

## Pancreatic Cancer: Optimizing Nutrition

March 9, 2020

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# Pancreatic Cancer Optimizing Nutrition

March 9, 2020



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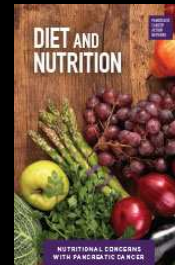
Jeannine Mills, MS, RD, CSO, LD



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## Benefits of Nutrition Therapy

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



*Empowers patients and caregivers*

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## Outline

Discuss pancreatic exocrine insufficiency symptoms and treatment

Review nutrition strategies for symptom management

Answer frequently asked questions

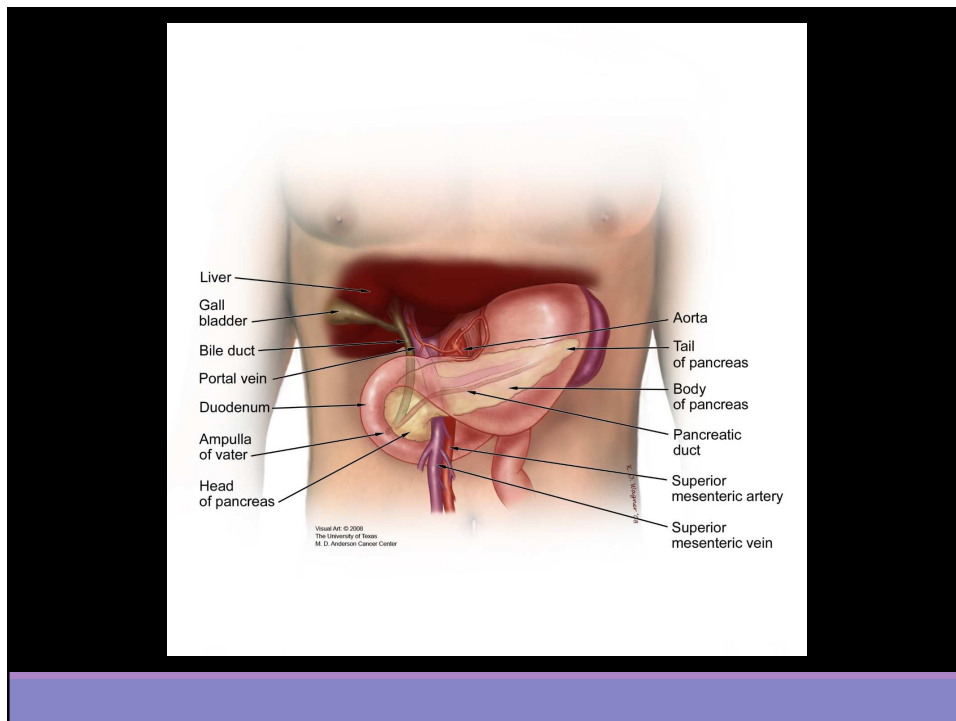
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## Role of the Pancreas

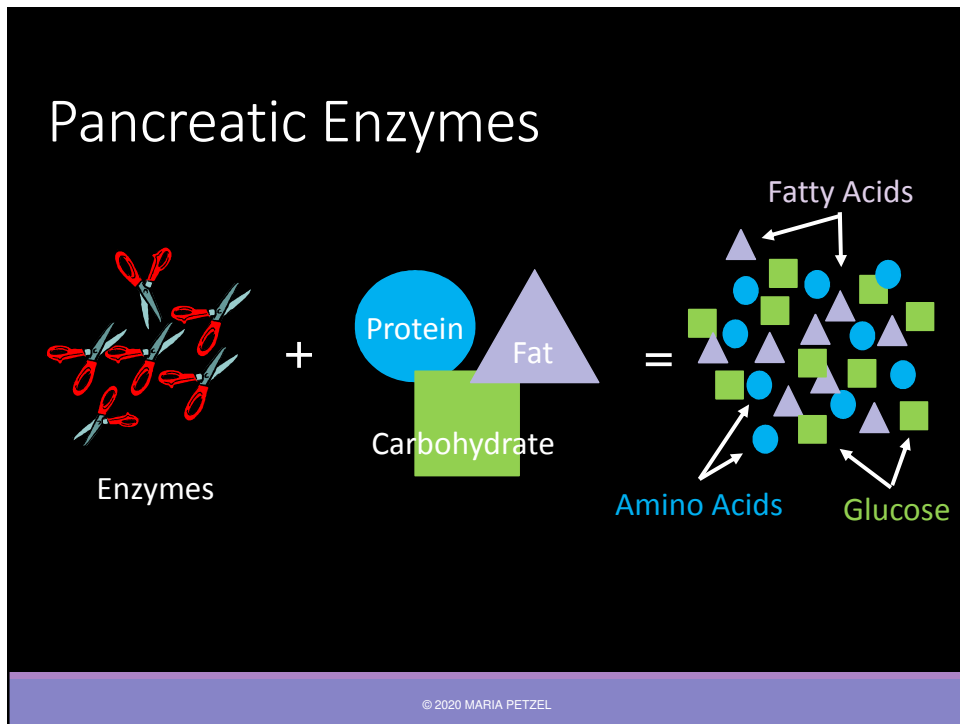
Produce enzymes to help digest food to be transported in blood stream.

Produce insulin to help transfer glucose from the blood to the cells where it is used for energy.

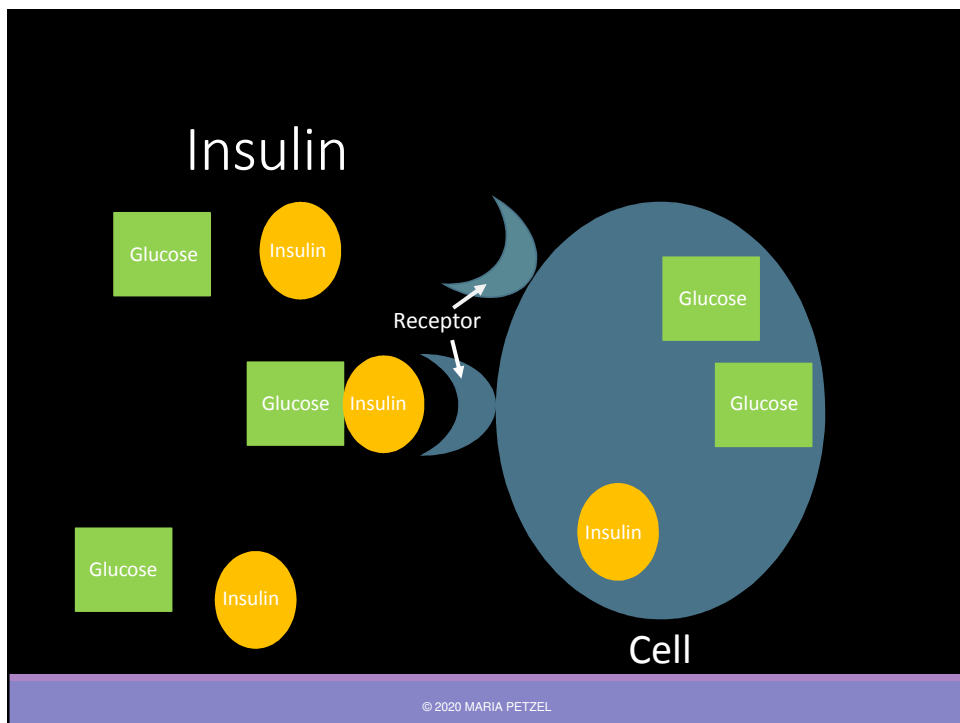
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The National Pancreas Foundation Presents

# Animated Pancreas Patient™

[www.animatedpancreaspatient.com](http://www.animatedpancreaspatient.com)




The graphic features a central human silhouette with a highlighted pancreas. To the left, a circular inset shows various food items. To the right, another circular inset shows kitchenware like a stove and sink. The text 'Exocrine Pancreatic Insufficiency' is written in a stylized font above the silhouette.

<http://www.animatedpancreaspatient.com/en-pancreas/view/m104-a4-exocrine-pancreatic-insufficiency-epi-animation>

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## Symptoms of Pancreatic Exocrine Insufficiency

- Feelings of indigestion/cramping
- Large amounts of gas
- Foul smelling gas or stools
- Floating stools or greasy/fatty stools
- Frequent stools
- Loose stools/diarrhea
- Light colored or yellow stools
- Unexplained weight loss



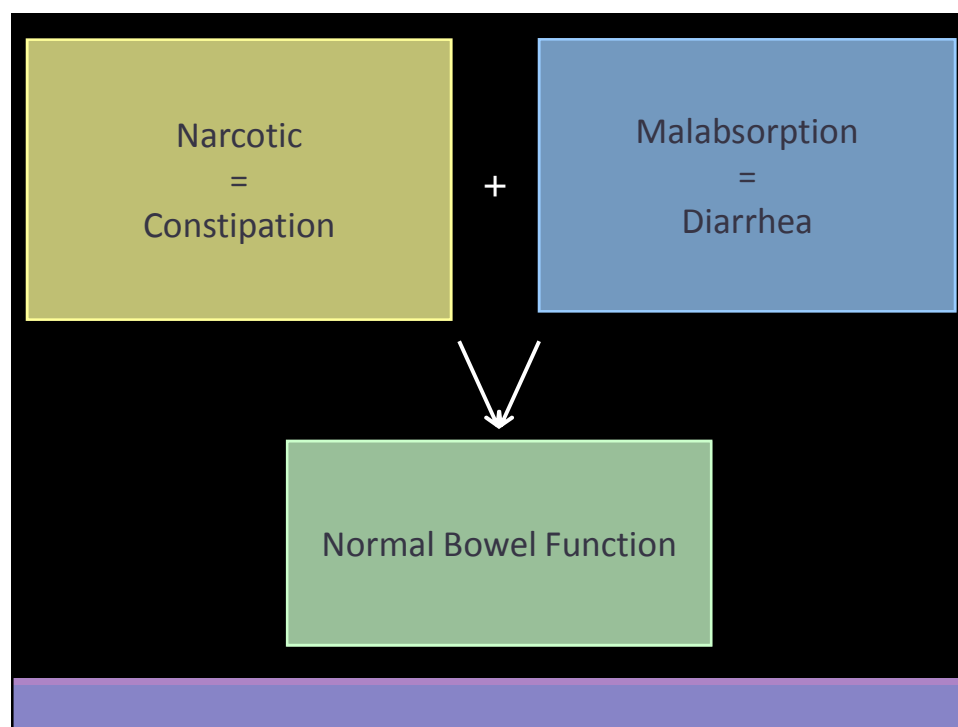
A photograph of a young girl with blonde hair, wearing a white shirt, sitting at a table and eating. She is looking towards the camera with a neutral expression.

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# Pancreatic Enzymes



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## 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.

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## 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

Current Brands Available by Prescription	
- Creon	- Pancreaze
- Pertzye	- Viokase
- Zenpep	

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## Enzyme Dosage: Titration

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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)

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## What does that really mean?

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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

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## Pancreatic Enzymes: Side effects of too many

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Constipation (most common)

Nausea

Abdominal Cramps

Diarrhea

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

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## Enzyme Resources

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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*

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# Nutrition Strategies for Common Symptoms and Side Effects

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## Common Side Effects

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Poor appetite  
Early satiety  
Nausea and/or vomiting  
Taste Changes  
Diarrhea  
◦ Lactose Intolerance  
◦ Dumping syndrome \*

Constipation  
Excessive gas  
Diabetes  
  
\* More common with surgery

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## Poor Appetite

Eat small amounts frequently

Schedule meals/snacks

Use liquid calories

Light activity

May benefit from medication

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## Liquid Nutritional Drinks

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

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## Early Satiety

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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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## Nausea/Vomiting

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

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## Taste Changes

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Rinse mouth

Metallic taste: use plastic utensils and serving ware

Enhance dull taste use tart flavors

Try new foods or foods previously disliked

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## Diarrhea

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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)

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## Nutrition Therapy for Diarrhea (Independent of cause)

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Limit or avoid:

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

Increase:

- Soluble fiber
- Fluids

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## Lactose Intolerance

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May be temporary

May be able to tolerate low lactose foods

Provide lactase enzymes prior to a meal—avoid limiting diet

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## Dumping: symptoms

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Flushing

Sweating

Feeling of low blood sugar

Loose BM

Generally occur within 2 hours of eating.

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## Dumping

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Limit portion sizes

Drink liquids between meals

Avoid foods high in sugar

Avoid hot liquids

Add soluble fiber

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## Constipation

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Bowel regimen may be warranted

Hot fluids

Include high fiber foods

Limit gas forming foods, carbonated beverages, straws, chewing gum

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## Excessive gas

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Optimize pancreatic enzymes

Avoid chewing gum

Avoid gas-producing foods:

Avoid drinking through straws

- Broccoli, cauliflower, cabbage

Use simethicone (Gas-X) liberally

- Onions

Consider Bean-O

- Beans

- Carbonated beverages (beer, soda)

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## Glucose Intolerance/Diabetes

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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



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## Frequently Asked Questions

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## Is it okay for me to exercise?

**YES!**

### Benefits of exercise:

- Maintain mobility
- Reduce risk of falls
- Prevent, build or rebuild lean body mass
- Glycemic control
- Reduce depression and anxiety
- Fight fatigue
- Improve QOL

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## Guidelines for Exercise

*Check with your healthcare provider before starting a new exercise program*

### 150 minutes of moderate intensity exercise per week

- Breathing quickens, but not out of breath
- Light sweat after 10 minutes
- Can carry a conversation but not sing

### Recommend strength training 2 times per week



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## How will my diet change after surgery?

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### Short term:

Low fiber, low fat, low sugar

Small-frequent meals

Liquids separated from solids

### Long term:

#### Regular diet

- May have difficulty tolerating large amounts of fat
- May not return to full size meals
- May have difficulty with some higher fiber foods

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## How do I stay on a plant-based diet with an altered GI tract?

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### 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

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

- 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
- Include fish in the diet
- Take extra enzymes as needed

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## Monitoring for Vitamin and Mineral Deficiencies

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- Vitamin B12
- Iron
- Ferritin
- Vitamin D or 25OHD
- If suspect severe malnutrition or malabsorption, may check Vitamins E, A, K, as well as vitamin B6, folate, zinc, copper and selenium
- Bone mineral density



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Can I take dietary supplements?

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## Misconceptions and Risks

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“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



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## Supplements

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Know what you are taking

Let your team know

- Concerns:
  - Interaction with other medications, nutrients, treatment
  - Safety
  - Efficacy
  - Side effects

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## Supplement Resources

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ConsumerLab: independent product testing

[www.consumerlab.com](http://www.consumerlab.com)

The National Institutes of Health Office of Dietary Supplements-

<http://dietary-supplements.info.nih.gov>

Memorial Sloan Kettering Cancer Center Website

[www.mskcc.org/cancer-care/integrative-medicine](http://www.mskcc.org/cancer-care/integrative-medicine)

National Center for Complementary and Alternative Medicine

[www.nccam.nih.gov/](http://www.nccam.nih.gov/)

U.S. Pharmacopeia Convention

[www.quality-supplements.org](http://www.quality-supplements.org)



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## Does sugar feed cancer?

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Considerations:

- Cancer Prevention
- Treatment
- Survivorship

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## How do I find a dietitian?

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### 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](http://www.cdrnet.org)

- Contact the Pancreatic Cancer Action Network
- Contact The Academy of Nutrition and Dietetics

[www.eatright.org](http://www.eatright.org)

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Ready to answer  
questions...

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## Cookbooks and other 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](http://www.AICR.org)
- PanCAN: Cooking. Comfort. Care/[www.pancan.org/facing-pancreatic-cancer/living-with-pancreatic-cancer/diet-and-nutrition/cooking-comfort-care/](http://www.pancan.org/facing-pancreatic-cancer/living-with-pancreatic-cancer/diet-and-nutrition/cooking-comfort-care/)
- Cook for Your Life <https://www.cookforyourlife.org>



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**Thank you for your participation.**

If you have questions, please contact

**Patient Central at  
877-2-PANCAN or e-mail [patientcentral@pancan.org](mailto:patientcentral@pancan.org).**

**[www.pancan.org](http://www.pancan.org)**



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