

ASK the Dietitian

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Should I be taking a multivitamin? If so, how do I choose between the many products on the market?

The short answer to whether a vitamin and mineral supplement is recommended is “Yes,” especially during the first year following the diagnosis of celiac disease and the institution of the gluten-free diet. We recommend that you choose a product that contains the B vitamin complex (thiamin, riboflavin, niacin, vitamin B 12 and folate), vitamin D and the minerals zinc, magnesium and iron. You can use the label on the multivitamin to match the % Daily Value (DV) provided by the product to the amount that is recommended based upon your child’s age. The multivitamin should meet at least 60% of the DV for the B vitamins, iron, magnesium and zinc, and 100% for vitamin D. We do occasionally find ourselves needing to compromise when the “ideal” supplement does not match the form or taste preference of the child. If this is the case, then we recommend you discuss the options with your dietitian.

Some of the reasons we recommend that children take a multivitamin and the guidelines for what % of the child’s DV the multivitamin should provide are given below.

Historically, gluten-containing breads and cereals in the U.S. have been either enriched or fortified with vitamins and minerals. (1) By definition, “enriched” means that nutrients that were removed during processing of grain are added back to the final product. “Fortified” refers to the addition of vitamins and minerals above that which would naturally occur in the grain.

Prior to the year 2000, most gluten-free breads and gluten-free cereals were neither enriched nor fortified. Enrichment of gluten-free products is now capturing the attention of many manufacturers; however, the proportion of gluten-free items that are enriched or fortified remains below that of gluten-containing counterparts.

We recommend vitamins and supplements that contain the B vitamin complex because these nutrients are often removed during the processing of grains and must subsequently be enriched in breads and cereals. We recommend the multivitamin also include zinc, magnesium and iron since these minerals are typically fortified in children’s diets by adding them to breakfast cereals.

We consider it important for patients to take a daily multivitamin for at least a year after their diagnosis while significant healing of the gastrointestinal tract is underway. Nutrition deficiencies can be a culprit in celiac disease symptoms that occur “outside” of the gastrointestinal (GI) tract. However, there is no harm in your child continuing to take a multivitamin, particularly since it can help

ensure the adequacy of your child's vitamin and mineral intake. One study has found that fewer persons with celiac disease consume the recommended number of servings of grains compared to unaffected persons, thereby placing patients with celiac disease at increased risk for the suboptimal intake the B vitamins, even when the gluten-free products are enriched (2). Another study found that 50% of patients with celiac disease had evidence of an inadequate intake of folate (3). Reduced levels of iron, folate, vitamin B 12, vitamin D, zinc and magnesium are common in celiac patients prior to beginning the gluten-free diet and can persist until the GI tract is well healed (4). Zinc levels have also been found to be low in patients with celiac disease at the time of their diagnosis, likely due to the malabsorption associated with untreated celiac disease (5). Although zinc levels should revert to normal after the GI tract has healed, there is no harm in providing a consistent source of zinc in the diet.

What are the best ways of assuring an adequate intake of B vitamins, zinc, magnesium and iron?

Blood levels of Vitamin D, zinc and magnesium are often assessed at diagnosis and follow-up. Vitamin B levels can be drawn, but because they are water-soluble, vitamin deficiencies are not as easily identified. Adjustments to standard age appropriate doses should be made after your health care providers review lab results and assess usual intake. More is not always better.

The simplest thing to do is give your child a daily multivitamin that is adequate for his or her needs. If your child is very resistant to taking the supplement, then it is important that he or she be given fortified gluten-free breads and cereals.

You can determine if a product is enriched or fortified by looking at the ingredients list, because the ingredient list will contain vitamins and minerals that have been added to the product during its manufacture. You can also look at the food label to see whether it lists the vitamins and minerals on the %DV. The %DV can come from the product's natural ingredients or ingredients added to the product during the manufacturing process.

I have not found a complete list of companies that provide enriched or fortified gluten-free products.

The following example depicts what may be found when comparing labels.

- Wonder bread (GLUTEN-CONTAINING) is enriched. One serving provides 4% DV niacin, 4% DV iron and 6% DV folate.
- Schär Gluten-Free Classic White Bread is not enriched. The ingredient list does not include niacin, iron or folate.
- Kinnikinnick Multigrain Rice Bread is enriched. One serving provides 2% DV niacin, 5% DV riboflavin and 5% DV iron.

Have you any recommendations for multivitamins?

I have no specific recommendations. I did spend an afternoon at Whole Foods Market and online looking at different products. The gluten status of any specific product can change, so you each time you purchase the product you should check the label to be sure the product is still gluten-free. The list below identifies some products that meet recommendations while currently carrying a gluten-free label.

Liquid Vitamins:

- Source of Life Animal Parade Gold Liquid made by Nature's Plus
- Child Life Essentials by Child Life Essentials
- Dynamic Health Liquid by Dynamic Health

Chewable:

- Source of Life Animal Parade by Nature's Plus
- Freeda Vitamins by Freeda (only online) at www.freedavitamins.com
- Tall Tree's Children's Chewable by Country life
- Kirkman Children's Chewable by Kirkman (note: does not contain Iron)

Gummies:

- Source of Life Animal Parade by Nature's Plus
- Dolphin Pals by Country life (note: they contain 22% DV of the B Vitamins, acceptable if the grain products you have chosen are fortified or enriched)

NOTES:

Flintstones, Centrum and One-A-Day report that wheat would be indicated on their label, but they cannot confirm whether the products are gluten-free because the raw materials they received from other vendors are not certified gluten-free.

Gummies other than those listed above do not contain the B vitamins.

References:

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4. Caruso, Pallone, Stasi, Romeo and Monteleone: Appropriate nutrient supplementation in celiac disease. *Annals of Medicine*, pp 522-531. 2013.
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