

Healthy kids, strong parents,
WIC works wonders!

Are all milk alternatives the same?

Store shelves are filled with milk alternatives made with soy, rice, coconut, almonds, cashews, hazelnut and even hemp. The USDA regulations only allow soy-based beverages as a milk alternative. Before a soy-based beverage can be added to the Food List, it must be fortified with protein and 8 nutrients so it has the same nutrient profile as cow milk.

One nutrient of particular concern is Vitamin D. In a Canadian study, children who drank a milk alternative that was **not** fortified with Vitamin D ended up with low blood levels of Vitamin D. Several case studies identified severe rickets from Vitamin D deficiency in children who did not drink cow's milk and had not been taking Vitamin D supplements.

It is important to be aware that even though the products on WIC are fortified, this doesn't mean other products by the same company meet the same fortification levels. In most cases, they do not.



If a participant regularly buys a milk alternative that is not one of the WIC approved products, suggest that she compare it to one of the WIC approved products to see that it has at least the same amount of protein, calcium and Vitamin D.

What is the milk or milk alternative of choice?

In Oregon, 94% of WIC participants receive a food package for cow milk. Of these, 4% are for lactose-free milk.

Of participants who do not tolerate or prefer cow milk, goat milk is used by 2% of children and women.

Soy-based beverage is used by 1% of children ages 1-4 years and 3% of women on Oregon WIC.



Considerations when using soy beverages

Studies on soy products are limited and some present conflicting results. More research is needed on the long-term health effects of consuming soy-based beverages.

With that said, a review of existing studies brings forward two areas to explore when counseling families about the option of soy beverage.

- **Can drinking soy beverage effect iron absorption?** Soy protein has phytates which bind minerals. Some studies have shown soy protein can interfere with iron absorption. If a participant is at risk of iron deficiency and consumes soy beverage, suggest drinking the soy beverage between mealtimes to lessen the impacts on iron absorption.

- **Is the type of calcium used to fortify soy-beverages absorbed by the body?** Soy-based beverages do not naturally contain calcium, so are fortified with calcium carbonate or tricalcium phosphate. Studies on soy beverage found the calcium absorption of calcium carbonate was the same as cow milk, but less absorption occurred with tricalcium phosphate. To counter this effect, some companies use both calcium sources and/or fortify to a higher calcium level than milk.

Shake before using. The calcium in soy beverages can settle to the bottom of the package. If a residue is found on the bottom of the empty package, then each cup can have less calcium than it says on the label.



Soy products differ around the world

The soy products we eat in the United States are not the same as the soy products that have been consumed by Asian cultures for thousands of years.

In Asia, soy products are fermented and minimally processed. These include miso, tempeh, soy sauce and natto. Fermentation makes these foods easier to digest.

In the U.S., industrial processing is used to make soy-based beverages, textured soy protein and soy-based protein powders.

More research is needed to determine the long term health impacts of industrial processing compared to fermentation.