

# Diet after Total Pancreatectomy

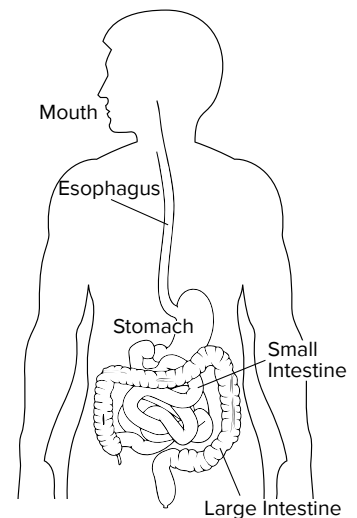
Patient name: \_\_\_\_\_ Surgery date: \_\_\_\_\_

Dietitian: \_\_\_\_\_ Contact number: \_\_\_\_\_

## Introduction

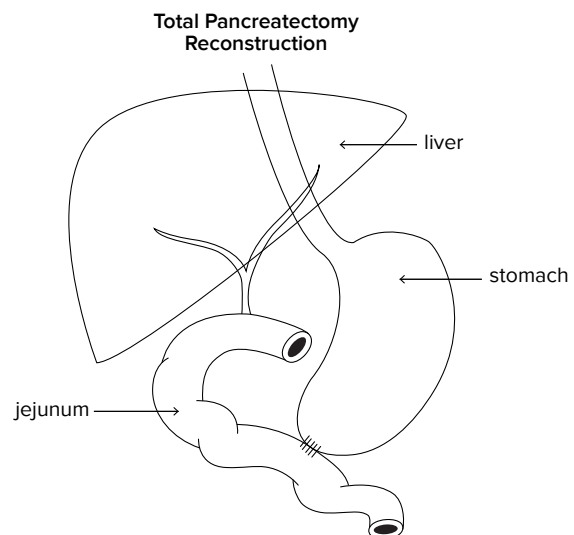
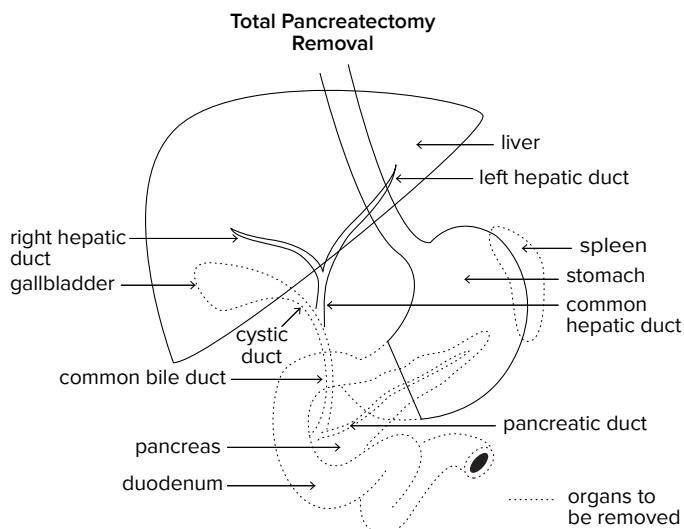
### A Review of Your Digestive Tract

Digestion starts in the mouth. When you chew and swallow food, it goes down the esophagus and lands in your stomach. From there, the contents move to your small bowel (also known as the small intestine). Most digestion happens in this long and narrow muscular tube. The small bowel is where proteins, carbohydrates, fats, and vitamins are absorbed. The pancreas aids in digestion by producing pancreatic enzymes to help digest food in the small bowel. Next, the contents enter your large bowel (also known as the large intestine or colon). The large bowel absorbs water and electrolytes, turning contents from liquid to formed bowel movements.



### What is a Total Pancreatectomy?

A total pancreatectomy is the surgical removal of the whole pancreas. This is different from a distal pancreatectomy which removes the body and the tail of the pancreas while the head of the pancreas is left intact. The removal of the whole pancreas causes people to experience impaired digestion and absorption of nutrients as well as diabetes after the surgery requiring changes to their diet and medications.



# Nutrition Problems and Management

## The Absence of Pancreatic Enzyme Production

Surgical removal of the pancreas will cause an absence of pancreatic enzyme production. This results in impaired digestion and absorption of nutrients, especially fat. Symptoms include changes in stool (loose, pale, greasy/oily, floating, foul smelling), excessive foul smelling flatulence, bloating, belching, abdominal pain, cramping after eating, weight loss, and fatigue.

Tips:

- Your doctor will prescribe pancreatic enzymes for you. The pancreatic enzymes approved for use in Canada are Cotazym®, Creon®, Pancrease®, and Viokase®. Take the pancreatic enzymes with meals and snacks as directed by your doctor.
- You should be able to eat a regular healthy diet without any fat restriction if you are taking your pancreatic enzymes as prescribed. Monitor the amount of fried or greasy food that you eat as you may need more pancreatic enzymes if you are consuming higher fat foods. Talk to your doctor and dietitian if you continue to experience symptoms.
- Talk to your doctor, dietitian, or pharmacist about taking a multivitamin and mineral supplement.

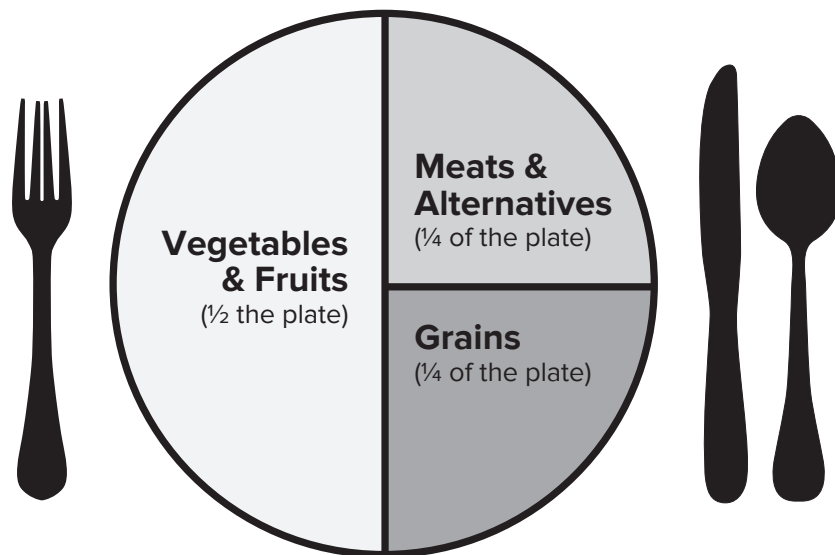
# Diabetes

Diabetes is a condition in which your body is unable to produce insulin or use the insulin it produces, causing high blood sugars. Normally, the pancreas produces and releases insulin to manage blood sugars. When this does not happen, sugar builds up in your blood instead of being used for energy. Surgical removal of the pancreas will cause diabetes. Symptoms include excessive thirst, excessive hunger, tiredness, increased urination, and weight loss. Diabetes is managed with diet, exercise, and diabetes medication.




## What Foods Increase Blood Sugar?

- Carbohydrates (carbs) are a type of nutrient found in foods like fruits, grains, starchy vegetables, and dairy products. Carbs include sugars, starches, and fibre. Sugars and starches cause an increase in blood sugar. Fibre does not increase blood sugar, but actually slows digestion to help prevent blood sugar spikes. You need carbs to stay healthy, but the type and amount of carbs you eat matters.




## Balanced Meals with Canada's Food Guide



## Nutrition:

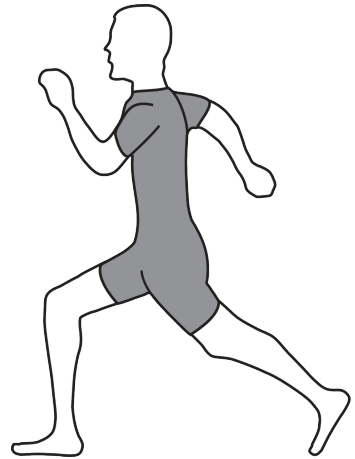
<p>Eat 3 meals per day at regular times and space meals no more than 6 hours apart.</p>	<ul style="list-style-type: none"> <li>• Eating at regular times helps control blood sugar levels.</li> </ul>
<p>Fill <math>\frac{1}{4}</math> of your plate with whole grains or starchy foods.</p> 	<ul style="list-style-type: none"> <li>• Choose high-fibre carbs such as whole grain bread, pasta, rice, cereal, pita, tortilla, and roti.</li> <li>• Starchy vegetables (e.g. potatoes, yams, corn) are high in fibre and similar in their carb content to other grains.</li> <li>• Limit foods high in simple sugars such as regular pop, sports drinks, cakes, pastries, candies, and sweet condiments (e.g. honey, ketchup, BBQ sauce, teriyaki sauce) as they cause blood sugar spikes.</li> </ul>
<p>Fill <math>\frac{1}{4}</math> of your plate with protein foods.</p> 	<ul style="list-style-type: none"> <li>• Protein foods slow digestion and help prevent blood sugar spikes.</li> <li>• Choose healthy proteins including plant-based protein (e.g. tofu, soybeans, chickpeas, beans, lentils, plant protein powders), lean animal protein (e.g. fish, chicken, turkey, eggs, whey protein powder), and lower-fat dairy products (e.g. 0-2% milk fat Greek yogurt, 1-2% milk fat cottage cheese) more often.</li> </ul>
<p>Fill <math>\frac{1}{2}</math> your plate with vegetables and fruits.</p> 	<ul style="list-style-type: none"> <li>• People with diabetes should choose more vegetables than fruit because most vegetables have less carbs.</li> <li>• Eat whole vegetables and fruits instead of drinking juices. Juices lack the fibre found in whole fruit and are higher in sugar.</li> <li>• As a general guide, spread fruit out over the day by having a small piece of fruit or <math>\frac{1}{2}</math> cup of fruit with a meal or snack.</li> </ul>

## Nutrition (continued):

<p>Choose healthy fats.</p> 	<ul style="list-style-type: none"><li>• Choose healthy fats (e.g. unsaturated fats) such as olive oil, canola oil, avocado, non-hydrogenated margarine, nuts, seeds, and oily fish (e.g. salmon, trout).</li><li>• Choose foods with saturated fat less often (e.g. red meat, butter, cakes, pastries, deep-fried foods, high-fat dairy products) as they can increase your cholesterol level and your risk of heart disease.</li></ul>
<p>Choose snacks that contain high-fibre carbs and protein foods.</p> 	<ul style="list-style-type: none"><li>• Snacks containing high-fibre carbs and protein foods (e.g. hummus and crackers, apple slices and peanut butter, cottage cheese and fruit) will help control blood sugar levels.</li></ul>
<p>Choose healthy beverages to quench thirst.</p> 	<ul style="list-style-type: none"><li>• Make water your beverage of choice. Unsweetened tea or coffee are other good choices.</li><li>• Drinking regular pop or fruit juice causes blood sugar spikes.</li><li>• Alcohol can affect your blood sugar. If you choose to drink alcohol, discuss this with your doctor.</li></ul>

**Other lifestyle tips:**

- Include regular physical activity into your daily routine. Regular physical activity (e.g. brisk walking, cycling, and jogging) improves your body's sensitivity to insulin and helps manage your blood sugar levels. If you have been inactive for some time, talk to your doctor before starting any exercise program that is more strenuous than brisk walking.
- Your doctor will prescribe insulin, take it as directed. Talk to your doctor if you continue to have symptoms of high blood sugars and whether your insulin needs to be adjusted.

**Low Nutrient Levels**

Low levels of nutrients can be caused by not eating enough nutrients or by not digesting or absorbing nutrients after surgery. The most common nutrients of concern are iron, calcium, zinc, copper, selenium, vitamins A, E, D, and K.

**Tips:**

- Eat a variety of foods daily.
- Talk to your doctor, dietitian, or pharmacist about taking a multivitamin and mineral supplement.

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

If you have nutrition questions after discharge, dial 8-1-1 HealthLink BC to speak with a Registered Dietitian, weekdays from 9am-5pm.



Parts of this handout were adapted from Diabetes Canada.

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