

High Fiber Diet

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Fiber is an indigestible substance found in plant foods commonly called “bulk” or “roughage”. Fiber absorbs water and helps to form a larger, softer stool for easy elimination from the bowels. Most of the fiber we consume consists of non-starch polysaccharides classified as either water soluble or water insoluble fiber.

Water-insoluble fibers include lignin, cellulose, and complex hemicellulose. These fibers promote bowel regularity and may protect against colorectal cancer. Wheat bran (the outer coating of unrefined wheat), corn, cabbage, peas, beans, nuts, and root vegetables are all good sources of insoluble fiber.

Water-soluble fibers include pectin, gum, mucilage, oat bran, barley, psyllium, apples/oranges, pears, and the inner contents of peas and beans. Soluble fibers are absorbed in the large intestines and provide more than bulk to stools. It helps to lower blood cholesterol and sugar levels.

Soluble Fiber		Insoluble Fiber		
Gum	Pectin	Cellulose	Hemicellulose	Lignin
-Oatmeal and other rolled oat products -Dried beans	-Squash -Apples -Citrus fruits -Cauliflower -Green beans -Cabbage -Dried beans -Dried peas -Carrots -Strawberries -Potatoes	-Whole wheat flour -Unprocessed bran -Cabbage -Peas -Green beans -Wax beans -Broccoli -Brussel sprouts -Cucumber with skin -Green peppers -Carrots	-Bran cereals -Whole grains -Brussel sprouts -Mustard greens -Beet root	-Flax -Bran cereals -Unprocessed bran -Strawberries -Eggplant -Pears -Green beans -Radishes

Why A High Fiber Diet?

A high fiber diet is recommended for many conditions including constipation, spastic colon, irritable bowel syndrome (alternating diarrhea and constipation), and uncomplicated diverticulosis. Furthermore, a diet high in fiber may help to decrease the risk of certain diseases (e.g. Colon cancer) and has shown beneficial in the treatment of obesity, diabetes, and high cholesterol. High fiber foods are not always identifiable by their texture, as bananas are a good source compared to celery and lettuce which are not.

How Much?

It is recommended that adults consume 20-35 grams of dietary fiber per day. For children over the age of two, it is recommended that they consume Age + 5 grams per day. For example, a child 5 years would need 5 grams + 5 grams = 10 grams fiber/day. Infants less than one year probably do not need fiber. High fiber foods have a low caloric density and initiate satiety, therefore attention should be given to providing appropriate calories for growth in children.

Increasing the amount of fiber in your diet should be done gradually to avoid gas, bloating, and/or diarrhea. Constipation can result if increased fiber intake is not coupled with increased fluid intake. For adults, dividing your body weight by half is the number of ounces to maintain minimum hydration levels. The recommended fluid intakes for children on a high fiber diet are below:

Recommended Fluid Intake On A High Fiber Diet	
Child's Weight	Total Fluid per 24 hours (1 day)
7 pounds	2 cups
12 pounds	3 1/3 cups
21 pounds	5 cups
26 pounds	6 cups
35 pounds	7 cups
44 pounds	8 cups
63 pounds	9 1/2 cups
99 pounds	10 1/2 cups

Source: Hendricks K, Walker A. Manual of Pediatric Nutrition, 2nd Ed., Philadelphia; BC Decker, 1990.