

FIBER-RESTRICTED DIETS

(Low-Residue/Low-Fiber)

Description

The Low-Residue/Low-Fiber Diet restricts dietary fiber and provides less than 10 grams a day. Foods that have been defined in qualitative terms as having tough fibers are also eliminated. Animal products, refined grain products, and selected fruits and vegetables are included.

Indications

- To prevent the formation of an obstructing bolus when the intestinal lumen is narrowed.
- To delay intestinal transit time in conditions of diarrhea.
- To reduce (not eliminate) the residue in the colon pre- and postoperatively.
- To allow the bowel to rest during acute exacerbation of inflammatory bowel disease, acute phases of diverticulitis, or regional enteritis (Crohn's disease).

The diet is intended for short-term use. The goal of nutrition therapy is to establish a tolerance to a wider variety of foods and to make a transition to a regular diet.

Contraindications

A fiber-restricted diet is contraindicated when a soft stool is desired, as in individuals with diverticulosis. A low-residue/low-fiber intake may aggravate the symptoms of irritable bowel or constipation. In these cases, a high-fiber intake is recommended. (See Section D: High-Fiber Diet.)

Where a diet soft in texture is desired, as in the case of a patient with esophageal narrowing, a mechanical soft diet may be ordered.

Nutritional Adequacy

The Low-Residue or Low-Fiber Diet can be planned to meet the Dietary Reference Intakes (DRIs) as outlined in the *Statement on Nutritional Adequacy* in Section IA. At least one serving of citrus fruit juice is recommended for daily vitamin C.

How to Order the Diet

Order as "Low-Residue Diet" or "Low-Fiber Diet." Milk and other lactose-containing foods will not be restricted unless ordered. Milk is fiber-free and a medium-residue food; therefore, it is not necessary to eliminate it. However, for individuals with inflammatory bowel disease and a lactose deficiency, a low-fiber, low-lactose dietary restriction may be appropriate.

Planning the Diet (1):

1. Limit foods and beverages that contain added sugar, lactose, fructose, high-fructose corn syrup, and sorbitol
2. Limit intake of fat to < 8 teaspoons each day
3. Select cereals, grains and bread products that contain < 2 g fiber/serving
4. Avoid beverages with caffeine
5. Eat small meals, or snack every 3 to 4 hours
6. Clean, prepare and store foods using proper sanitation techniques

Reference

1. Meal Plans, Gastrointestinal Diseases. In: *Nutrition Care Manual*. American Dietetic Association; 2007. Available at: <http://www.nutritioncaremanual.org>. Accessed January 28, 2008.

FOOD GUIDE - LOW-RESIDUE/LOW FIBER DIET ⁽¹⁾

FOOD GROUP	FOODS ALLOWED	FOODS EXCLUDED
Beverages (0 gm fiber/serving) No limit of allowed foods	Decaffeinated coffee, caffeine-free teas, soft drinks without caffeine, rehydration beverages	Beverages with added sugar or high-fructose corn syrup, fructose or sorbitol. Avoid caffeine-containing beverages.
Milk Products (0 gm fiber/serving) No limit of allowed foods	Choose yogurt with live, active cultures, evaporated skim, and low-fat milk, soy milk, powdered milk, cheese, low-fat ice cream ⁽¹⁾	Milk is avoided only when lactose intolerance is present ⁽¹⁾ . Yogurt with berries, orange or lemon rind, or nuts. Whole milk, half and half, cream, sour cream, regular ice cream
Breads and Starches, Pasta, Rice (0.5 gm fiber/ serving per allowed foods) No limit of allowed foods	All breads and crackers made from white flour or choose grain foods with less than 2 grams dietary fiber per serving ⁽¹⁾ Graham crackers Corn and flour tortillas Cornbread Pasta, noodles, white rice	Whole-wheat, rye, pumpernickel or bran breads, crackers, muffins Buckwheat pancakes Rye wafers Breads and crackers containing fruit, nuts, or seeds Brown rice; barley
Breakfast Cereals (0.5 gm fiber/serving) No limit of allowed foods	Farina, cream of rice, grits, oatmeal Ready-to-eat cereals from corn, rice, or white flour or others providing < 2 g fiber per serving ⁽¹⁾	Wheatena, rolled wheat, and other whole-grain cooked cereals Ready-to-eat whole-grain, oat and bran cereals including bran flakes, granola, Grape-Nuts, oat bran, 100% bran, puffed wheat, shredded wheat, wheat bran, wheat flakes, wheat germ
Fruit Juices (0 gm fiber/serving per allowed foods) No limit of allowed foods	Fruit juice without pulp (except for prune juice). Ripe banana or melons. Canned, soft fruits packaged in water or natural juices. Peeled apples.	Limit juices that contain added sugars, high-fructose corn syrup, and sorbitol
Fruits (2.0 gm fiber/serving per allowed foods) Count in 3-6 servings of allowed fiber containing foods/day	Banana, applesauce Canned: peeled apricots, Royal Anne cherries, peeled citrus sections, peaches, pears, peeled plums, fruit mix without grapes, pineapple	All fresh fruits except banana and soft fresh fruit from which the peel and seeds have been removed
Desserts (2.0 gm fiber/serving per allowed foods) Count in 3-6 servings of allowed fiber containing foods/day	Fruit and vegetable pies without skins or seeds, eg, apple, pumpkin, banana, All others except those excluded	Cakes, pies, cookies, pudding containing dried fruit, fruit with skins or seeds, coconut, nuts, or seeds
Meat, Fish, Poultry, Cheese, Eggs (0 gm fiber/serving) No limit of allowed foods	Tender, well-cooked meats, poultry, fish, eggs, and soy prepared without added fat. Smooth nut butter	Avoid fried meat including sausage and bacon. Luncheon meats, such as bologna or salami, hot dogs, tough or chewy cuts of meat, fried eggs, all dried beans, peas, and nuts, Chunky nut butters.

FOOD GUIDE- LOW-RESIDUE/LOW-FIBER DIET (1)

FOOD GROUP	FOODS ALLOWED	FOODS EXCLUDED
Legumes None allowed	None	All legumes: chickpeas, lima beans, black-eyed peas, kidney beans, pinto beans, etc Peanut butter Baked beans
Soup (2.0 gm fiber/ serving per allowed foods) Count in 3-6 servings of allowed fiber containing foods/day	Meat, rice, noodle soups Soups made from allowed vegetables	Minestrone soup Bean, pea, and lentil soups
Fats (0 gm fiber/serving) No limit of allowed foods	Limit fats to < 8 teaspoons per day ⁽¹⁾ including bacon, butter, cream, cream substitutes, margarine, mayonnaise, oils, shortening, salad dressing, sour cream	Nuts, seeds
Sugar and Sweets (0 gm fiber/serving) No limit of allowed foods	Cranberry sauce, seedless, sherbet	Candy containing fruits, nuts, or coconut Jam, marmalade, relishes containing seeds, or skins
Vegetables and Vegetables Juices (2.0 gm fiber/ serving per allowed foods) Count in 3-6 servings of allowed fiber containing foods/day	Mushrooms (cooked) Tomato/vegetable juice Tomato sauce Cooked asparagus, beets, carrots, spinach, green and wax beans, zucchini, white potatoes without skins	Raw or fried vegetables Broccoli Corn Mixed vegetables Skin of potato Beets Brussel Sprouts Cabbage Cauliflower Succotash (also see legumes) Collard, mustard, and turnip greens
Miscellaneous (0 gm fiber/serving) No limit of allowed foods	Catsup, spices, herbs, seasonings	Pickles

SAMPLE MENU (less than 10 g fiber)

Breakfast	Noon	Evening
Orange juice	Chicken rice soup	Baked chicken with gravy
Grits	Roast beef sandwich on white bread	Whipped potatoes
Soft-Cooked egg	Mayonnaise	Green beans
White toast	Tomato juice	Dinner roll
Margarine	Orange sherbet	Margarine
Grape jelly	Coffee and tea	Canned peaches
Milk	Sugar	Milk
Coffee		Tea
Sugar		Sugar

HIGH-FIBER DIET

Description

Dietary fiber has demonstrated benefits for health maintenance and disease prevention and is a component of medical nutrition therapy (1). The diet emphasizes the consumption of dietary fiber from various foods of plant origin, particularly minimally processed fruits, vegetables, legumes, and whole-grain and high-fiber grain products. A plant-based diet may also provide other nonnutritive components (eg, antioxidants, phytoestrogens) that have implications for health (1). Dietary fiber intake in the United States continues to be at less than recommended levels, with usual intakes averaging only 14 to 15 g of dietary fiber per day (2). The American Dietetic Association recommends that healthy adults consume 20 to 35 g of dietary fiber per day. The American Academy of Pediatrics recommends children 2 and older consume an amount equal to or greater than their age plus 5 g/day (1). In September 2002 the Institutes of Medicine's Food and Nutrition Board released for the first time Dietary Reference Intakes (DRIs) for total fiber based on life stage (see Table D-1) (3). In addition to the DRI's, the amount and sources of fiber provided should be determined by the nutrition objectives for the specific disease state, as outlined below.

Table D-1: Dietary Reference Intakes for Total Fiber by Life Stage* (3)

Age	Male	Female
0-12 months	ND	ND
1-3 years	19 g	19 g
4-8 years	25 g	25 g
9-13 years	31 g	26 g
14-18 years	38 g	26 g
19-50 years	38 g	25 g
> 50 years	30 g	21 g
Pregnancy (14-50 years)		28 g
Lactation (14-50 years)		29 g

ND-Not Determined

*DRI's based on 14 g total fiber/1000 calories required for age, gender

General Information

A variety of definitions of dietary fiber exist globally (1). Some are based primarily on analytical methods used to isolate and quantify dietary fiber, whereas others are physiologically based (1). Crude fiber is the amount of plant material that remains after treatment with acid or alkali solvents. It is predominantly a measure of the cellulose content of a food and, as such, significantly underestimates the total dietary fiber found in plant food. Many older food composition tables report only crude fiber (4). For labeling purposes in the United States, dietary fiber is defined as the material isolated by analytical methods approved by the Association of Official Chemists. The Panel on the Definition of Dietary Fiber under the Food and Nutrition Board of the National Academy of Sciences has defined fiber as follows:

Dietary fiber is the nondigestible component of carbohydrates and lignin naturally found in plant foods (3,5). *Functional fiber* refers to those fiber sources that are shown to have similar health benefits as dietary fiber, but are isolated or extracted from natural sources or synthetic sources (3,5). *Total fiber* is the sum of dietary fiber and functional fiber (3,5). The intent of these proposed definitions is to recognize the physiologic actions of fiber and its demonstrable health effects, and to reduce the emphasis on dietary fiber as a constituent of food requiring quantification (3,5). There has been a trend to assign specific physiologic effects either to soluble or insoluble fibers (5). This approach makes it difficult to evaluate the effects of fiber provided by mixed diets (5). Dietary fiber provided by mixed diets is two-thirds to three-fourths insoluble; however, the exact distribution between soluble and insoluble depends on the method of analysis (5). In addition, soluble and insoluble fiber foods often have similar benefits vs independent benefits that affect health outcomes. For example, psyllium seed husk (considered an insoluble fiber) and oat bran (soluble fiber source) both increase stool weight and improve laxation as well as lower blood cholesterol levels (1). It has also been found that not all soluble fibers are hypocholesterolemic agents, but rather only those that are viscous (1). Based on the review of evidence, the National Academy of Sciences Panel recommends that the terms *soluble fibers* and *insoluble fibers* gradually be eliminated and replaced by specific beneficial physiologic effects of fiber (3,5).

Indications

Constipation and normal laxation: Consumption of dietary fiber is a frequent prevention or treatment of constipation. Many fiber sources, including cereal brans, psyllium seed husk, methylcellulose, and a mixed high-fiber diet increase stool weight, thereby promoting normal laxation (6). The increase in stool weight is caused by the presence of the fiber, by the water that the fiber holds and by partial fermentation of the fiber, which increases the amount of bacteria in stool (7). The large intestine responds to the larger and softer mass of residue produced by a high-fiber diet by contracting, which moves the contents toward excretion (1). Fiber in mixed diets, legumes, and whole-grain and high-fiber grain products are particularly effective promoters of normal laxation (1). A fiber supplement may be needed when food intake is low, as in the case of inactive older adults (1). Common fiber supplements are psyllium seed husk and methylcellulose (1). Other factors that influence fecal elimination and that should be considered when a dietitian is planning treatment include fluid intake, exercise, stress, and relaxation.

Diverticulosis: Diverticular disease of the colon is thought to occur secondary to increased intracolonic pressure caused by hard, dry fecal material and the increased effort necessary to eliminate this type of stool. Well-controlled experimental studies confirming the benefits of a high-fiber diet in the prevention and management of diverticular disease are relatively few, with less than conclusive results. One study found that 90% of patients with diverticular disease remained symptom-free after 5 years on a high-fiber diet (8). This result may be explained by the fact that a high-fiber diet promotes the formation of soft, large stools that are defecated more easily, resulting in lower colonic pressure and less straining during elimination (1). Also, a high-fiber diet may reduce the chances that one of the existing diverticula will burst or become inflamed (1). The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) currently recommend a high-fiber diet of 20 to 35 g of fiber each day for the treatment of diverticular disease (1, 9). In some cases, mild pain medications may also be considered to help relieve symptoms, however many pain medications can affect emptying of the colon, an undesirable side effect for people with diverticulosis (9).

To increase stool bulk, studies suggest increasing the consumption of whole-grain breads, cereals, and brans. In cases of diverticulosis, a common practice has been to provide a high intake of fiber but to exclude hulls of nuts and corn and seeds because they may get trapped in one of the diverticula (1). However, there have been no controlled studies to demonstrate that skins and seeds are harmful (8). The NIDDK currently recommends that foods such as nuts, popcorn hulls, and sunflower, pumpkin, caraway, and sesame seeds should be avoided (9). The seeds in tomatoes, zucchini, cucumbers, strawberries, and raspberries, as well as poppy seeds, are generally considered harmless (9).

Irritable bowel syndrome: Irritable bowel syndrome (IBS) is characterized by intestinal dysfunction of at least 3 months' duration, during which time diarrhea, diarrhea alternating with constipation, and chronic constipation may be experienced in the absence of any underlying disease states (8). Abdominal pain, the passage of mucus, and pain alleviation following defecation may also indicate IBS (10). In patients with a strong family history of allergy and hypersensitivity to certain foods, a trial of food elimination and challenge may be justified (8). A normal diet with moderate to high fiber (20-35g/day) may help relieve symptoms and promote bowel motility (8). Additional fiber in the form of bulk laxatives (eg, Metamucil) may be an alternative for those who do not want to make the necessary diet changes.

Cardiovascular disease and hypercholesterolemia: The one characteristic common to all cholesterol-lowering fibers is viscosity (11). Fibers that lower blood cholesterol include foods such as apples, barley, beans and other legumes, fruits, vegetables, oatmeal, oat bran and rice hull; and purified sources such as beet fiber, guar gum, karaya gum, konjac mannan, locust bean, gum, pectin, psyllium seed husk, soy polysaccharide and xanthan gum (12). The US Food and Drug Administration (FDA) has studied two fibers, beta glucan in oats and psyllium husk, to authorize a health claim that foods meeting specific compositional requirements and containing 0.75 g of beta glucan or 1.7 g of psyllium husk per serving can reduce the risk of heart disease (13). The mechanism by which viscous fibers lower cholesterol is that the viscosity interferes with bile acid absorption from the ileum. In response, low-density lipoprotein (LDL) cholesterol is removed from the blood and converted into bile acids by the liver to replace the bile acids lost in the stool. Some evidence also indicates that changes in the composition of the bile acid pool accompanying ingestion of some viscous fibers dampen cholesterol synthesis (1,14). A secondary benefit of a high-fiber diet in treating cardiovascular disease may include lower energy, fat, and simple sugar contents, all of which would be effective treatments for the obesity and hypertriglyceridemia also associated with cardiovascular disease (1,15).

High-Fiber Diet

Diabetes mellitus: Considerable experimental evidence demonstrates that the addition of viscous dietary fibers slows gastric emptying rates, digestion, and the absorption of glucose to benefit immediate postprandial glucose metabolism and long-term glucose control in individuals with diabetes mellitus (16,17). The American Diabetes Association has determined that the consumption of soluble fiber independent of total fiber has limited documented effects on glycemic control in individuals with diabetes (18). Although large amounts of dietary fiber (>50 g/day) may have beneficial effects on glycemia, insulinemia, and lipemia, it is not known whether such high levels of fiber intake can be maintained long-term (18). For general health benefits, the daily consumption of dietary fiber is encouraged from food sources such as whole grains, fruits, and vegetables (18).

Cancer: People who eat a greater amount of fruits and vegetables have about one half the risk of cancer and a lower mortality from cancer (19). There is convincing evidence that diets high in vegetables and fruits decrease the risk of cancers of the colon, rectum, lung, stomach, mouth, pharynx, and esophagus and probably protect against cancers of the breast, bladder, larynx, and pancreas (20-22). Despite inconsistencies in the results of fiber and colon cancer studies, the scientific consensus is that there is enough evidence that dietary fiber protects against colon cancer (1). In one study, authors estimated that the risk of colorectal cancer in the US population could be reduced by about 31% with an average increase in fiber intake from food sources of approximately 13 g/day (23).

Use in enteral formulas: Two types of enteral formulas that contain dietary fiber are currently marketed: blended formulas made from whole foods and formulas supplemented with purified fiber sources (eg, oat, pea, hydrolyzed guar gum, and sugar beet fiber) (1). Dietary fiber added to enteral formulas is thought to aid in normalizing bowel function and reduce the incidence of diarrhea. To date, there are no conclusive studies that fiber-containing enteral formulas prevent diarrhea in tube-fed patients (1). A recent addition to enteral formulas is fructo-oligosaccharides (FOSs), which are short-chain oligosaccharides (usually 2 to 10 monosaccharide units). Because they are not digested in the upper digestive tract, FOSs have some of the same physiologic effects as soluble fiber (24). The FOSs are rapidly fermented by intestinal bacteria that produce short-chain fatty acids, which stimulate water and electrolyte absorption and should aid in the treatment of diarrhea. Although FOSs are a preferred substrate for *Bifidobacteria*, they are not used by potentially pathogenic bacteria, thus helping to maintain and restore the balance of healthy gut flora (1). Currently, FOSs are not isolated by currently accepted methods for dietary fiber so they cannot technically be called dietary fiber (5). The newly proposed definitions of dietary fiber, if implemented, should allow a label claim for FOSs as an added fiber (5).

Contraindications

Diverticulitis: A high-fiber diet is contraindicated when inflammation has caused the narrowing or blockage of the intestinal lumen or during acute diverticulitis (8,9).

Infants and children: The American Academy of Pediatrics does not encourage the addition of high-fiber foods to the diets of infants younger than 1 year old. High-fiber foods are filling but contain few calories, potentially causing reduced energy intakes in infants, whose stomach capacities are naturally small. It is recommended that children over 2 years of age increase their fiber intake to an amount equal to or greater than their age plus 5 g/day (1).

Phytobezoar formation: Phytobezoars are masses of vegetable matter that become trapped in the stomach. Individuals who experience decreased gastric motility or emptying, such as diabetic gastroparesis, or those who have undergone surgical procedures for stomach cancer or peptic ulcer disease may be susceptible (25,26). These individuals should be advised to avoid the following foods implicated in phytobezoar formation: apples, berries, brussels sprouts, coconuts, figs, green beans, oranges, persimmons, and potato peels (8,27).

Nutritional Adequacy

The diet can be planned to meet the Dietary Reference Intakes (DRIs) as outlined in the [Statement on Nutritional Adequacy](#) in Section IA.

How to Order the Diet

Order as "High-Fiber Diet."

Planning the Diet

- Promote food intake patterns consistent with the *Dietary Guidelines* that encourage a wide variety of plant foods to achieve fiber intakes. Emphasize fruits, vegetables, and whole-grain breads and cereals.
- Foods made from whole-grain flours are substituted for those made with refined flours and starches.
- People who experience difficulty in chewing fruits and vegetables may increase fiber in the diet by consuming one or more servings daily of a high-fiber cereal, such as bran; substituting whole-wheat bread for white bread; and consuming soft or cooked fruits and vegetables.
- If unprocessed bran is consumed, it must be served thoroughly moistened and mixed with food and be incorporated gradually into the diet. One tablespoon of bran contains 4.5 g of dietary fiber. To incorporate bran into the diet, begin with 1 tsp a day and gradually increase in divided doses, as tolerated, to 4 to 6 tbsp a day (8). Three tablespoons of bran, consumed daily in divided doses, is adequate to promote normal bowel functioning.
- High-fiber foods should be added to the diet gradually. An increase in fiber consumption may initially generate bloating and flatulence. Patients should be advised that these conditions may occur but will generally subside as the digestive system adjusts to increased fiber consumption.
- Fiber gathers water in the colon, hence its stool-bulking property. For this reason, a high-fiber diet should also include a liberal intake of fluids, of at least 64 oz of extra fluid per day (8). Consuming increased amounts of fiber without increasing fluid consumption can lead to the formation of hard, dry stools that are difficult to eliminate.

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FOOD GUIDE HIGH-FIBER DIET

This list is not meant to be all-inclusive. Only the foods highest and lowest in fiber in each category are listed in the categories Higher-Fiber and Lower-Fiber Foods, respectively.

FOOD GROUP	Emphasize HIGHER-FIBER FOODS	Minimize LOWER-FIBER FOODS
Beverages and Milk		Beverages and milk
Breads and Crackers	100% whole-wheat bread, rolls, muffins Whole-wheat crackers Bran muffins Pumpernickel and rye bread	White bread and rolls Saltine and other refined crackers
Cereals and Grains	100% and 40% bran cereal, whole-wheat and oat cereals, including puffed wheat, shredded wheat, granola,* Grape-Nuts, oatmeal,* oat bran,* rolled wheat, and Wheatena Brown rice, barley	Cereals from refined wheat flours, corn, or rice, including farina, grits, cream of rice, cornflakes, puffed rice, and crisp rice White rice, pasta, noodles
Desserts	Desserts made from whole-grain flour, nuts, fruits, coconut, or vegetables	Cake, cookies, and pastry made from white flour Ice cream, sherbet Cream or custard pies Pudding, custard Gelatin
Fats	Peanuts,* tree nuts, seeds	Butter, margarine, oils, mayonnaise, salad dressings, gravy
Fruits	All except juices	Juices
Meat, Fish, Poultry, Cheese, Eggs, Legumes	Chili and other entrees containing legumes* Peanut butter*	Meat, fish, poultry, eggs, cheese
Soups	Vegetable and other legume* soups	Broth, meat, rice, noodle soups
Sugars and Sweets	Candy made primarily from coconut, raisins, or other fruit or nuts	Hard, chocolate, or caramel candy; honey, jam, jelly, molasses, sugar, syrup
Vegetables and Potatoes	All, especially broccoli, corn, greens, legumes,* peas,* sweet potatoes, winter squash	

*Foods containing soluble fibers.

SAMPLE MENU (23 g fiber)

Breakfast	Noon	Evening	Snack
Fresh orange	Split pea soup	Cranberry relish	Milk
40% bran cereal	Roast beef sandwich on whole-wheat bread with lettuce and tomato	Roast turkey	Grapes
Soft cooked egg		Sweet potatoes	
Whole wheat toast		Broccoli	
Margarine	Relish plate	Tossed salad with dressing	
Jelly	Apricot halves	Whole wheat bread	
Milk	Coffee or tea	Margarine	
Coffee		Fresh apple	
		Coffee or tea	

DIETARY FIBER CONTENT OF FOODS

Food Group	<1 g	1-1.9 g	2-2.9 g	3-3.9 g	4-4.9 g	5-5.9 g	>6 g
Breads	Bagel (½) Dinner roll French bread Hamburger/hot dog roll (½) Hard roll Italian bread Pancake (1) Graham crackers (2) White bread	Whole-wheat bread (5 inches) Raisin Rye Tortilla	pita Pumpernickel Bran muffin			Rye wafers (3)	
Cereals (¾ cup cooked; 1 oz dry, unless noted)	Puffed rice Puffed wheat Rice Krispies	Oatmeal Cornflakes Granola Grits	Grape-Nuts Shredded Wheat Wheat Chex	Cheerios Raisin bran Wheat germ Wheaties	Unprocessed bran 40% bran flakes Oat bran Ralston cereal		All-Bran Bran Buds
Pasta, rice	Macaroni Spaghetti Egg noodles Rice, white	Rice, brown					
Vegetables and legumes (½ cup cooked unless noted)	Cabbage, raw Bean sprouts Celery, raw Cucumber, raw Green pepper Lettuce, raw Mushrooms, raw	Asparagus Brussels sprouts Cabbage Carrots, raw Cauliflower Green beans Summer squash Tomatoes, raw Turnips Zucchini squash	Broccoli Carrots Corn Mixed vegetables Okra Potato, no skin Spinach	Baked beans Sweet potato	Baked potato, no skin Kidney beans Lima beans Peas Winter squash	Chickpeas Pinto beans	Lentils
Fruits, canned (unless noted)	Grapefruit, raw Grapes, raw Pineapple Plums Watermelon Fruit juices (including nectars)	Applesauce Apple slices Apricots Cantaloupe Cherries, raw or cooked Cherries, raw Fruit cocktail Peaches Pineapple, raw Prunes (3) Raisins, dried (2 tbsp) Strawberries, raw	Banana Nectarine Papaya Pears	Apple, raw Dates (5) Mango Orange, raw	Pear, raw Raspberries, raw		
Miscellaneous	Olives	Filberts Popcorn Walnuts	Almonds Avocado Fruit pie Peanuts Peanut butter				

Source: Pennington J. *Bowes and Church's Food Values of Portions Commonly Used*. 17th ed. Philadelphia, Pa: JB Lippincott; 1998.

Dietary Fiber Content of Common Foods

	Grams		Grams		Grams
<u>Beverages and Milk</u>					
Milk, white, nonfat or low-fat (8 oz)	0.0	Cheerios	3.0	Applesauce, canned	1.0
Buttermilk	0.0	Cornflakes	1.1	Apricots, canned (3 halves)	1.4
Coffee, tea	0.0	Granola (1/3 cup)	1.8	Banana (1 medium)	2.7
<u>Bread</u>					
Bagel (1 whole)	1.6	Grape-Nuts	2.5	Cantaloupe (1/4 melon)	1.3
Bran muffin (1 average size)	2.5	Oat bran (1/3 cup)	4.8	Cherries, sweet (10)	1.6
Biscuit	0.5	Puffed rice (1 cup; 14 g)	0.1	Cherries, canned	1.9
Cornbread	1.0	Puffed wheat (1 cup; 14 g)	0.5	Dates, dried (5)	3.1
Dinner roll (1)	0.9	Raisin bran	4.0	Fig, dried (3)	6.8
Doughnut	0.7	Rice Krispies	0.5	Fruit cocktail	1.2
French bread (1 slice)	0.8	Shredded wheat	2.8	Grapefruit (1/2)	1.4
Hamburger/hot dog roll (1/2)	0.6	Wheaties	3.0	Grapefruit sections, canned	0.5
Hard roll (1 white)	0.9	Wheat germ (1/4 cup)	3.8	Grapes, European (10)	0.8
Italian bread (1 slice)	0.9	<u>Pasta, Rice, etc</u> (1/2 cup cooked)			
Pancakes	1.0	Barley	3.0	Honeydew melon	0.5
Pita bread (5 inches)	1.0	Macaroni; spaghetti	0.9	Mandarin oranges	0.9
Pumpnickel bread (1 slice)	2.1	Rice, white	0.5	Mango (1 medium)	3.7
Raisin bread (1 slice)	1.1	Rice, brown	1.7	Nectarine (1 medium)	2.2
Rye bread (1 slice)	1.9	<u>Desserts</u>			
Taco shell (1)	1.3	Cake, plain, iced (1/12 of 9 inches)	0.5	Orange (1 small)	3.1
Tortilla, flour	1.2	Carrot cake (1/12 of 9 inches)	1.4	Papaya (1/2 medium)	2.5
White bread (1 slice)	0.6	Coffee cake (1/6 of 16 oz)	0.8	Peaches, canned (2 halves)	1.6
Whole-wheat bread (1 slice)	1.9	Cookies (1 oz)	0.5	Peach, raw (1 medium)	1.7
<u>Crackers</u>					
Graham	0.25	Gelatin dessert	0.0	Pear, canned (2 halves)	2.0
Rye wafers (3)	5.7	Ice cream (1/2 cup)	0.0	Pear, raw (2 1/2 per pound)	4.0
Saltines (2)	0.1	Pie, fruit (1/8 of 9-inch pie)	2.0	Pineapple, canned	1.0
Triscuits (7)	4.0	Pudding	0.0	Pineapple, raw	1.8
Wheat Thins (24)	1.0	Yogurt (8 oz) plain or fruit	0.0	Plums, raw, 1 medium	1.0
<u>Snacks</u>					
Corn chips (1 oz)	1.4	<u>Fats and Nuts</u>			
Popcorn (1 cup)	1.0	Avocado (1/4)	2.1	Plums, canned (3)	0.9
Potato chips (1 oz)	1.0	Butter; margarine (1 tsp)	0.0	Prunes (3)	1.8
Pretzels (1 oz)	0.9	Cream, dairy and nondairy, all types	0.0	Raisins (2 tbsp)	1.6
<u>Cereals and Grains</u>					
(Cooked cereal 3/4 cup unless noted)		Mayonnaise; smooth salad dressing (1 tbsp)	0.0	Raspberries, raw	4.2
Cream of rice	1.0	Oil; shortening (1 tbsp)	0.0	Strawberries, raw	1.6
Farina	2.4	Olives (5 medium)	0.5	Tangerine	1.9
Grits	1.5	Tartar sauce; thousand island dressing (1 tbsp)	0.0	Watermelon	0.4
Oatmeal	3.0	<u>Fruit Juices</u> (1/2 cup)			
Ralston	4.6	Almonds, roasted	3.0	Apple	0.0
<u>Dry, Ready-to-Eat Cereal</u>					
(1 oz unless noted)		Filberts	1.7	Apricot nectar	0.8
All-Bran	10.0	Peanuts, roasted and salted	2.3	Cranberry	0.0
Bran Buds (1/3 cup)	12.0	Peanut butter, chunky (2 tbsp)	2.0	Grapefruit; orange	0.0
Bran, unprocessed (1 tbsp)	4.6	Walnuts (1 oz)	1.4	Grape	0.0
40% bran flakes	4.0	<u>Meat, Fish, Poultry, Cheese, Eggs</u>			
<u>Fruits and Juices</u>					
		<u>Sugar and Sweets</u>			
		(1/2 cup portion unless noted)		Jam; preserves (1 tbsp)	0.7
		Apple, raw with peel	3.7	Jelly (1 tbsp)	0.0
		(2 1/2-inch diameter)		Sugars; honey; syrups	0.0
		Apple, canned, sliced	1.7	Cranberry sauce (1/4 cup)	0.7

Dietary Fiber Content of Common Foods (Cont.)

	Grams		Grams
<u>Soups (½ cup)</u>			
Bean with bacon	7.0	Green pepper	0.9
Beef barley	2.0	Kale	1.3
Beef noodle	1.0	Lentils	7.8
Celery, cream of	1.0	Lettuce, iceberg (shredded)	0.5
Cheddar cheese	1.0	Mixed vegetables	2.5
Chicken gumbo	1.0	Mushrooms, raw	0.4
Chicken noodle	1.0	Mushrooms, canned	1.9
Chicken rice	0.0	Okra	2.2
Chicken vegetable	2.0	Onions, raw, chopped	1.4
Clam chowder, Manhattan	2.0	Peas, green, frozen	4.4
Clam chowder, New England	1.0	Pinto beans	5.5
Corn chowder	2.0	Potato, baked, with skin	4.6
Minestrone	4.0	Potato, boiled (140 g)	2.3
Mushroom, cream of	1.0	Potato, french fried (20)	1.6
Pea, green	2.5	Potato, mashed	1.9
Pea, split	5.0	Radishes	0.7
Potato, cream of	1.0	Sauerkraut	2.9
Tomato	2.0	Spinach	2.8
Turkey noodle	1.0	Spinach, raw	0.8
Vegetable	2.0	Squash, summer	1.3
Vegetable beef	2.0	Squash, winter	4.5
		Squash, zucchini	1.8
<u>Vegetables</u>			
(½ cup portion cooked or raw unless noted)			
Asparagus	1.4	Sweet potatoes, mashed	3.0
Baked beans (1/3 cup)	3.0	Tomato, raw (1medium)	1.4
Bean sprouts	0.6	Tomato juice	0.7
Beans, green, fresh-cut	2.0	Tomato sauce	1.7
Beans, green, cut	1.3	Turnips	1.6
Beans, kidney	4.9	Turnip greens	2.5
Beans, lima, baby	4.9	<u>Miscellaneous</u>	
Beans, navy	6.7	Ketchup (1 tbsp)	0.2
Beets	1.4	Mustard (1 tsp)	0.1
Broccoli, raw (1 spear)	1.3	Pickle, dill (1 medium)	0.3
Broccoli, spears	2.8	Pickle, sweet (4 slices)	0.5
Broccoli, chopped	2.3	Pickle relish, sweet (1tbsp)	0.5
Brussels sprouts	2.0		
Cabbage, cooked	1.7		
Cabbage, raw	0.8		
Carrots, cooked	2.6		
Carrots, raw (1 medium)	2.2		
Cauliflower, cooked	1.7		
Cauliflower, raw	1.3		
Celery, raw (1 stalk)	0.7		
Chard	1.7		
Chickpeas (garbanzo beans)	5.3		
Collard greens	2.4		
Coleslaw	0.9		
Corn kernels	2.3		
Cowpeas (black-eyed peas)	3.7		
Cucumber, raw	0.4		

Source: Pennington J. *Bowes and Church's Food Values of Portions Commonly Used*. 17th ed. Philadelphia, Pa: JB Lippincott; 1998.

GASTROINTESTINAL SOFT DIET

Description

The Gastrointestinal Soft Diet limits most raw, highly seasoned, and fried foods. The diet contains only moderate amounts of fiber.

Indications

This diet is used as a transitional diet for patients who have undergone surgery that irritates or causes major discomfort to the gastrointestinal tract.

Contraindications

The diet does not necessarily limit fat or the size of meals and may be counterproductive in patients with gastro- esophageal reflux (see Section III: [Gastroesophageal Reflux](#)).

The diet is low in fiber and may be contraindicated in disorders, such as diverticulosis, requiring a liberal fiber intake. See Section 1D: [Fiber-Restricted Diets](#) and [High-Fiber Diet](#).

The diet may inappropriately limit mealtime variety and thereby limit enjoyment and oral intake.

Nutritional Adequacy

The diet can be planned to meet the Dietary Reference Intakes (DRIs) as outlined in the [Statement on Nutritional Adequacy](#) in Section 1A.

How to Order the Diet

Order as "Gastrointestinal (GI) Soft Diet." If between-meal feedings are required, they should be specifically ordered.

SAMPLE MENU

Breakfast	Noon	Evening
Orange juice	Roast beef	Cream of tomato soup
Oatmeal	Whipped potatoes	Baked chicken
Scrambled egg	Cooked carrots	Steamed rice
Toast	Plain roll	Green beans
Margarine	Margarine	Plain roll
Jelly	Sugar cookies	Margarine
Milk	Iced Tea	Sliced peaches
Coffee		Milk

FOOD GUIDE-GASTROINTESTINAL SOFT DIET

Since the food tolerances of patients with gastrointestinal disorders and symptoms can vary considerably, attention should be given to individual food tolerances.

FOOD GROUP	FOOD ALLOWED	FOODS EXCLUDED
Beverages and Milk	Milk and milk drinks Cereal beverages Carbonated beverages Coffee, tea	Alcohol
Breads and Crackers	White, seedless rye, fine whole-wheat bread Plain crackers Graham crackers	Coarse whole-grain breads Breads with seeds, nuts, or raisins Highly seasoned crackers
Cereals and Grains	Cooked and dry cereals unless listed as excluded Plain spaghetti, macaroni, noodles, rice	Bran cereals Cereals with raisins Brown or wild rice
Desserts	Plain cake, cookies, pudding, custard, ice cream, sherbet, gelatin, fruit whips	Pastries, pies, desserts containing nuts, coconut, dried fruits, fruit with seeds or tough skins
Fats	Butter Cream; cream sauce Bacon Margarine Mayonnaise; mild salad dressing	Fried foods Gravy Nuts Olives Spicy salad dressings
Fruits and Juices	All fruit juices Avocado Banana Grapefruit and orange sections without membrane Baked peeled apple; applesauce Canned: apricots, cherries, peaches, pears, pineapple Peeled ripe peaches or pears	Raw fruit not listed as allowed Dried fruits Fruits with edible seeds or tough skins
Meat, Fish, Poultry, Cheese, Eggs, Legumes	Meat, fish, or poultry, not fried Plain cheeses Eggs, except fried Smooth peanut butter	Fried meat, fish, or poultry Highly seasoned cold cuts or sausage Fried eggs
Soup	Cream soups made from foods allowed; meat, rice, noodle soups	Vegetable soups unless made from foods allowed
Sugar and Sweets	Sugar, syrup, honey, clear jelly; plain, sugar candy in moderation	Jam, marmalade, and candies that contain tough skins, seeds or nuts
Vegetables and Potatoes	Tomato juice Cooked asparagus, beets, carrots, green or wax beans, green peas, mushrooms, potatoes, spinach, summer squash, sweet potatoes, tomatoes, winter squash	Raw vegetables All other cooked vegetables Deep-fried vegetables
Miscellaneous	Salt, allspice, cinnamon, paprika, herbs, flavoring extracts, ketchup	Red, black, white pepper; horseradish, mustard, pickles, popcorn, potato chips