

# Health & Nutrition Sciences

## Dietary Fiber:

Essential to Digestive Health

**Dietary fiber helps promote digestive health through its modulation of laxation, fermentation, and effects on gut microbiota.<sup>1</sup>**



### What is Fiber?

Fiber has traditionally been categorized as soluble or insoluble. While there is no universal definition for fiber, for purposes of the Nutrition & Supplement Facts Panel, it includes both naturally occurring 'intrinsic and intact' fibers in plants and synthetic carbohydrates that the Food & Drug Administration has determined to have physiological benefits.<sup>2</sup>

### Properties of Fiber

Dietary fiber may be categorized by properties of solubility, viscosity, and fermentation. While there is likely overlap between groups, this helps relate the types of fiber to health outcomes.<sup>3</sup>



#### Soluble

Dissolves in water to form thick gel-like substance in the stomach, which is broken down by bacteria in the large intestine, provides some calories, can help slow digestion.<sup>4</sup>

**Sources:** beans, oats, Brussels sprouts, oranges, flax seed



#### Viscosity

Gels with water, influences chyme consistency and can improve nutrient digestion and absorption.<sup>3</sup>

**Sources:** oats, fruits with peel, legumes, nuts



#### Insoluble

Does not dissolve in water and may pass through gut relatively intact, not a source of calories, can help with laxation and regularity.<sup>4</sup>

**Sources:** wheat bran, brown rice, fruit and vegetable skins, nuts and seeds



#### Fermentable

Produces short-chain fatty acids which increase bioavailability of some minerals and can inhibit pathogenic bacteria.<sup>1</sup>

**Sources:** garlic, onions, chicory root (inulin)

Prebiotics: Serve as a food for beneficial bacteria in the gut and can help promote a balanced gut microbiota<sup>5</sup>



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Only Around 5% of Americans Get the Amount of Fiber They Need Each Day.<sup>6</sup>



Most Americans consume ~1/2 of the recommended fiber each day.<sup>4</sup>

	Age (years)	Dietary Fiber Adequate Intake (g/day)
	1 to 3	19
	4 to 8	25
	9 to 13	26
	14 to 18	26
	19 to 50	25
	50+	21
	9 to 13	31
	14 to 18	38
	19 to 50	38
	50+	30

## Experts Recommend: Focus on Food and Flavor

Promoting a variety of appealing and flavorful fiber-rich foods helps consumers achieve different health benefits.<sup>6</sup>

Food	Standard Portion Size	Fiber (g) in Portion
Quaker High Fiber Instant Oatmeal	45 g packet	10
Beans, pinto, dry, cooked	1/2 c	8
Naked Fruit & Veggie Smoothie, Berry Veggie	8 fl oz	6
Avocado, cubes	1/2 c	5
Pumpkin seeds, whole, roasted	1 oz	5.2
Tropicana Essentials with Fiber	8 fl oz	4
Quaker Oats Old Fashioned or Quick 1-Minute	1/2 c	4
Blueberries, raw	1 c	3.5
Banana	1 medium	3.1

Certain PepsiCo products can increase fiber intake to help support a healthy digestive system.

Source: USDA Food Data Central

### References:

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