

Side Effect Management through Diet and Nutrition

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Medical Nutrition Therapy Goals

- Prevent or reverse poor nutrition
- Maintain dose and schedule of cancer treatments
- Manage symptoms
- Maintain or improve weight and strength
- Maximize quality of life

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Common Side Effects

- Diarrhea
 - Pancreatic exocrine insufficiency*
 - Glucose intolerance, diabetes*
 - Nausea and/or vomiting
 - Loss of appetite, weight loss
- (* More common with surgery)

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Common Side Effects (continued)

- Taste changes
- Early satiety
- Pain with eating
- Fatigue
- Constipation
- Dumping syndrome*

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Diarrhea

- Work closely with medical team (multiple causes of diarrhea):
 - Treatment Induced
 - Lactose Intolerance
 - Bacterial Overgrowth
 - Pancreatic/Digestive Insufficiency

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Nutrition Therapy for Diarrhea

Independent of cause

Limit or avoid:

- Lactose (or add lactase)
- Insoluble fiber
- Foods sweetened with sugar alcohol
- Sugar sweetened beverages

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Nutrition Therapy for Diarrhea

Independent of cause

Increase:

- Soluble fiber
- Fluids

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Probiotics for Diarrhea

- Sources of probiotics:
 - Foods
 - Dietary Supplements

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Lactose Intolerance

- May be temporary
- Individuals who were not previously intolerant may become intolerant
- May be able to tolerate low lactose foods
- Provide lactase enzymes prior to a meal—avoid limiting diet

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Symptoms of Pancreatic Exocrine Insufficiency

- Feelings of indigestion
- Cramping after meals
- Large amounts of gas
- Foul smelling gas or stools
- Floating stools or greasy/fatty stools
- Frequent stools
- Loose stools/diarrhea
- Unexplained weight loss

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How to Optimize Enzymes:

- Take at the beginning and throughout the meal/snack
- Don't take at the same time as antacids or iron supplements
- If prescribed by your doctor, take acid reducing medication daily.

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Finding the right enzyme and how much to take.

- Every person is different and needs different amounts of pancreatic enzymes.
- Amount needed varies depending on disease, treatment, and amount of fat in the diet/meal.
- Find the brand and the dose that works for you and stick with it.
- Start:
 - Meals: 20,000-40,000 units of lipase per meal
 - Snacks: 10,000-20,000 units of lipase per snack

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Enzyme Dosage: Titration

- Continue to increase amount of lipase per meal/snack until pancreatic insufficiency symptoms are minimized/eliminated

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Pancreatic Enzymes: Side effects of too many

- Constipation (most common)
- Nausea
- Abdominal Cramps
- Diarrhea

(Careful not to confuse with symptoms of inadequate enzyme use, chemotherapy, or radiation treatment.)

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Glucose Intolerance/Diabetes

- Medication
- Meet with a dietitian to customize diet.
- Limit refined carbohydrates.
- Eat carbohydrates in combination with protein, fiber, and fats.

After treatment/surgery complete:

- Follow a carbohydrate controlled diet.
- Consume high fiber carbohydrate foods as tolerated. Limit refined carbohydrates.

Nausea/Vomiting

- Eliminate offending odors
- Dry crackers/toast
- Avoid overly sweet, greasy/fried, or highly spiced foods
- Use room temp foods
- Oral care
- Eliminate stress
- Medication

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Poor Appetite

- Avoid overly sweet, greasy/fried, or highly spiced foods
- Eat small amounts frequently
- Schedule meals/snacks
- Use liquid supplements/smoothies
- Light exercise
- Alcoholic beverage before meal
- May benefit from medication

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Early Satiety

- Alleviate gas and bloating
- Liquids between meals
- Small servings, more often
- Limit high fat or fried foods
- High fiber foods may be problematic
- Medications

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Taste Changes

- Rinse mouth
- Metallic taste: use plastic utensils and serving ware
- Enhance dull taste use tart flavors
- Try new foods or foods previously disliked
- Discuss with medical team possible prescription of short course of zinc

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Pain with Eating

- Avoid high fiber foods.
- Chew food well.
- Take pain medication proactively.

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Fatigue

- Be active:
- Choose foods that are less cumbersome to chew and swallow
- Do not increase caffeine use

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Constipation

- Hot fluids
- Include high fiber foods
- Limit gas forming foods, carbonated beverages, straws, chewing gum

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Dumping: symptoms

- Flushing
- Sweating
- Feeling of low blood sugar
- Loose BM

Generally occur within 2 hours of eating.

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Dumping

- Limit portion sizes
- Drink liquids between meals
- Avoid foods high in sugar
- Avoid hot liquids
- Add soluble fiber, guar gum

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What should I eat?

- Protein
- Fruits, vegetables, complex carbohydrates
- Fats (as tolerated)

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General Nutrition Tips

- Eat small frequent meals (6-8/day)
- Plan meals/snacks the day before
- Get plenty of fluids
- Limit use/portions of fat containing foods
- Choose nutrient dense foods
- Be active

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Protein Foods

- Poultry, fish, meat
- Beans, peas, lentils
- Nuts and seeds
- Eggs
- Yogurt, milk, cheese
- Vegetarian alternatives: soy milk, tofu, veggie burgers, protein powders, etc.

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Carbohydrate Foods

- Bread, pasta, rice, cereal, etc
- Fruits
- Vegetables
- Dairy products

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Sources of Fat

- Nuts and seeds
- Avocado
- Olives
- Oil: canola, olive, peanut

Other fats to use sparingly:

- Butter, stick margarine, hydrogenated oils
(or foods that use these as ingredients)

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What should I drink?

Most patients require 6 to 12 cups per day of non-alcoholic fluid per day to maintain adequate hydration. (8 oz = 1 cup)

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Liquid Nutritional Drinks

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> • Regular <ul style="list-style-type: none"> – Boost – Ensure | <ul style="list-style-type: none"> – Mix1 – Orgain | <ul style="list-style-type: none"> • Diabetic <ul style="list-style-type: none"> – Glucerna – Boost Glucose Control |
|--|--|---|
-
- Home made smoothies
 - Mix in blender
 - Liquid: juice, yogurt, milk, soymilk, etc
 - Fruit and/or cooked vegetables
 - Protein: protein powder, tofu, cottage cheese

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Eating Long Term: after all treatment complete

Plant based diet

- 2 ½ cups of fruits and vegetables per day.
 - Even better: 3 ½ - 4 ½ cups per day.
- Healthy Fats
- Eat fish (not fried)
- Limit red meat

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After All Treatment Completed

- Be active
- Take enzymes
- Take acid reducing medication (if prescribed by your surgeon).
- Follow with primary doctor for diabetes management and bone health.

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After All Treatment Completed

- “One a day” multiple vitamin and mineral supplement
- Calcium with vitamin D
- Fish oil/Omega-3 (if you don’t consume fish 3 or more times a week).

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“Super Foods”

- Citrus
- Apples
- Parsley
- Grapes
- Tumeric
- Peanuts
- Berries
- Soy*
- Red wine*

* If history of breast or ovarian cancer discuss with dietitian or doctor first

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