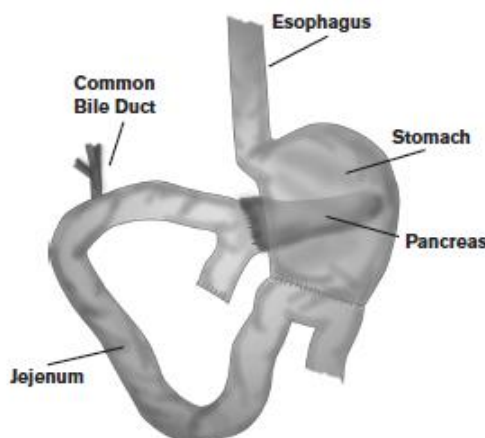


Post Whipple Diet

Diet after Whipple Procedure

The standard Whipple procedure or **pancreaticoduodenectomy** is an operation in which a part of the pancreas, known as the head, is removed along with the gallbladder, common bile duct, part of duodenum, and a portion of the stomach.

Pyloric preserving pancreaticoduodenectomy is a modification of the standard Whipple, in which the stomach remains intact.



The pancreas is a gland that secretes the hormones insulin and glucagon and other hormones that regulate blood sugar levels and the release of enzymes that help digest protein, fat, and carbohydrates. If a part of the pancreas is removed, it can impact the digestion of these nutrients, especially fat, resulting in fat mal digestion and absorption. A decrease in insulin output can increase the risk of having high blood sugar levels.

Some of the most common complications of the Whipple procedure involving diet and nutrition are the following:

- Fat mal digestion and absorption
- Loose, oily stool (sign of fat mal digestion and absorption)
- Early satiety/fullness (usually associated with the standard Whipple procedure)
- Delayed gastric emptying (common to both standard and pyloric preserving procedure)
- Whipple induced hyperglycemia (high blood sugar)
- Weight loss
- Possible vitamin (vitamins A, D, E) and mineral deficiency (selenium, iron, zinc)

To help you tolerate meals best, your food choices after the Whipple procedure should be:

- low in fat
- low in indigestible fibers/insoluble fibers
- small, frequent portions
- soft in texture to ease digestion

You may need a liquid nutritional supplement for additional calories and protein, such as a 4 ounce serving of Boost® or Ensure®, until you are able to eat enough food to meet your calorie needs.

Your experience with an oral diet in the post-surgical period can be divided into 3 general time frames:

- the **immediate post-surgical period** lasting 1 to 14 days
- the **short-term post-surgery period** lasting 15 days to 3 months
- the **long-term post-surgical period** lasting 4 months or longer

These periods may vary by the individual.

Foods for a Whipple Diet and Meal Planning

Food group	Foods to avoid or which may cause distress	Foods that are recommended	Serving sizes
Breads, Cereals, Rice, Pasta, Potato	Whole grain, high-fiber grain products such as shredded wheat, bran flakes, Raisin Bran®, Fiber One®. High fat bakery products such as croissants, muffins, Danish, donuts. Breads and cereals made with seeds and/or nuts should also be avoided	Low-fiber, seedless breads and rolls. Hot cereals such as oatmeal, Cream of Wheat, Cream of Rice. Cold cereals such as Cheerios®, corn flakes, Post Grape-Nuts Flakes®, Rice Krispies®, wheat flakes, etc. Rice, noodles, pasta, potato without skin, pancakes, waffles, and crackers	½ cup hot cereal ¾ cup cold cereal ½ cup pasta, rice, or potato 1 slice of bread ½ roll 1 pancake or waffle 5 crackers
Fruits	Fresh fruits with peels, grapes, pineapple, blueberries, raspberries, cantaloupes, and melons, dried fruits (these fruits may be reintroduced during the <i>short-term post-surgical period</i> and likely the <i>long-term post-surgical period</i>)	Canned peaches, pears, applesauce, peeled apples, peeled pears, baked apples without the skin, fruit juices, ripe bananas, and stewed strawberries	½ cup canned or cooked fruit ¾ cup juice 1 small to medium size peeled, fresh fruit ½ large banana

Food group	Foods to avoid or which may cause distress	Foods that are recommended	Serving sizes
Vegetables	Higher-fiber raw or canned vegetables (such as leafy greens, celery, corn, cabbage, Brussels sprouts, cauliflower and broccoli, raw tomatoes, onions, cucumbers, and zucchini (these vegetables may be reintroduced during the <i>short-term post-surgical period</i> and likely the <i>long-term post-surgical period</i>)	Cooked vs fresh vegetables such as canned or cooked carrots, beets, winter squash, sweet potato, tomato sauce, peas, string beans (green or yellow), vegetable juices such as V8 and tomato juice	½ cup cooked ¾ cup vegetable juice
Meats, poultry, fish, dry beans, peas, eggs, nuts, cheese	Fried fish, tuna packed in oil, fried meats or poultry, refried beans, nuts, seeds, large amounts of cheese	Whole egg, egg whites, water packed tuna, fish, lean beef, pork, chicken (skinless), and turkey, low-fat cottage cheese, small amounts of sliced or brick cheese	1 oz of meat, fish, or poultry 1 egg 1/3 cup cottage cheese 1/3 cup beans Limit sliced or brick cheese to 1 oz per day
Milk, Yogurt	Ice cream and whole milk	2%, 1% or skim milk and yogurt	1 cup milk 1 cup yogurt
Fats	Butter, margarine, vegetable oil, peanut butter, crunchy nut butters, cream cheese, sour cream, salad dressings, salad spreads and pesto	<i>In quantities as written for you in the Food Guide for Daily Meal Plan on the next page</i>	1 tsp butter, margarine, vegetable oil 2 tsp peanut butter ½ tbsp. of regular mayonnaise 1 tbsp salad dressing or salad spread 1 tbsp cream cheese 2 tbsp sour cream
Snacks, sweets	Cakes topped and filled with frosting/icing, pastries, donuts, corn chips, potato chips, and nuts	Plain cakes, shortbread cookies, low-fat muffins, puddings, sherbet	

Condiments, seasoning, sugar		Ketchup, mustard, salt, pepper, spices; jams, jelly, honey, syrup, granulated white or brown sugar	
Liquids and beverages		Coffee, tea, carbonated or non-carbonated beverages, water	

Food Guide for Daily Meal Planning

Quantities of Foods to Meet Your Calorie, Protein and Nutrient Needs

Food Group	Serving Sizes One serving size is equal to:	Serving of Food to Include in Daily Meal Plan
Breads, Cereals, Rice, Pasta	<ul style="list-style-type: none"> • 1 slice bread • ½ - 1 cup ready-to-eat cereal • ½ cup cooked pasta, cereal, or rice • ½ cup potato • ½ cup cooked barley 	
Fruits	<ul style="list-style-type: none"> • ½ cup canned or cooked fruit or ½ large banana • ¾ cup juice • 1 small to medium sized fruit 	
Vegetables	<ul style="list-style-type: none"> • ½ cup cooked • ¾ cup vegetable juice 	
Meats, Poultry, Fish, Dry Beans, Peas, Eggs, Nuts	<ul style="list-style-type: none"> • 1 oz meat, poultry, or fish • 1 egg • 1/3 cup cottage cheese • 1 oz cheese • 1/3 cup beans 	
Milk, Yogurt	<ul style="list-style-type: none"> • 1 cup milk or yogurt 	
Sugars	<ul style="list-style-type: none"> • 1 tsp or tbsp jam, jelly, syrup, honey, granulated white or brown sugar 	
Fats	<ul style="list-style-type: none"> • 1 tsp margarine, butter, or any vegetable oil • 2 tsp peanut butter • ½ tbsp regular mayonnaise • 1 tbsp salad dressing or spread • 1 tbsp diet margarine, cream cheese, or whipping cream • 2 tbsp reduced calorie salad dressing/sour cream 	
Liquids	<ul style="list-style-type: none"> • 6-8 cups 	

Other Tips

- If you have any difficulty with meal planning, food selections, or any other problems with your diet, please call your dietitian.
- Limit your liquid at meals to ½ cup, (milk is a good choice) and drink the majority of liquids 30 minutes before or after your meal. As fullness after eating normalizes, resume preferred intake of liquid.
- If your physician has prescribed pancreatic enzyme replacement medication, be sure to take it with all meals or as prescribed for you.
- Plan to eat at least 3 meals per day, and a 4th or 5th meal if you cannot eat enough in 3 meals to meet your calorie and protein goal.
- Plan to give yourself more time to eat your meals to ease your digestion and increase intake at each meal.
- Take a multivitamin.

Directions for Re-Introducing Various Foods Back into Your Daily Diet

About 2 weeks after discharge from hospital:

- Add one new food at a time.
- Continue to avoid fried or high-fat foods.
- Consider use of nutritional supplement if oral intake is inadequate.
- Increase the portion sizes at your meals.
- Record your food intake to assess adequacy of food intake.

About 4 months after surgery

- Maintain caution with the fat content of foods you eat.
- Reintroduce a full range of fruits and vegetables as tolerated.
- Maintain a healthy diet that is rich in cereals, grains, fruits, and vegetables; moderate in lean meats, fish, and poultry; and low in fat content.

SAMPLE MEAL PLAN

Breakfast

1 banana
½ cup oatmeal
½ - 1 cup milk

Midmorning or Midafternoon Meal

½ - 1 cup yogurt and graham crackers
OR
1 scrambled egg or toast and jam
OR
1/3 - ½ cup cottage cheese and saltine cracker

Lunch

Turkey sandwich on seedless rye or a bun/roll
½ cup cooked vegetable
½ cup canned peaches
½ cup milk

Dinner

Chicken breast or other lean meat or fish
½ - ¾ cup rice, pasta, or potato
½ - 1 cup cooked vegetable
½ cup milk
Low-fat dessert (optional)

Evening Meal

½ to ¾ cup cereal
OR
Toast with jam or ½ sandwich
½ cup milk or ½ - 1 cup yogurt

**If you have any questions, please call the
Dietitian Office at Roswell Park at 716-845-2398.**