

## FAT RESTRICTED DIET FOR GALLBLADDER DISEASE

- **PURPOSE:** The diet is designed to restrict fat intake for patients who experience symptoms of bloating, diarrhea, steatorrhea and nutrient losses when high fat foods are eaten.
  
- **USE:** This diet is used in the treatment of diseases of the pancreas, biliary tract and lymphatic system and other diseases in which fat is malabsorbed. The diet is appropriate for patients with disorders such as cystic fibrosis, radiation enteritis, pancreatitis, celiac disease, short bowel syndrome and tropical sprue. See the section on Fat Malabsorption Test Diet, page K-14 for information on the test diet to determine fat malabsorption. This diet is not intended for use in lowering serum lipid levels.
  
- **MODIFICATIONS:** The diet is modified to restrict overall fat to 25 to 50 grams (g) per day. The 25 g fat diet allows 5 oz. of lean meat or meat substitutes per day; the 50 g fat diet allows 6 oz. of lean meat or meat substitutes as well as 3 to 5 servings of fat per day. The fat servings are outlined in Table E-13. The food plan must be individualized to meet patient preferences. Monitor patient tolerance and adjust fat restriction in response to reported symptoms. It may also be necessary to supplement the diet with additional carbohydrates in the form of sugars and starches to meet caloric needs. Any pancreatic enzyme replacements prescribed should be taken with meals.  
  
Fifteen (15) mL of medium-chain triglycerides (MCT) may be added to the diet 3 to 4 times per day to provide additional energy in cases of maldigestion and/or malabsorption of fat. It is important to refer to the product use guidelines for appropriate administration.
  
- **ADEQUACY:** The well chosen Fat Restricted Diet can be adequate in Calories and all other nutrients needed to meet the 1989 Recommended Dietary Allowances (See Appendix 5). Patients with prolonged steatorrhea or diarrhea may develop vitamin or mineral deficiencies. Vitamin B12 malabsorption is one of the most common nutritional abnormalities in patients with bacterial overgrowth; iron deficiency anemia can also occur in these patients. Fat-soluble vitamins may be poorly absorbed and clinical deficiencies of vitamins A, D, and E have been reported.

If supplementation is indicated, fat-soluble vitamins should be supplied in a water-soluble form.

**TABLE E-12: FOOD SELECTION GUIDELINES FOR FAT RESTRICTED DIET**

<b>FOOD CATEGORY</b>	<b>RECOMMENDED</b>	<b>NOR RECOMMENDED</b>
<b>Beverages</b>	Skim milk; nonfat buttermilk; powdered and evaporated skim milk; coffee, tea; postum; soda; other nondairy drinks	1%, 2%, whole milks, buttermilk made with whole milk, chocolate milk, evaporated milk; cream; egg nog; malted milk, milk shakes, alcoholic beverages(unless approved by the physician)
<b>Breads and cereals</b>	Whole-grain breads, enriched breads; saltines, graham crackers, Melba toast, pretzels, matzo, rye wafers, soda crackers; cold and cooked cereals, whole-grain cereal except granolas; unbuttered popcorn; plain corn or flour tortillas	Biscuits; crackling corn bread, fried cornbread; breads containing egg or cheese; sweet rolls; pancakes; french toast; doughnuts; waffles; fritters; buttered popcorn; muffins; granola cereals and cereals containing nuts or coconut; breads to which extra fat is added; croissants; popovers; snack crackers with added fat; cheese crackers; snack chips; stuffing; fried tortillas
<b>Desserts and sweets</b>	Sherbet, fruit ice; gelatin; angel food cake; vanilla wafers; graham crackers; meringues; pudding made with skim milk; fat-free commercial baked products; nonfat ice cream and frozen yogurt; sugar; honey; jelly; jam; marmalade; apple butter; molasses; maple syrup; sourballs; gumdrops; jelly beans; marshmallows; hard candy; cocoa powder	All other cakes, cookies, pies and pastries; puddings made with whole milk or eggs; cream puffs; candies made with butter, coconut, chocolate, nuts and cream.
<b>Fruits</b>	Fresh, frozen, canned or dried fruit; fruit juices	Avocado; coconut, banana, apples
<b>Potatoes and potato Substitutes</b>	Potatoes, sweet potato; rice; barley; noodles, spaghetti, macaroni, and other pastas	Fried potatoes; fried rice; potato chips; chow mein noodles
<b>Vegetables</b>	All fresh, frozen or canned vegetables prepared without fats, oil or fat-containing sauces such as cream or cheese	Buttered, au gratin, creamed, or fried vegetables unless made with allowed fat allowance
<b>Soups</b>	Fat-free broth; fat-free vegetable soup; cream soup made with skim milk and allowed fat; packaged dehydrated soups	All others

**TABLE E-12: FOOD SELECTION GUIDELINES FOR FAT RESTRICTED DIET, Continued**

<b>FOOD CATEGORY</b>	<b>RECOMMENDED</b>	<b>NOT RECOMMENDED</b>
<b>Meats and meat Substitutes</b>	<p>All meats trimmed fat  Poultry: breast meat without skin  Veal: all cuts  Lean beef: USDA good or choice cuts (such as round, sirloin, flank steak, tenderloin, and chopped beef); roast (rib, chuck, rump); steak(cube, Porterhouse, T-bone); meatloaf made with 95% lean ground beef  Lean pork: fresh, canned, cured or boiled ham; Canadian bacon; tenderloin; chops; loin roast; Boston butt; cutlets  Luncheon meats, frankfurters: only those labeled 96%+ fat-free  Lean lamb: chops, leg or roast  Fish: all fresh, frozen or canned in water: crab, lobster, scallops, shrimp, clams, oysters, tuna; herring(uncreamed or smoked); sardines (canned, drained); salmon (canned in water)  Legumes: cooked, canned, without added fat  Tofu, tempeh, natto  Cheese: skim milk cheeses; low fat cottage cheese, (non-fat cottage cheese as desired); Parmesan cheese  Low-fat yogurt; (non-fat yogurt as desired)  Eggs: poached; soft or hard cooked; scrambled, not fried in fat; egg substitutes, (non-fat egg substitutes as desired); count 1 egg as 1 oz of meat in daily meat allowance</p>	<p>Any fried, fatty or heavily marbled meat, fish or poultry  Poultry: duck, goose, dark meat, skin  Beef: most USDA prime cuts of beef, ribs, corned beef  Pork: spareribs; ground pork sausage ( patty or link); ham hocks; pigs' feet; chitterlings  Lamb: patties (ground lamb)  Fish: tuna or salmon packed in oil  Most luncheon meats, including bologna: salami, pimento loaf  Sausage: Polish: Italian, knockwurst; smoked bratwurst; frankfurter  Legumes cooked with added fat  Cheese: all others</p>
<b>Miscellaneous</b>	<p>Catsup: chili sauce; vinegar; pickles; vanilla; white sauce made with skim milk and allowed fat; mustard; all herbs and seasonings, apple butter; fat-free salad dressings and mayonnaise</p>	<p>Olives and nuts in excess of specified portions; cream sauces; gravies</p>

**TABLE E-13: FAT SERVINGS FOR 50 g FAT RESTRICTED DIET\***

<b>FATS</b>	<b>PORTIONS</b>
Unsaturated Fats:	
Margarine	1 tsp
Diet margarine	1 TbS
Mayonnaise, reduced-calorie	1 TbS
Mayonnaise, regular	1 tsp
Creamy salad dressings, reduced-calorie	1 TbS
Creamy salad dressing, regular	2 tsp
Other salad dressings, reduced-calorie	2 Tbs
Other salad dressing, regular	1 Tbs
Vegetable oils	1 tsp
Nuts:	
Almonds	6 whole
Cashews	1 Tbs. or 2 whole
Peanuts	20 small or 10 large
Peanut butter	2 tsp
Cashew butter	2 tsp
Walnuts	2 whole
Pistachios	18 whole
Other nuts	1 Tbs
Seeds:	
Sesame	1 Tbs
Sunflower	1 Tbs
Pumpkin	2 tsp
Olives	10 large or 5 small
Saturated:	
Bacon	1 slice
Bacon fat	1 tsp
Butter	1 tsp
Whipped butter	2 tsp
Chitterlings	½ oz
Shredded coconut	2 Tbs
Cream:	
Light, coffee, table	2 Tbs
Heavy whipping	1 Tbs
Sour cream	2 Tbs
Cream cheese	1 Tbs
Coffee whitener:	
Liquid	2 Tbs
Powder	4 tsp
Lard	1 tsp
Oil:	
Coconut	1 tsp
Palm	1 tsp
Shortening	1 tsp
Salt pork	¼ oz

\*Amounts listed equal 1 fat equivalent; 3-5 equivalents are allowed per day for 50-g fat diet. It is recommended that unsaturated fats be used.