

# The Role of Fiber in Children's Diets- Topic of the Month

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This Topic of the Month was written with Boluwatife Lowen, MPH nutrition student and dietetic intern from the University of Minnesota School of Public Health.

Fiber supports healthy digestion, prevents constipation, and helps children feel full and satisfied after meals. WIC staff play an important role in providing practical and culturally appropriate guidance that helps families build healthy, fiber-rich eating habits. This month's topic explores fiber and how we can guide families in increasing fiber intake using familiar WIC foods.



## What is fiber?

Fiber is a type of carbohydrate found in plant-based foods that is difficult for the body to digest. Fiber is distinguished in two ways, dietary fiber (naturally occurring in whole foods) and functional fiber (extracted or synthesized and added to foods). For this article we will focus on dietary fiber.

There are two types of dietary fiber, soluble and insoluble; both are important for maintaining a healthy diet.

- Soluble fiber- Slows digestion; lowers glucose and cholesterol levels.
- Insoluble fiber- Adds bulk to stools; promotes regularity, prevents constipation.

Many plant-based foods that are high in fiber provide both soluble and insoluble fibers. The balance between the two depends on the specific food—whether it's a fruit, vegetable, or whole grain. Eating a mix of fiber-rich foods ensures children will get both kinds.

## **Nutritional benefits**

Nutritionally, fiber helps regulate blood sugar, supports heart health, and may protect against chronic diseases later in life. Fiber also supports healthy digestion and helps prevent constipation, a common issue among young children. By promoting a feeling of fullness, regular fiber intake can reduce overeating and support healthy weight management. Including fiber-rich foods in a child's diet encourages the development of lifelong healthy eating habits.

Reading food labels can help to identify the <u>dietary fiber (PDF)</u> found in foods. Typically, the more refined or processed a food is, the lower its fiber content. For example, one medium apple with the peel contains 4.4 grams of fiber, while a ½ cup of applesauce contains 1.4 grams, and 4 ounces of apple juice contains no fiber.

# **Guidance from the Dietary Guidelines for Americans**

The <u>Dietary Guidelines for Americans 2020-2025 (PDF)</u> provide guidance to prioritize foods containing dietary fiber, which is noted as a nutrient of public health concern. Choosing fiberrich foods such as fruits, vegetables, legumes, and whole grains helps children meet their daily fiber needs and supports digestion and overall health.

The recommended daily fiber intake for children varies by age and sex, starting at 19 grams per day for ages 1–3, increasing to 25 grams for ages 4–8, and reaching 26 grams for girls and 31 grams for boys ages 9–13. This gradual increase reflects growth and growing calorie needs.

## Tips for meeting recommendations

- Start the day with whole grains: Choose oatmeal, whole grain cereals, or whole wheat toast instead of refined grains like white bread.
- Add fruits and vegetables to every meal: Offer sliced pears, avocado, apples, berries, carrots, or steamed broccoli as snacks or sides. These can be eaten fresh, frozen, or canned.
- Serve legumes weekly: Include fiber-rich foods like beans, lentils, or chickpeas in soups, pasta, or quesadillas.
- Choose whole fruits over juice: Whole fruits provide more fiber than 100% juice. Aim for whole apples or oranges instead of juice boxes.

# WIC's role

WIC plays a key role in helping families increase fiber intake by offering fiber-rich foods through the food package and providing nutrition education that emphasizes choosing whole foods. WIC staff are essential in supporting caregivers to make simple, realistic changes that improve fiber intake in children's diets. By encouraging the intake of fiber-rich foods, we help lay the foundation for healthy growth, energy, development, and long-term wellness in children.

# Fiber rich WIC-eligible foods

- Fruits such as apples, pears, strawberries, and oranges.
- Vegetables like broccoli, carrots, and sweet potatoes.
- Canned or dried beans and legumes such as black beans, kidney beans, lentils, chickpeas.
- Whole grain products including brown rice, plain rolled oats, whole grain cereals, whole wheat bread, whole wheat or corn tortillas, and whole wheat pastas.
- Peanut butter.

## Tips for WIC staff to promote fiber intake

- Highlight WIC-allowed fiber-rich foods: Emphasize foods like whole grain breads, cereals, brown rice, beans, fruits, and vegetables. Mention that these are included in the WIC food package.
- Point to recipes on the WIC website: Share and explore recipes with families from the MDH WIC Recipes page, especially the <u>bean recipes</u>. Offer tips from <u>Beans Quick Tips for CPAs</u> (PDF) to inspire use of different bean types and prep ideas.
- Explore simple swaps and additions: Encourage small, realistic changes such as swapping
  white bread for 100% whole wheat, adding beans to a taco, or keeping the peel on fruits
  like apples or pears.
- Use visuals and family-friendly phrases: MyPlate or plate visuals help show how fiber fits
  in. Use clear messages like "fiber helps with fullness and pooping" or "fiber keeps tummies
  happy."
- Encourage variety and meet families where they are: If a child only eats a few fruits or veggies, offer suggestions to gently expand options over time (e.g., different textures, colors, or ways of cooking). Validate their efforts and celebrate small wins.

#### **Increasing fiber intake:**

- To avoid gas, bloating, and cramps, recommendations include increasing fiber intake gradually, so the body can get used to it.
- It is best practice to incorporate whole foods that are rich in fiber or look for products with 3 or more grams of fiber per serving listed on the food label.

# Additional tips

- Offer age appropriate high-fiber snacks like whole grain crackers with bean dip, whole grain tortilla with avocado, or slices of fruit with skin and peanut butter.
- Read food labels together: teach kids to look for "whole grain" as the first ingredient and 3
  or more grams of fiber per serving.

 Make eating fruits and vegetables fun: create faces, discuss shapes, or create superhero names for these super foods.

## Tips for purchasing canned beans

- Each can of beans count as 0.25 containers toward the WIC balance.
  - Four cans equal 1 whole container.
  - Three cans equal 0.75 containers.
  - Two cans equal 0.5 containers.
  - One can equals 0.25 containers.



For more tips on shopping for WIC foods see <u>WIC Package Sizes & Shopping Tips</u>.

For more tips on using WIC foods in recipes see WIC Food Tips.

## **Practice exercise for staff**

Fiber is essential for children's digestion, helping them feel full and stay regular—but many kids don't get enough. WIC foods like fruits, vegetables, whole grains, and beans are excellent sources of fiber.

### Consider these questions alone, with a co-worker, or with a group:

- What are some simple, high-fiber meals or snacks you've suggested or tried using WIC foods?
- How do you help families whose children only eat a few fruits or vegetables? What's worked for encouraging variety?
- What quick tips or recipes could you share that make it easier for families to include more fiber?
- How can we make fiber-rich foods appealing to picky eaters?

Next, share your ideas and strategies discovered in real conversations with families!

## Resources

WIC Recipes (MDH WIC recipes, 2024)

WIC Foods - Questions (MDH WIC, 2023)

High Fiber Diet (National Library of Medicine, 2023)

Food Sources of Dietary Fiber (DGA, 2019)

Dietary Fiber (Academy of Nutrition and Dietetics, 2025)

Easy Ways to Boost Fiber in Your Daily Diet (Academy of Nutrition and Dietetics, 2021)

# References- complete listing of hyperlinks:

#### Dietary Fiber (PDF)

(https://www.accessdata.fda.gov/scripts/interactivenutritionfactslabel/assets/InteractiveNFL\_ DietaryFiber October2021.pdf)

#### Dietary Guidelines for Americans 2020-2025 (PDF)

(https://www.dietaryguidelines.gov/sites/default/files/2021-03/Dietary\_Guidelines\_for\_Americans-2020-2025.pdf)

Bean Recipes (https://www.health.state.mn.us/people/wic/recipes/beans.html)

#### Beans Quick Tips for CPAs (PDF)

(https://www.health.state.mn.us/docs/people/wic/localagency/nutrition/fpchange/tips/beans.pdf)

### WIC Package Sizes & Shopping Tips

(https://www.health.state.mn.us/people/wic/foods/measurements.html)

WIC Food Tips (https://www.health.state.mn.us/people/wic/foods/tips.html)

WIC Recipes (https://www.health.state.mn.us/people/wic/recipes/index.html)

<u>Food Sources of Dietary Fiber</u> (https://www.dietaryguidelines.gov/resources/2020-2025-dietary-guidelines-online-materials/food-sources-select-nutrients/food-sources-fiber)

<u>High Fiber Diet (https://www.ncbi.nlm.nih.gov/books/NBK559033/)</u>

<u>Dietary fiber</u> (https://www.eatrightpro.org/news-center/practice-trends/dietary-fiber)

<u>Easy Ways to Boost Fiber in Your Daily Diet</u> (https://www.eatright.org/health/essential-nutrients/carbohydrates/easy-ways-to-boost-fiber-in-your-daily-diet)

WIC Foods - Questions (https://www.health.state.mn.us/people/wic/foods/faqs.html)

Minnesota Department of Health - WIC Program, 625 Robert St N, PO BOX 64975, ST PAUL MN 55164-0975; 1-800-657-3942, <a href="health.wic@state.mn.us">health.wic@state.mn.us</a>, <a href="health.wic@state.mn.us">www.health.state.mn.us</a>; to obtain this information in a different format, call: 1-800-657-3942.

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