



FL!P FOR F!BER

America's Fiber Deficit: What Health Professionals Need to Know to Help Increase Fiber Intake



From heart health to digestive health to maintaining a healthy weight, fiber benefits the body from head to toe. And while a 2009 survey conducted on behalf of Kellogg shows that Americans recognize the many health benefits of fiber¹, the reality is that 95 percent are still falling short.² In fact, average fiber consumption is about 13 grams per day,³ less than half of the recommended 25-38 grams for most adults.⁴

In a quest to uncover what factors are contributing to the fiber deficit in America, Kellogg recently conducted a research series looking at consumer understanding, actual fiber content of foods perceived to be a good source of fiber, and the impact this has on actual intake. Following is what we learned, plus solutions to help increase fiber intake and decrease the deficit.

The American Consumer: "Whole" Lot of Fiber Confusion?

Consumers know fiber and whole grains are important, and the majority of Americans are trying to get more fiber (92 percent) and whole grains (87 percent) in their diet.⁵ Yet, despite their efforts, only one third of those surveyed realize their diets likely contain too little fiber.¹

In spring 2009, Kellogg conducted an omnibus survey of American adults to gauge consumers' knowledge of fiber and where to find it in foods. The results pointed to some confusion between fiber and whole grains.

Consumers are choosing products made with whole grains specifically to get more fiber:

Reasons for making effort	%
Whole grains are healthier	76
In order to get more fiber	69
To improve digestive health	63
Fill me up and help me lose weight	53
Prevent constipation/regularity	50
Reduce cholesterol	47
Get more vitamins/minerals	44
Enjoy the taste	36

In fact, 85 percent of consumers who are choosing foods made with whole grains assume that product to be a good or excellent source of fiber:

Fiber level expectation when see "whole grains" on food package	%
Excellent or good source	85
Excellent source of fiber	33
Good source of fiber	53

Furthermore, about half of consumers assume a gram-to-gram relationship between fiber and whole grains:

Grams of fiber expected when see 5g of whole grains/serving on food package	%
5g or more of fiber/serving	53
3 to 4g of fiber/serving	13
1 to 2g of fiber/serving	16
Lt 1g of fiber/serving	5
Not sure	12

The reality is that the fiber content of whole-grain foods can vary greatly. Not only do whole-grain types (brown rice, whole-grain wheat, etc.) have different levels of fiber, but the amount of whole grains (and, by extension, the amount of fiber) in foods made with whole grains can vary tremendously. Kellogg sought to understand if this was, in fact, the case.



Whole Grain Half Truths

Since 2000, there has been a 1344 percent increase in whole-grain products.⁶ Front-of-pack labeling featuring the claim “contains whole grains” resonates strongly with adults, with 87 percent indicating an increase in purchase interest.⁷ Kellogg commissioned an audit of breakfast cereal, and cereal and granola bars labeled with whole-grain messages from January 2005 to August 2008, and assessed their fiber content.⁸

Here’s What We Found in the Cereal Aisle...

At the time of the audit, 72 nationally distributed ready-to-eat cereal products included clearly visible messaging about whole grains on the front of the package.

- The fiber content of these cereals varied greatly, ranging from 0 grams to 11 grams per serving
- Only about half provided a good to excellent source of fiber
- Of the cereals with whole-grain messaging that did not provide at least a good source of fiber, about 60 percent provided only 1 gram or less of fiber per serving

...And in the Cereal and Granola Bar Aisle

During the audit period, 46 nationally distributed cereal and granola bars had clearly visible messaging about whole grains on their packaging.

- The fiber content of these cereal/granola bars varied greatly, ranging from 0 grams to 9 grams per serving
- Nearly all provided less than a good source of fiber
- Two-thirds of the cereal/granola bars made with whole grains that did not provide a good source of fiber – more than half of the total sample – provided only 1 gram or less of fiber per serving

Cereals with Whole-Grain Messaging That Are Not Good Sources of Fiber

0 Grams of Fiber

General Mills Rice Chex

1 Gram of Fiber

General Mills Boo Berry Cereal
 General Mills Chocolate Chex
 General Mills Cinnamon Toast Crunch
 General Mills Cocoa Puffs
 General Mills Cocoa Puffs Combos
 General Mills Cookie Crisps
 General Mills Corn Chex
 General Mills Corn Puffs
 General Mills Country Corn Flakes
 General Mills Disney’s Princess Fairytale Flakes
 General Mills Golden Grahams
 General Mills Lucky Charms
 General Mills Reese’s Puffs
 General Mills Spiderman 3 Cereal
 General Mills Strawberry Chex
 Kellogg’s Fruit Harvest Strawberry-Blueberry
 Kellogg’s Mini-Swirlz Cinnamon
 Malt-O-Meal Honey & Oat Blenders Cereal
 Malt-O-Meal Marshmallow Mateys

2 Grams of Fiber

General Mills Frosted Cheerios
 General Mills Honey Nut Cheerios
 General Mills Mickey Mouse Clubhouse Cereal (Berry Crunch)
 General Mills Oat Cluster Cheerios
 General Mills Oat Cluster Cheerios Crunch
 General Mills Yogurt Burst Cheerios
 Malt-O-Meal Cinnamon Toasters
 Malt-O-Meal Honey Nut Scooters
 Post Honey Bunches of Oats
 Post Honey-Comb
 Quaker Life
 Quaker Maple & Brown Sugar Cereal

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Assessing Impact of Choosing Foods Made with Whole Grains on Fiber Intake

Research indicates that consumers are eating more foods with whole-grain ingredients expecting to get more fiber, yet many foods with whole-grain messaging do not deliver even a good source of fiber. Kellogg’s sought to understand the

impact that whole-grain food choices had on fiber intake and how that might be contributing to Americans’ fiber deficit.

For this analysis, Kellogg turned to The NPD Group. NPD sourced dietary intake over 14 days of consumers ages 2 and older from its proprietary Nutrient Intake

Database⁹, which captures fiber intake from multiple food sources throughout an average day as well as fiber intake and cereal consumed during breakfast.

Here’s what was found:

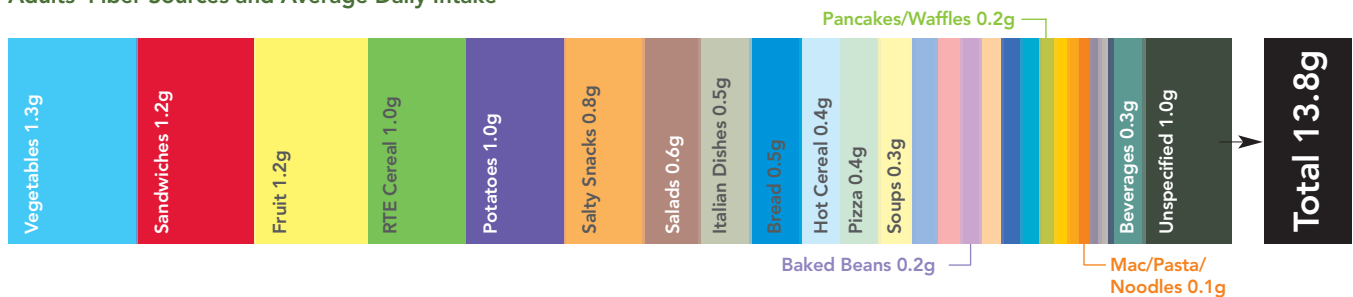
Every Gram of Fiber Counts

NPD's analysis found that the fiber in foods commonly eaten varies widely, as do people's diets on any given day, delivering only fractions of a gram of fiber on average.

The data found it takes **more than 25 different foods** to deliver the **13.8 grams of fiber** American adults consume in an average day – which is **less than half of the recommended daily intake**. This highlights the

importance of helping consumers select foods that provide at least a good source of fiber as often as possible. In the quest to efficiently deliver fiber, **every gram counts**.

Adults' Fiber Sources and Average Daily Intake



Closing the Fiber Gap: An Opportunity for Ready-to-Eat Cereals

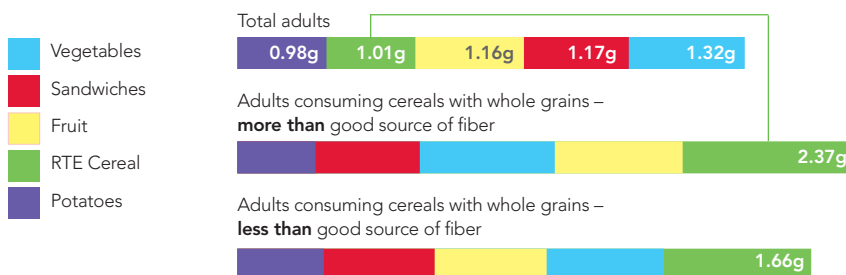
Ready-to-eat cereals are one of the most significant sources of fiber in the diet, delivering levels of fiber on par with fruits and vegetables. Not surprisingly, cereals made with whole grain do increase average daily fiber intake. In fact, they are the number one source of fiber in the diets of people who eat them. (See Chart A.)

Choosing ready-to-eat cereals that are made with whole-grain ingredients *and also provide at least a good source of fiber* can pay off; consumers who select such cereals get almost twice as much incremental fiber than consumers choosing whole grain-containing cereals with less than a good source of fiber.

Simply flipping the package to the Nutrition Facts panel to check for fiber content (*rather than assuming it is there because there is a claim about whole grains on the package*) can make a significant difference. In fact, it may increase fiber intake from cereal eaten at breakfast by up to 144 percent. (See Chart B.)

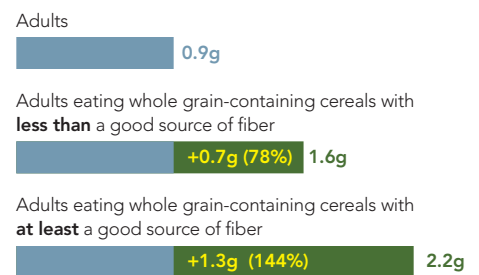
A. Cereal: A Top Contributor to Fiber Intake

Average Daily Fiber Intake – Top 5 Sources



B. Fiber Intake from Cereal at Breakfast

Incremental Fiber Consumed in Whole Grain-Containing Cereals During an Average Day's Breakfast by Adults



Grams Per Day Add Up to Servings Per Week

Over a longer term, choosing higher fiber cereal complements other fiber-rich foods in the diet, providing an extra 28 grams of

fiber consumed over two weeks – the equivalent of nearly nine good-source-of-fiber servings. **There is a significant difference in fiber intake when consumers eat whole grain-containing**

cereals with at least a good source of fiber, rather than eating whole grain-containing cereals with less fiber.



Flip for Fiber to KNOW How Much Fiber Is in There:

Consumers know fiber is important for overall health and are actively seeking ways to increase their fiber intake. Yet, we're still falling short. Part of the reason appears to be that consumers are confusing fiber with whole grains and are choosing products made with whole grains in order to meet their fiber goals. While it's true that choosing foods made with whole grains contributes to fiber intake, choosing foods that are made with whole grains **and a good source of fiber** is more effective.

How can consumers reduce their fiber deficit and be sure of the fiber content in the foods they eat? Have them **Flip for Fiber** – “flip” to the Nutrition Facts Panel to see how much fiber is in there. A good fiber source is one with at least 3 grams per serving; 5 or more grams per serving is an excellent source of fiber.

And, of course, continue to encourage the intake of fiber-rich fruits, vegetables, nuts, seeds, beans and legumes as well as fiber-enriched foods.



The Kellogg Company's Commitment to Fiber

The Kellogg Company has a long-standing commitment to fiber, beginning from our introduction to the first fiber cereal in the early 1900s. Today, Kellogg has more ready-to-eat cereals that are at least a good source of fiber than any other food company, including *Frosted Mini-Wheats*®, *Kellogg's Raisin Bran*® and *All-Bran*®. In recognition of America's fiber deficit, Kellogg has pledged to make the majority of its U.S. ready-to-eat cereals at least good to excellent sources of fiber per serving by the end of 2010.¹⁰

Kellogg is also dedicated to providing credible science and research information to support health professionals' efforts in educating clients and consumers about making healthful choices. Many health professional resources are available free on www.kelloggsnutrition.com, including:

- *FIBER-pe-dia: A Comprehensive Look at Fiber*, a guide for health professionals and their clients on fiber, its benefits and how to incorporate fiber into consumers' diets
- *Fiber Tracker*, an online tool that allows consumers to see how their food choices contribute to their daily fiber intakes
- Ready-to-use presentations and downloadable materials

- The opportunity to sign up for Kellogg's® Know Network to get connected to all Kellogg's Nutrition™ resources including product news, research, industry insights, education materials and more.



For more information,
please visit
www.kelloggsnutrition.com.

References

¹ Kellogg Whole Grains & Fiber Omnibus Survey, 2009

² Moshfegh, Alanna; Goldman, Joseph; and Cleveland, Linda; 2005 What We Eat in America, NHANES 2001-2002: Usual Nutrition Intake From Foods as Compared to Dietary Reference Intakes

³ The NPD Group Research for Kellogg Company, 2009

⁴ Institute of Medicine (IOM). Dietary, Functional, and Total Fiber. In: Food and Nutrition Board (FNB), editor. Institute of Medicine Expert Panel on Dietary Reference Intakes for Macronutrients Dietary

Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington, DC: National Academies Press; 2002. p. 339-421

⁵ 2008 IFIC Health & Wellness Study

⁶ Whole Grains Council, <http://www.wholegrainscouncil.org/newsroom/whole-grain-statistics>

⁷ 2007 Gallup Target Market report on Fiber, MS27114

⁸ This "claim audit" was completed using a syndicated database, capturing items entered into the database from 01/01/05 to 07/24/08. The database is maintained by an independent research company who pulls packaging from the shelf and puts in a

database for the use of their subscribers. Current product formulations or on-pack messaging may be different from the information reflected in this report

⁹ The NPD Group's Nutrient Intake Database is based on 14-day eating frequency diary information gathered at the individual level, supplemented with average portion size and nutrient composition information from the U.S. government.

¹⁰ Kellogg Company. News Alert: Kellogg Enhances Nutrition Credentials by Adding Fiber to Their Popular Ready-to-Eat Cereals in the U.S. and Canada. June 4, 2009.