



Nutrition and Pancreatic Enzymes for Side Effect Management

Presented by
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Patient and Liaison Services (PALS)

PANCREATIC CANCER ACTION NETWORK

ADVANCE RESEARCH. SUPPORT PATIENTS. CREATE HOPE.

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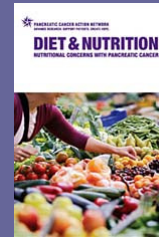


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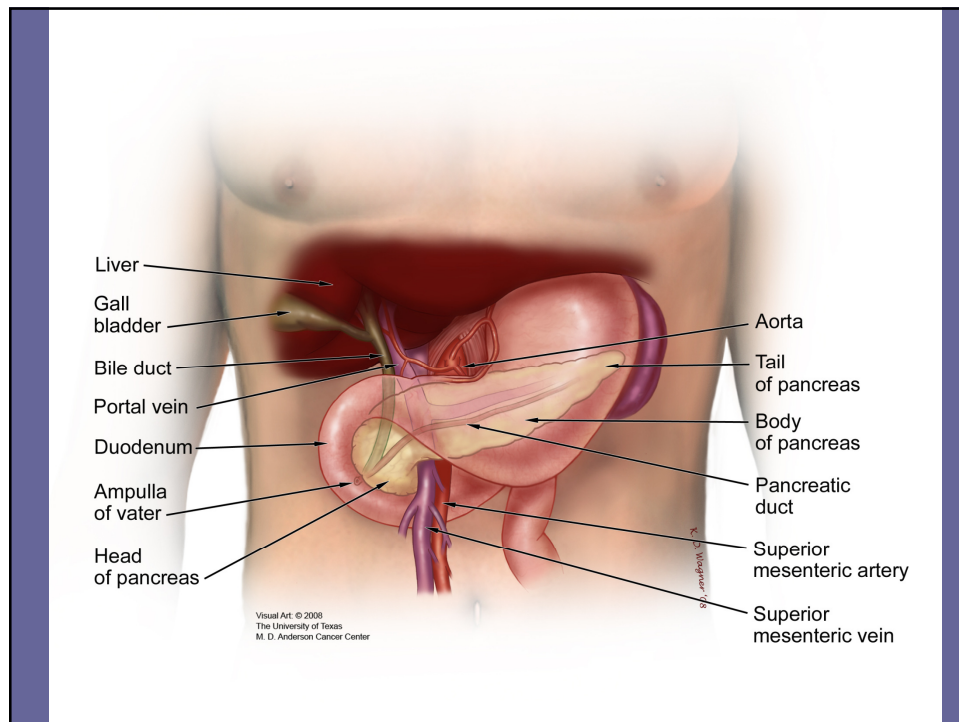
Nutrition Therapy Goals

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

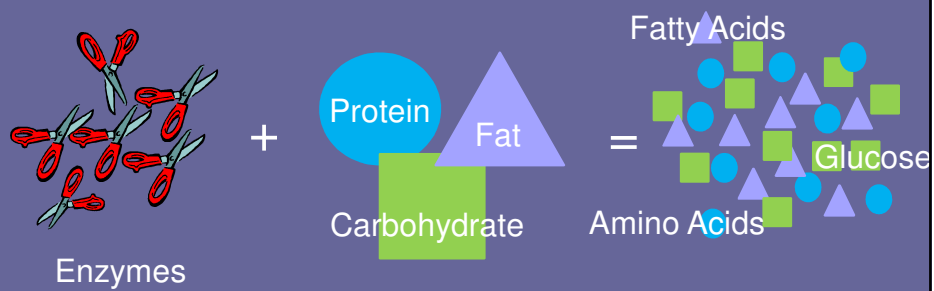


Role of the Pancreas

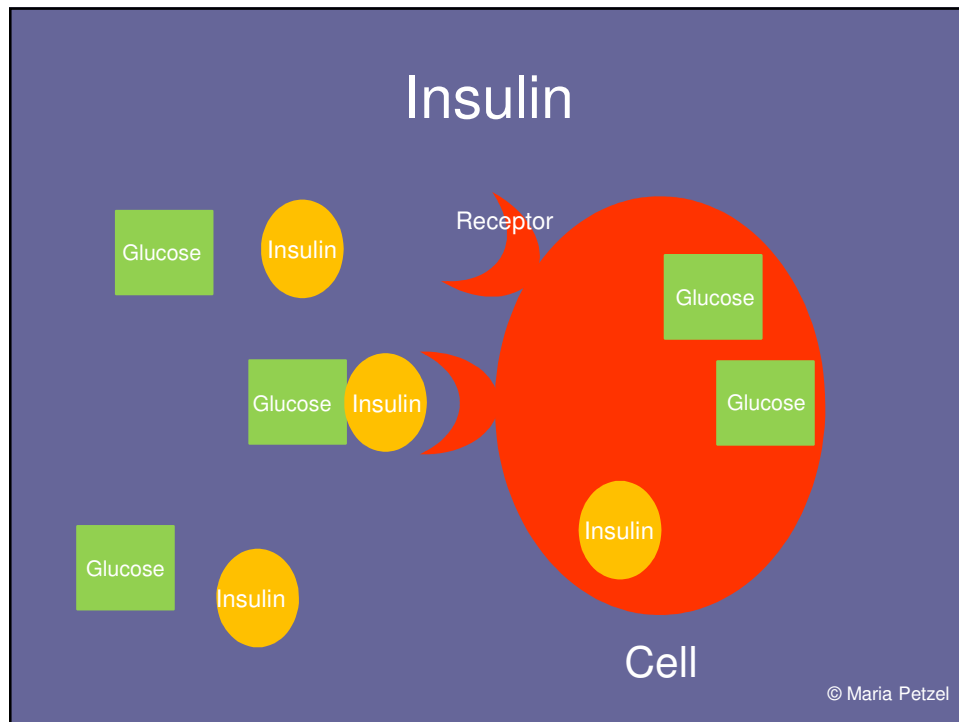
- Produce enzymes to help digest food to be transported in blood stream
- Produce insulin to help transfer glucose from the blood to the cells where it is used for energy.



Pancreatic Enzymes



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Common Side Effects

- Diarrhea
- Pancreatic exocrine insufficiency
- Glucose intolerance, diabetes
- Nausea and/or vomiting
- Loss of appetite, weight loss

Common Side Effects (continued)

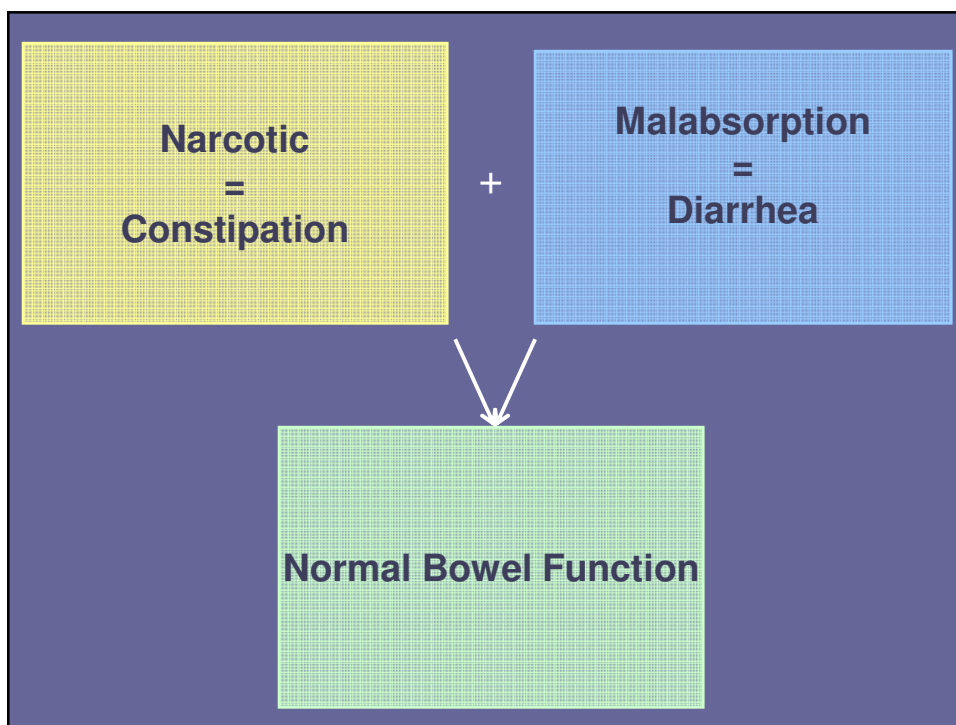
- Taste changes
- Early satiety
- Constipation

Pancreatic Enzymes



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



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.

The Right Enzyme and how much to take

- 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

Enzyme Dosage: Titration

- Increase until pancreatic insufficiency symptoms are minimized/eliminated
- Maximum: 2500 units of lipase per kilogram per meal (or 10000 units of lipase per kilogram per day)

What does that really mean?

- 60 kg (130 lb) woman
- Max daily dose = weight x 10,000 L.U.

$60 \times 10000 = 600,000$ lipase units/day =

48 capsules Creon 12,000

Or **60 capsules** Zenpep 10,000

Pancreatic Enzymes: Side effects of too many

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

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

Symptom Management

Common Side Effects

- Diarrhea
- Constipation
- Nausea and/or vomiting
- Early satiety
- Excessive gas
- Taste Changes
- Poor appetite

Diarrhea

- Work closely with medical team (multiple causes of diarrhea):
 - Treatment Induced
 - Lactose Intolerance
 - Bacterial Overgrowth
 - Pancreatic/Digestive Insufficiency
 - Dumping syndrome (after Whipple or gastric bypass)

Nutrition Therapy for Diarrhea

Independent of cause

Limit or avoid:

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

Nutrition Therapy for Diarrhea

Independent of cause

Increase:

- Soluble fiber
- Fluids

Probiotics for Diarrhea

- Sources of probiotics:
 - Foods
 - Dietary Supplements

Constipation

- Hot fluids
- Include high fiber foods
- Limit gas forming foods, carbonated beverages, straws, chewing gum
- Bowel regimen may be warranted

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

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

Excessive gas

- Optimize pancreatic enzymes
- Use simethicone (Gas-X) liberally
- Consider Bean-O
- Avoid gas-producing foods:
 - Broccoli, cauliflower, cabbage
 - Onions
 - Beans
 - Carbonated beverages (beer, soda)
- Avoid chewing gum
- Avoid drinking through straws

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

Poor Appetite

- Eat small amounts frequently
- Schedule meals/snacks
- Use liquid supplements/smoothies
- Light exercise
- Alcoholic beverage before meal
- May benefit from medication

Liquid Nutritional Drinks

Regular

- Boost
- Orgain
- Ensure
- Enu

Diabetic

- 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

What to Eat?

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

Protein

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

Complex Carbohydrate

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

Fat (as tolerated)

- 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)

Fluids

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

Water

Tea

Juice (100%)

Sports drinks

Milk or dairy alternatives

Broth

Gelatin

Glucose Intolerance/Diabetes

- Medication
- Customize diet
- Limit refined carbohydrates
- Eat carbs in combination with protein, fiber, and fats



Finding a Dietitian

- How to Find a Registered Dietitian:
 - Request a consult at your cancer center
 - Commission on Dietetic Registration
 - Search: List of Board Certified Specialists in Oncology Nutrition by State- www.cdrnet.org
 - Contact the Pancreatic Cancer Action Network (PanCAN)
 - Contact The Academy of Nutrition and Dietetics www.eatright.org

Cookbooks

- Betty Crocker's Living With Cancer Cookbook (2011)
- What to Eat During Cancer Treatment: 100 Great-Tasting, Family-Friendly Recipes to Help You Cope (2009) by Jeanne Besser
- The Cancer-fighting Kitchen: Nourishing, Big-Flavor Recipes for Cancer Treatment and Recovery (2009) by Rebecca Katz
- One Bite at a Time (2009) by Rebecca Katz
- Eating Well Through Cancer: Easy Recipes & Recommendations During & After Treatment (2006) by Holly Clegg
- The New American Plate Cookbook: Recipes for a Healthy Weight and a Healthy Life (2005) by The American Institute for Cancer Research

Reminder: Next Webinar-
Nutrition After Surgery and Long Term
Management

Tuesday, November 11th, 2014

Ready to answer questions...



Thank you for your participation.

Pancreatic Cancer Action Network
www.pancan.org

If you have questions, please contact our
Patient and Liaison Services (PALS) program
at

(877) 272-6226 or e-mail pals@pancan.org.



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