGH % Casein</li> </ul>	<p><b>Contains lactose</b></p> <p><u>Flavors:</u> strawberry, chocolate, vanilla</p>	<p>Most readily available</p> <p>Highly cost effective</p> <p>Powder form available</p>

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	<ul style="list-style-type: none"> <li>has anti-viral, anti-bacterial, anti-microbial and anti-fungal benefits</li> <li>Great source of Medium Chain Triglycerides</li> <li>raises HDL cholesterol levels</li> </ul>	<ul style="list-style-type: none"> <li>Hard to digest</li> </ul> <p><b>Kidney strain:</b></p> <ul style="list-style-type: none"> <li>HIGH protein (compared to breast milk)</li> <li>HIGH sodium, potassium, chloride</li> </ul> <p><b>Fortification requirements:</b></p> <ul style="list-style-type: none"> <li>NO iron</li> <li>LOW vitamin E and C</li> </ul>		
<b>Hemp</b>	<p><b>HIGH</b> omega-3 &amp; omega-6 fatty acids:</p> <ul style="list-style-type: none"> <li>reduce risk of heart disease</li> <li>boosts immune systems</li> <li>improve early brain development</li> </ul> <p>10 essential amino acids</p> <p><b>LOW</b> sodium</p> <p><b>NO</b> cholesterol and sugar</p>	<p>May not be readily available</p> <p><b>Cooking:</b></p> <ul style="list-style-type: none"> <li>Texture between Rice and Soy Milk: watery</li> <li>sufficient for cooking sauces</li> </ul>	<p><b>Free of:</b></p> <p>Lactose Soy Gluten Tree Nut</p> <p><u>Flavors:</u> Original, Unsweetened, Chocolate, Vanilla</p>	<p>Can be made at home (Hemp Seeds)</p> <p><b>Living Harvest Tempt</b> (32 oz at \$4.59)</p> <p><b>Pacific Foods</b> (32 oz at \$4.55)</p>
<b>Oat</b>	<p><b>HIGH</b> fiber</p> <ul style="list-style-type: none"> <li>full serving of whole grains in 1 serving</li> </ul> <p><b>Cooking:</b></p> <ul style="list-style-type: none"> <li>Moderate protein levels – not equivalent to cow’s milk for baking</li> <li>Good for gravy and sauces</li> </ul> <p>Rich source of Phytochemicals:</p> <ul style="list-style-type: none"> <li>Fight cancer &amp; protects chronic diseases</li> </ul> <p><b>LOW</b> Fat:</p> <ul style="list-style-type: none"> <li>Nutritional substitute for low fat milk</li> </ul> <p><b>LOW</b> sodium</p> <p><b>NO</b> cholesterol</p>	<p>Must be fortified</p> <ul style="list-style-type: none"> <li>deficient in protein and vitamins (especially B12)</li> </ul> <p><b>LOW</b> Fat</p> <ul style="list-style-type: none"> <li>Essential for brain development in young children</li> <li>Aids in nutrient absorption</li> </ul>	<p><b>Gluten Allergen Contamination possible</b></p> <ul style="list-style-type: none"> <li>Not suitable for Celiac’s Disease</li> </ul> <p><b>Free of:</b></p> <p>Lactose Soy Tree Nut</p> <p><u>Flavors:</u> Original, Vanilla</p>	<p>Can be made at home</p> <p><b>Pacific Foods</b> (32 oz at \$3.69)</p>
<b>Potato</b>	<p><b>NO</b> cholesterol</p>	<p><b>NO</b> fat</p> <ul style="list-style-type: none"> <li>Essential for brain development in young children</li> <li>Aids in nutrient absorption</li> </ul> <p><b>NO</b> protein</p> <p><b>Must be fortified</b></p> <ul style="list-style-type: none"> <li>Deficient in protein, vitamins and minerals</li> </ul>	<p><b>Free of:</b></p> <p>Gluten Soy Lactose</p> <p><u>Flavors:</u> Chocolate, Strawberry</p>	<p>Can be made at home</p> <p><b>DariFree Potato Milk Powder</b> (1 can at \$14.50)</p>

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<b>Rice</b>	<p><b>NO</b> cholesterol</p>	<p><b>*NOT recommended for those &lt; 2 years of age (AAP)</b></p> <p><b>Cooking:</b></p> <ul style="list-style-type: none"> <li>Most watery milk alternatives – not useful for cooking</li> </ul> <p><b>Fortification:</b></p> <ul style="list-style-type: none"> <li>Not sufficient alternative to milk without heavy fortification</li> <li>Very low calcium and other nutrients of cow's milk</li> </ul> <p><b>HIGH</b> glycemic index</p> <ul style="list-style-type: none"> <li>Large portion of calories from sugar</li> <li>More carbohydrate than milk</li> </ul> <p><b>LOW</b> fat</p> <ul style="list-style-type: none"> <li>essential for brain development in young children</li> <li>aids in nutrient absorption</li> </ul> <p><b>LOW</b> or <b>NO</b> protein</p> <p><b>NO</b> fiber</p>	<p><b>NO</b> allergens</p> <p><b>Free of:</b> Lactose Tree Nut</p> <p><b>Flavors:</b> Original, Vanilla</p>	<p>Can make at home</p> <p><b>Pacific Foods</b> (32 oz at \$3.09)</p> <p><b>Rice Dream</b> (2 – 32 oz at \$8.18)</p> <p><b>West Soy</b> (12 - 32 oz at \$35.98)</p>
<b>Soy</b>	<p><b>HIGH</b> protein (with fortification)</p> <p><b>Oligosaccharides</b></p> <ul style="list-style-type: none"> <li>performs a prebiotic function</li> </ul> <p><b>Cooking:</b></p> <ul style="list-style-type: none"> <li>Good cooking &amp; baking alternative</li> </ul> <p>Most readily available</p> <p><b>NO</b> cholesterol</p>	<p><b>Phytates:</b></p> <ul style="list-style-type: none"> <li>enzyme inhibitors that prevent proper absorption of essential minerals</li> <li>poor bone strength</li> </ul> <p><b>Oligosaccharides</b></p> <ul style="list-style-type: none"> <li>harder to digest</li> <li>90% escapes digestion</li> </ul> <p><b>Fortification:</b></p> <ul style="list-style-type: none"> <li>LOW calcium &amp; vitamin D</li> <li>LOW natural protein</li> </ul> <p><b>LOW</b> saturated fat</p> <ul style="list-style-type: none"> <li>essential for brain development in young children</li> <li>Nutrient absorption</li> </ul> <p><b>HIGH</b> sugar and carbohydrate content</p>	<p><b>Phytoestrogen Allergen</b></p> <p><b>Free of:</b> Lactose Gluten</p> <p><b>Flavors:</b> Original, Unsweetened, Vanilla</p>	<p><b>Eden Foods</b> (12 – 32 oz at \$41.92)</p> <p><b>Pacific Foods</b> (12 – 32 oz at \$70.00)</p> <p><b>Silk</b> (32 oz at \$4.29)</p> <p><b>Soy Dream</b> (32 oz at \$2.58)</p> <p><b>West Soy</b> (65 oz at \$3.98)</p>

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