Milk and Milk Alternatives

**Topic of the Month: October 2015**

**Milk’s role in the WIC Food Package:**

The WIC food package provides milk and other dairy products to participants over the age of 12 months. Dairy products contribute key nutrients to the WIC food package and the diet of the WIC recipient. A glass of milk contains three of the four nutrients that USDA deems under-consumed by most Americans—calcium, vitamin D and potassium. (1) Milk is also a good source of protein.

Milk and milk products contain many nutrients that are key for bone health, specifically calcium, vitamin D (although not present in cheese, nor in all yogurts), protein, phosphorus, magnesium, potassium, vitamin B12 and zinc. Research has also shown that milk consumption has positive effects on blood pressure, heart disease, diabetes prevention, and weight management. (2) Milk also can provide a good source of protein to help toddlers meet their protein needs if they are not good meat or protein food eaters.

**Milk Alternatives:**

Some participants are not able to use milk, such as those with severe lactose intolerance, vegans, those with specific cultural practices, etc. The WIC program offers soy beverage as an alternative to milk for those participants.

Recently, other non-dairy beverages have become readily available as milk alternatives, such as almond and rice beverages. Those beverages are often marketed as healthier than cow’s milk. Although those beverages can be part of a healthy diet, provide certain nutrients, and may be a better choice than other beverages (such as soda), they are **not nutritionally equivalent to milk**, and so are **not WIC-allowed** at this time.

**Soy Beverage**

Soy beverage is made by grinding a mixture of soybeans and water, and then extracting out the liquid. It has a protein content similar to cow’s milk, but does not naturally contain calcium and many of the nutrients found in milk. Soy beverages which are WIC-allowed have been fortified with additional nutrients such as calcium, vitamins A, D, B12, and riboflavin, and have added protein to be more nutritionally equivalent to cow’s milk and to meet WIC requirements.

**Nut Beverages (e.g., almond beverage)**

Just as with soy beverage, nut beverages are made by grinding nuts with water, and extracting the liquid. Nut beverages are low in calories and fat, but they are also very low in protein, calcium and vitamin D. Many, but not all nut beverages, are fortified with calcium and vitamin D. Read the nutrition label to determine whether a nut beverage has been fortified. Most nut beverages also contain carrageenan, a thickening agent, to give the liquid a milk-like mouth feel.
Grain and Seed Beverages (e.g., rice beverage)

A milky beverage can be made by grinding rice, oats, quinoa, or hemp with water and extracting the juices. These grain beverages are about twice as high in carbohydrates and sugar than other milk alternatives. Grain and seed milks are also very low in protein and calcium. Once again manufacturers often fortify with calcium and vitamin D. Read the label to determine whether a product has been fortified.

<table>
<thead>
<tr>
<th>Milk and Milk Alternatives</th>
<th>Nutrient Comparisons in 1 Cup</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Calories</td>
</tr>
<tr>
<td>1% Milk</td>
<td>105</td>
</tr>
<tr>
<td>Silk Original Plain Soymilk (fortified)</td>
<td>110</td>
</tr>
<tr>
<td>Almond Breeze Original, unsweetened (fortified)</td>
<td>60</td>
</tr>
<tr>
<td>Rice Dream (Enriched)</td>
<td>120</td>
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*Fortified, not naturally occurring.
**The percent Daily Value (DV) provides information based on a caloric intake of 2000 calories for adults and children four or more years of age

Nutrient references: USDA Nutrient Database Silk Soy Beverage Nutrition Content Almond Breeze Nutrition Content Rice Dream Nutrition

For a more detailed nutrient comparison, see reference (2)

What are things to consider when counseling an adult participant who only drinks a milk alternative?

Explore why the participant drinks the milk alternative.

Milk Allergy: If the participant has an allergy to milk protein (much less common), assess her knowledge and interest in discussing ways to assure nutrient adequacy, such as label reading and ideas about other sources of calcium in the diet. Soy beverage may be offered as an alternative if there is not a soy allergy (and in consultation with the participant’s health care provider if necessary).

Perception that a milk alternative is healthier: Affirm the participant’s desire to eat a healthy diet. Explain that WIC can provide WIC-allowed soy beverages as a milk alternative with a high nutrition value.
Preference: If the participant states that she wants a milk alternative due to taste or a preference for plant-based foods, discuss with her that WIC-allowed soy beverage is most similar to the nutrition in cow’s milk.

- If she plans on using other milk alternatives, encourage her to read labels to make sure any milk substitutes she purchases are fortified with calcium and vitamin D. Protein and lower amount of added sugar might also be considerations, depending on the quality of her diet.
- Explore whether she is open to eating other dairy products such as cheese and yogurt since calcium found in dairy products is more easily absorbed by the body.

If a participant does not drink milk or milk alternatives at all, then explore her interest in discussing ways to use milk or soy beverage in cooking, and/or using other dietary sources of calcium on a daily basis.

What about toddlers and older children who will not drink milk or soy beverage?

Some toddlers, especially 12 month olds, are slow to accept milk, especially if they are used to breastmilk or formula. Some tips to encourage milk acceptance include:

- If a toddler is breastfeeding, each feeding is a serving of milk. If the toddler is nursing 4x per day, they are getting the dairy requirement. It is ok to serve small quantities of cow’s milk in a cup at meals to introduce the toddler to the taste. Then when the child weans from the breast, he/she is already used to the taste of milk in a cup.
- If the child drinks formula, mix a little formula with milk, to help accustom the child to the taste.
- It may take some time for the toddler to transition to milk. Be consistent in offering a small amount of milk in a cup at each meal.
- Model drinking milk at meals by serving the adults milk too.
- Discuss with parents that it is normal for toddlers to drink smaller quantities of milk from a cup than from a bottle because they are getting nutrition from other foods.
- If a child refuses to drink milk, parents may be interested in discussing ways to use milk in cooking, in preparing hot cereals, and/or providing other food sources of calcium as an interim measure. Remember that the child needs those consistent calcium and protein foods every day.

Other Reference links:

1. NIH reference.
2. Milk and alternatives comparison chart
4. Dairy Council of CA
5. Oregon State Milk and Milk Alternatives
6. Midwest Dairy Association