

## Diet Tips for Insulinoma

### What is an Insulinoma?

Insulinoma is a rare tumor of the pancreas that results in too much insulin being produced. Excess insulin causes hypoglycemia, which is when blood sugar levels fall too low. Symptoms of hypoglycemia

include tiredness, weakness, trembling, rapid heartbeat and hunger. It is important to keep blood sugar

levels within a normal range. You may be prescribed a home blood sugar monitor to track your blood sugar levels.

### Are there diet tips that can help prevent low blood sugar levels?

Carbohydrate foods digest to become a sugar in the blood called glucose. Eating the right types and amounts of carbohydrate throughout the day can reduce the risk of low blood sugar. Foods that contain carbohydrate include milk, yogurt, fruit, grains, breads, cereals, and legumes (the dried bean family), and starchy vegetables (potatoes, peas, corn, yams, and winter squash).

Eat a meal or snack containing carbohydrate every 2-3 hours.

- Aim for 8 small meals throughout the day to maintain blood sugar levels.
- Include a protein food at each meal or snack. Protein causes the meal to digest slower and helps stabilize blood sugar levels. Try lean meats, poultry, fish, reduced fat cheeses, soy foods, peanut butter, nuts or seeds.
- Choose whole grains such as whole grain bread, and brown rice more often than white refined grains.
- To help avoid unwanted weight gain, limit excess intake of fats, oils and fried foods.
- Limit concentrated sweets such as juices, sodas, sweetened beverages, and candy.

### What is Cornstarch Therapy?

Raw cornstarch is a carbohydrate that digests more slowly than most carbohydrate foods. Slow, steady digestion releases glucose into the blood more evenly and is helpful in maintaining blood sugar levels. Cornstarch can slightly change the taste of the foods it is added to. Mix it with *cold* or *room* temperature beverages or soft foods. Avoid adding cornstarch to warm or hot items as heated cornstarch is not effective.

Try mixing 6 tablespoons cornstarch (~43 g carbohydrate) with the following:

- Yogurt
- Low-fat milk or lactose free milk
- Soy milk
- Nutrition supplement drink

**Sample 2 day Menu for Insulinoma**

**Includes 8 meals and snacks**

**Each meal and snack provides 45-60 grams\* of carbohydrate**

	Day 1	Day 2
<b>Early 4 am-6 am Snack</b>	8 oz soy milk or low fat milk mixed with 4 Tbsp of cornstarch	8 oz nutrition supplement drink mixed with 3 Tbsp of cornstarch
<b>Breakfast</b>	1 cup cooked oatmeal, ½ cup fruit, 2 Tbsp walnuts	2 scrambled eggs, 2 slices wheat toast, 1 small fruit
<b>Snack</b>	1 cup low fat milk, one medium banana	6 oz low fat plain or low sugar yogurt mixed with 4 Tbsp of cornstarch
<b>Lunch</b>	<i>Burrito</i> 1 (10 inch) tortilla, 2 oz cooked chicken breast, 1/2 cup cooked beans, 1 tablespoon guacamole, salsa, lettuce and tomato	<i>Sandwich</i> 2 slices whole grain bread, 2 oz turkey, 1 tsp mustard, lettuce and tomato, 1 small fruit
<b>Snack</b>	1 whole grain English muffin, 1 tsp honey, 1 Tbsp peanut butter	1 whole grain pita bread 1/3 cup hummus 1 carrot
<b>Dinner</b>	3 oz grilled fish fillet, 1 tsp olive oil to sauté fish, 1 cup cooked brown rice, 1 cup cooked vegetables such as green beans or broccoli	1 cup cooked whole grain pasta, 1/2 cup tomato sauce, 1 tsp parmesan cheese, 1 cup mixed green salad with veggies, 1 Tbsp reduced-fat salad dressing
<b>Snack</b>	1 medium apple, 1 Chewy Granola Bar	8 dried apricot halves 15 Whole Grain Pretzels
<b>Late ~10 pm Snack</b>	8 oz tomato Juice mixed with 6 Tbsp of cornstarch	1 cup low fat milk or soymilk, 1/2 cup berries, ice, 5 Tbsp of cornstarch, and 1 packet of sugar-substitute such as stevia; blended in blender

Substitutes for low fat milk include: nonfat milk, soy milk, rice milk or almond milk

\* You may need to add snacks in the middle of the night. If so adding a cornstarch drink blend is recommended to help maintain your glucose levels throughout the night while you sleep.