by Mary Ellen Camire

Will New Labeling Get Americans to **Eat More Fiber**?

Dietary fiber encompasses a diverse group of carbohydrates as well as lignin that cannot be digested and absorbed in the human small intestine, but may be fermented by bacteria in the colon. Although dietary fiber is not considered to be a nutrient, this complex matrix of compounds plays an important role in human health.

Manufacturers of isolated and synthetic fibers face the challenge of documenting health effects in order for customers to include their fiber products in the total fiber amount in the Nutrition Facts Panel.

Most Americans of all ages consume too few grams of dietary fiber, prompting the *Dietary Guidelines for Americans 2010* to highlight the importance of adequate fiber consumption. The proposed changes in nutrition labeling announced by the U.S. Food and Drug Administration (FDA) on March 3, 2014 drastically alter information regarding dietary fiber, in part to encourage consumers to eat more fiber on a daily basis.

Numerous definitions for dietary fiber have been proposed by associations, government agencies, and other groups, and this year FDA offered this definition: "(1) Non-digestible soluble and insoluble carbohydrates (with 3 or more monomeric units) and lignin that are intrinsic and intact in plants; (2) isolated and synthetic non-digestible carbohydrates (with 3 or more monomeric units) that FDA has granted be included in the definition of dietary fiber, in response to a petition submitted to FDA under § 10.30 (21 CFR 10.30) demonstrating that such carbohydrates have a physiological effect(s) that is beneficial to human health; or (3) isolated and synthetic non-digestible carbohydrates (with 3 or more monomeric units) that are the subject of an authorized health claim."

Inclusion of non-digestible oligosaccharides with a degree of polymerization (DP) equal or greater than three sugar units in the definition brings the U.S. into better alignment with Codex Alimentarius. Another new development is the requirement that isolated and synthetic fibers demonstrate a health benefit in order to be listed as fiber in the Nutrition Facts Panel. Canadian food labeling (Health Canada, 2012) also includes oligosaccharides with a DP ≥ 3 and requires "at least one physiological effect demonstrated by generally accepted scientific evidence."

Manufacturers of isolated and synthetic fibers face the challenge of documenting health effects in order for customers to include their fiber products in the total fiber amount in the Nutrition Facts Panel. FDA plans to provide guidance to manufacturers regarding documentation of beneficial statements, either via the citizen petition process or by submission of a full health claim request. Current health claims permitted for certain sources of dietary fiber specify risk reduction for cancer and heart disease when foods or diets rich in fiber are consumed along with a low-fat, low-cholesterol diet. Anticipated fiber benefits could be expanded to include laxation, and possible increased satiety and amelioration of blood glucose levels after meals.

The current Daily Value (DV) for dietary fiber is 25 g. FDA plans to adopt the Institute of Medicine (IOM) recommendation of 14 g of fiber per 1,000 kilocalories of diet. The switch to a recommended daily consumption of 28 g is prudent. Schmier and coworkers (2014) estimated that over a billion dollars in constipation care could be saved annually if just 25% of American adults increased their daily dietary fiber consumption by a mere 3 g.

Fiber-enriched foods are one means to increase fiber intakes. Vella and coworkers (2013) reported that among older Canadian adults surveyed, dietary fiber was the most popular bioactive material consumed, often in bread; extra fiber was consumed to deal with bowel health, cancer, diabetes, and heart disease.

Other proposed changes specify analytical methods for measuring fiber content, but no current technology can distinguish "natural" fiber from isolated or synthetic sources. Manufacturers will be asked to note how much of each fiber source is added to a product, and to deduct those isolated or synthetic fibers from the total value to be displayed in the Nutrition Facts Panel if a health benefit has not been approved for the material. Soluble fiber will be labeled as providing 2 kcal per g, based on estimated free fatty acids produced in the large intestine by bacterial fermentation. Insoluble fiber will not be included in energy calculations.

The effects of these changes in fiber labeling on consumer eating habits is difficult to predict. Many Americans do not consume recommended levels of fiber, so any encouragement to consume more fiber may improve public health. However, confusion about the relative merits of isolated and synthetic fiber sources versus intact natural fiber sources such as whole grains could slow efforts to boost fiber ingestion.

Comments about the proposed labeling changes will be accepted through August 1, 2014. You can submit comments electronically at http://www.regulations.gov/#!submitComment;D=FDA-2012-N-1210-0132. **FT**

References cited in this article are available online at ift.org.

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