Pancreatic Cancer: Optimizing Nutrition

March 19, 2018

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PANCREATIC CANCER: OPTIMIZING NUTRITION

MARCH 19, 2018

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PROVEN BENEFITS OF NUTRITION

“Nutrition intervention improves outcomes in patients with cancer cachexia receiving chemotherapy.“

- Nutrition counselling by a dietitian
- Prescription of oral nutritional supplements

PROVEN BENEFITS OF NUTRITION

Results after 8 weeks:

↑ dietary intake
↑ nutrition status
↑ physical functioning
↑ quality of life
↑ trends in weight and muscle mass

“Weight stabilization is associated with improved survival duration and quality of life in unresectable pancreatic cancer.”

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
- Recover from surgery and go on to postop therapy as appropriate

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

Enzymes + Protein + Fat + Carbohydrate = Fatty Acids + Amino Acids + Glucose

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INSULIN

Cell

Glucose
Insulin
Receptor
Glucose
Insulin
Glucose
Insulin

OUTLINE

• Pancreatic exocrine insufficiency
• Symptom management
• What to eat
• Long-term nutrition considerations

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

Narcotic = Constipation + Malabsorption = Diarrhea

Normal Bowel Function
HOW TO OPTIMIZE ENZYMES:

• Take at the beginning and throughout the meal/snack
• Troubleshooting may include adjustments to timing
• 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

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<th>Current Brands Available by Prescription</th>
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<tr>
<td>Creon</td>
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<td>Pancreaze</td>
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<td>Pertzye</td>
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<td>Viokase</td>
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<td>Zenpep</td>
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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 x 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.*

ENZYME RESOURCES

- Needy Meds
  [www.needymeds.org](http://www.needymeds.org)
- Partnership for Prescription Assistance
  [www.pparx.org](http://www.pparx.org)
- GoodRx
  [www.goodrx.com](http://www.goodrx.com)

Social Security Extra Help program
SYMPTOM MANAGEMENT

COMMON SIDE EFFECTS

- Poor appetite
- Early satiety
- Nausea and/or vomiting
- Taste Changes
- Diarrhea
  - Lactose Intolerance
  - Dumping syndrome *
- Constipation
- Excessive gas
- Diabetes

* More common with surgery
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
NUTRITION STRATEGIES

POOR APPETITE

• Eat small amounts frequently
• Schedule meals/snacks
• Use liquid calories
• Light activity
• May benefit from medication
LIQUID NUTRITIONAL DRINKS

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<td>• Glucerna</td>
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<td>• Ensure</td>
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• Home made smoothies
  • Mix in blender
    • Liquid: juice, yogurt, milk, soymilk, etc
    • Fruit and/or cooked vegetables
    • Protein: protein powder, tofu, cottage cheese, Greek yogurt

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
NAUSEA/VOMITING

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

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
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

Increase:
• Soluble fiber
• Fluids
LACTOSE INTOLERANCE

• May be temporary
• May be able to tolerate low lactose foods
• Provide lactase enzymes prior to a meal—avoid limiting diet

DUMPING: SYMPTOMS

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

Generally occur within 2 hours of eating.
DUMPING

• Limit portion sizes
• Drink liquids between meals
• Avoid foods high in sugar
• Avoid hot liquids
• Add soluble fiber

CONSTIPATION

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

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

GLUCOSE INTOLERANCE/DIABETES

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

After treatment/surgery complete:
- Carbohydrate controlled diet
- Use high fiber carb foods as tolerated
LOOKING AHEAD-
NUTRITION AND SURVIVORSHIP

- Be lean but not underweight
- Physically active 30 minutes a day
- Avoid sugary drinks and limit consumption of energy dense foods (high in sugar, low in fiber, and high in fat)
- Variety of fruits, vegetables and whole grains, legumes
- Limit consumption of red meat and processed meats
- Limit alcohol
- Limit salty foods or processed foods high in salt
- Do not rely on supplements to protect against cancer

AICR GUIDELINES FOR CANCER SURVIVORSHIP
FOLLOWING A PLANT-BASED DIET WITH AN ALTERED GI TRACT

• With frequent or loose stools:
  • Peeled and well cooked vegetables and fruits
  • Juicing may be alternate way to get some benefits of raw vegetables and fruits
    • start with ¼ - ½ cup per day for a week, gradually increase from there
    • ½ cup juice = one vegetable or fruit serving
    • use more vegetables than fruits
  • Include whole grains such as oats and barley (more soluble fiber and may be better tolerated)
  • Smooth/creamy nut butters as alternative for nuts
  • Choose healthy fats
    • Include fish in the diet
    • Eat small amounts of added fats spread through the day – 1-2 tsp olive/canola oil per meal/snack
    • Sub ¼ of a small avocado or a few olives in place of oil/butter
    • Take extra enzymes as needed

MAINTAIN OPTIMAL NUTRITIONAL STATUS

• Set goal weight
• Daily MVI and mineral supplement
• For Bone Health: Calcium 500-1000mg/D and Vitamin D at 600-1000IU/D as warranted
• Ongoing monitoring of fat malabsorption
• May need acid reducing medication
• Manage Diabetes Mellitus
  • Diabetes Educator for comprehensive teaching
MONITORING FOR VITAMIN AND MINERAL DEFICIENCIES

- Vitamin B12
- Iron
- Ferritin
- Vitamin D or 25OHD
- If suspect severe malnutrition or malabsorption, may check Vitamins E, A, K, as well as zinc, copper and selenium
- Bone mineral density

WHAT ABOUT OTHER DIETARY SUPPLEMENTS?
MISCONCEPTIONS AND RISKS

• “Pose no risk to the general population” and “rarely or never harmed by supplements”
• “More is better”
• “Natural or Standardized”
• Quality concerns may be challenging
• False claims
• Other concerns-surgical or procedural complications

SUPPLEMENTS

• Know what you are taking
• Let your team know
  • Concerns:
    • Interaction with other medications, nutrients, treatment
    • Safety
    • Efficacy
    • Side effects
SUPPLEMENT RESOURCES

• ConsumerLab: independent product testing
  www.consumerlab.com
• The National Institutes of Health Office of Dietary Supplements-
• Memorial Sloan Kettering Cancer Center Website
  www.mskcc.org/cancer-care/integrative-medicine
• National Center for Complementary and Alternative Medicine
  www.nccam.nih.gov/
• U.S. Pharmacopeial Convention
  http://www.usp.org/dietary-supplements/overview

FINDING A DIETITIAN

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

• 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

• The New American Plate Cookbook: Recipes for a Healthy Weight and a Healthy Life (2005) by The American Institute for Cancer Research

Online:

• American Institute of Cancer Research/www.AICR.org


• Cook for Your Life https://www.cookforyourlife.org

READY TO ANSWER QUESTIONS...
Thank you for your participation.

If you have questions, please contact Patient Central at 877-2-PANCAN or e-mail patientcentral@pancan.org.

www.pancan.org