Potential Nutrient Deficiencies on a Dairy-Free Diet

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Let's face it. It's hard to ignore all the "milk" products at the market. Almond milk, oat milk, rice milk, pea protein milk. The dairy case is full of options. Whether a child needs to go dairy-free or a family is choosing to, it's critical parents understand what's at stake on a dairy-free diet, especially for their children.

Why Go Dairy-Free?

Milk allergy is the most common food allergy among children, affecting about 2-3% of kids under age three, and the leading reason why children follow a dairy-free diet. When you're allergic to milk, you need to completely avoid it.

Some individuals may experience a sensitivity to dairy, such as lactose-intolerance or a digestive disorder like IBS (Irritable Bowel Syndrome). Although a well-planned dairy-free diet can be nutritious, there are certain nutrients at risk when following this dietary pattern, especially for children.

The At-Risk Nutrients on a Dairy-Free Diet

Cow's milk is a great source of nutrients for growing children. Even adults gain benefits from consuming nutrient-rich dairy foods. Protein, calcium, vitamin D (in fortified dairy products), vitamin B12, phosphorus and riboflavin are readily available in dairy products. Eliminating dairy may place these nutrients at risk.

Let's review why these nutrients are important for growing children.

PROTEIN

All growing children need protein in their diets so they can grow well. Protein assists the organs, brain, and

bones in their overall growth and full development. Without adequate protein in the diet, children are at risk for stunting, cognitive impairments and malnutrition.

Cow's milk is an excellent source of protein, and many children enjoy drinking it. In a 2020 study in Nature, children aged 6 months to about 5 years from low and middle income countries had a reduced likelihood of being underweight or stunted when cow's milk was part of their diet.[1] The authors surmised that milk consumption is an indicator of better overall nutrition.

Without dairy foods in the diet, most children will need to consume adequate protein from other foods sources. Some milk alternatives do not offer a good source of protein for growing children. In fact, the Healthy Beverages for Young Children Consensus Report discourages the use of milk alternatives such as almond milk, other nut milks, or rice milk for children under five, stating these beverages do not offer enough protein or fat and may provide too much added sugar at this age.[2]

CALCIUM

Calcium is a mineral that supports healthy bone growth and development. During childhood, the bones harden and lengthen due to the deposit of calcium into the bones. By the early twenties, bones reach their full development. It's important to emphasize calcium consumption in childhood to avoid bone conditions like osteoporosis later in life.

Children need 1,000 to 1,300 milligrams (mg) calcium per day to meet their daily nutritional needs for growth and development. Cow's milk and other dairy foods are a good source of calcium with about 300 mg of calcium per cup. Consuming three servings of milk or other dairy equivalent helps children meet this daily requirement.

When children follow a dairy-free diet, calcium must be consumed from other foods in quantities that will provide their daily needs. For example, calcium-fortified foods like orange juice and breakfast cereal, or kale, collard greens and broccoli, or salmon and shellfish can offer calcium. These foods may be challenging to eat for some children, as they may not be liked, or the amount they need to eat may be too much for them. Additionally, calcium from plants is not as well-absorbed due to inhibitors such as phytates and oxalates.

VITAMIN D

Vitamin D helps calcium enter the bones, so it's also an important nutrient. It may also play a role in providing protections from osteoporosis, high blood pressure, cancer and several autoimmune conditions.[3] The average intake of children aged 2 to 18 years is 196 IU, according to the 2015-2016 National Health and Nutrition Examination Survey (NHANES).[4] Compared to the RDA of 600 IU per day for children and adults over age one, it's easy to see that many children fall short on this vitamin.

Natural food sources of vitamin D exist, but they are few. They include mushrooms and seafood. Fortified foods like dairy products and eggs offer vitamin D and the activation of vitamin D in the skin from sunshine is also a source. However, children wearing sunscreen, and children with dark skin or those

living in the northern part of the United States may not get enough sunshine to adequately supply vitamin D.

VITAMIN B12

Animal foods are a natural source of vitamin B12. Young children need this vitamin to ensure optimal brain development and prevent anemia.

Children who follow a vegan or a strict plant-based eating pattern that eliminates dairy foods will need a vitamin B12 supplement. Plant foods do not carry a reliable or adequate source of vitamin B12 for children.

PHOSPHORUS

Phosphorus is a component of bones, teeth, and the elements that make up our genes. It's an essential mineral, which means we don't make it ourselves. We need to get it from food or supplements. Many foods contain phosphorus. Phosphorus from dairy foods and other animal products has a higher absorption rate in the body than plants. Dairy products contribute about 20% of total phosphorus intakes.[5]

RIBOFLAVIN

Riboflavin (also called vitamin B2) is a water-soluble B vitamin involved in producing energy for the body. Basically, it turns the food we eat into energy for our bodily functions. Milk, eggs, and lean meats are natural and rich sources of this vitamin. Grain-based foods like cereal are fortified with riboflavin. Vegans and vegetarians who avoid milk may be at risk for a riboflavin deficiency.

The Bottom Line

Dairy foods offer a variety of key nutrients for children's growth and development, such as protein, calcium, vitamin D, vitamin B12, and more. Many children readily accept and consume dairy foods and enjoy their nutritional benefits. However, if a dairy-free diet is consumed, parents will need to find other nutrient-rich, non-dairy foods to supply these important nutrients.

KEY TAKEAWAYS

- Giving up dairy may also mean giving up important nutrients that are critical for good health and growth.
- A dairy-free diet means having to replace lost vitamins and nutrients like protein, calcium, vitamin D, vitamin B12, phosphorus, and riboflavin with other foods.
- Dairy is a nutrient-rich food source that is difficult to replace.
- Healthy child development relies heavily on a diet that can provide the essential vitamins and nutrients found in dairy.

References

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