Nutrition for Neuroendocrine Cancers

Doris Piccinin, MS, RDN, CSO, CDCES, LDN

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https://www.foodyoulovebook.com
One diet does not fit all.....
Disclosures & Disclaimer

- Disclosures: none
- The content of this presentation is intended for general nutrition information. Will mainly focus on Neuroendocrine cancer of the gut (SI, pancreas, liver, colorectal).
- Please consult with your oncologist for treatment specific recommendations and ask for a referral to a dietitian.
What will we talk about?

- What foods should be avoided?
- Importance of maintaining weight
- Nutritional considerations for surgical resections
- What does our stool tell us?
- Summary and Resources
Foods to Avoid?

- Food Allergies
- Foods that may increase risk of food borne illness
- Food Intolerances
- Surgical resections
  - Swallowing or malabsorption issues
- What are your symptoms?
  - Nausea or Vomiting
  - Diarrhea
  - Gas/Bloating/Feeling of fullness
  - Gastroesophageal reflux disease
  - Constipation
  - Flushing with foods

Photo Source: https://www.fightbac.org/food-safety
Foods to limit with Carcinoid Syndrome leading to diarrhea

- Limit insoluble fiber (<10 gram fiber per day)
- Limit gas forming foods
- Limit simple sugars especially sugar sweetened beverages
  - Replace with Electrolyte replacement drinks
- Limit or avoid alcohol
- Limit fried greasy foods such as processed foods
- Limit spicy “hot” foods
- Limit acidic foods
- Limit lactose containing foods
- Limit amines
Foods to limit with Carcinoid Syndrome: Amines

▶ Amines to Avoid
  • Aged cheeses (cheddar, stilton, camembert, blue cheese, Roquefort)
  • Alcohol
  • Smoked, salted or pickled fish or meats
  • Yeast extract “hydrolyzed” meats such as marmite/vegemite, processed, yeast extract or nutritional yeast
    – (Check ingredients in meat substitutes)
  • Fermented foods such as tofu, tempeh, kimchi, sauerkraut, miso, soy or fish sauce.

▶ Limit
  • Dark or milk chocolate, cocoa
  • Caffeine
  • Avocados, bananas, raspberries
  • Peanuts, brazil nuts, fava beans, coconut
Maintaining Weight: Adding protein and calories

Small frequent meals
Schedule meals (Not based on appetite)

Barrera, AB et al, Rev Endocr Metab Disorder, 2018, Kikut, J et al, Nutrients, 2020
Nutritional considerations for Surgical Resections; Gut

- Check with surgeon on diet restrictions 6-8 weeks after surgery
- What part and how much was removed?
- Ask your surgeon for a referral to a GI specialist that will help monitor your micronutrients long term
- May need to have small more frequent meals to maintain weight

Photo Source: Epic 4 Health Blog | Bariatric Surgery and Nutritional Status
Considerations for Surgical Resection: Pancreas

- Removal of head or tail (distal) pancreas
- Whipple or Appleby
- Removal of Head of Pancreas may lead to Exocrine Deficiency
  - May lead to floating stools
  - Light colored, foul order
  - Fat malabsorption
- Endocrine Deficiency
  - Problems with blood glucose regulation

Photo Source: What is the difference between endocrine and exocrine hormones? - Quora
What does our stool tell us?

- Floaters, fatty streaks
- Greasy/difficult to flush
- Color
  - Light brown or tan
  - Yellow/Orange
- Texture
  - Consistency
- Odor

Photo Source: Bristol Stool Chart: Types of Poop - Shapes, Textures & Consistency (webmd.com)
Summary

- NO DIET FITS ALL
- Food safety
- Avoid amines if flushing occurs
- Importance of maintaining weight
- Keep records of surgical resections
- Track your symptoms and timing of stools
Neuroendocrine Resources

- The Find Food You Love book by Lexicon Pharmaceuticals is a great resource on symptom management and developing meal plans. Here's the link to order a free copy:
  - [https://www.foodyoulovebook.com](https://www.foodyoulovebook.com)
Additional Reading/Web resources

- General information on nutrition for NET’s (Oncology Nutrition Practice Group)

- Oncolink General Net and Nutrition
  - [Nutrition for People with Neuroendocrine (Carcinoid) Tumors | OncoLink](https://www.onco.com/)

- Oncolink: Pancreatic enzymes handout/webinar
  - [Pancreatic Enzyme Replacement Therapy (PERT) | OncoLink](https://www.onco.com/)
  - [Pancreatic Enzymes for Exocrine Pancreatic Insufficiency | OncoLink](https://www.onco.com/)

- Pamphlet written by Net group in the UK
  - [http://s3-eu-west-1.amazonaws.com/files.royalfree.nhs.uk/Patient_resources/NETS/Food_and_NETs.pdf](http://s3-eu-west-1.amazonaws.com/files.royalfree.nhs.uk/Patient_resources/NETS/Food_and_NETs.pdf)

- PowerPoint programs on nutrition for NET’s:
  - Leigh Ann Burns
    - [https://youtu.be/5vLPIQT_4BY](https://youtu.be/5vLPIQT_4BY)

- Carcinoid Cancer Foundation’s nutrition information by Monica Warner MS RD:
Additional Reading/Recipes: General Nutrition

- Academy of Nutrition and Dietetics (to find dietitian in your area)
  - www.eatrigh.org
- American Institute for Cancer Research
  - http://www.aicr.org
- Cancer Survivor’s Nutrition and Health Guide by Gene Spiller and Bonnie Bruce DR Ph., RD
- Eating well through cancer by Holly Clegg and Gerald Miletello, MD
- Cancer Fighting Kitchen by Rebecca Katz
References

- The Find Food You Love book by Lexicon Pharmaceuticals is a great resources on symptom management and developing meal plans. Here's the link to order a free copy:
- Partnership for Food Safety Education The Partnership for Food Safety Education | Fight BAC! Accessed 2/28/21
- Oncolink Nutrition for persons with Neuroendocrine (Carcinoid) cancer Nutrition for People with Neuroendocrine (Carcinoid) Tumors | OncoLink Accessed 2/28/21
- Clinical Trials.gov Phase II clinical trials of enterade in Neuroendocrine cancer Enterade in Carcinoid/Non-Carcinoid Syndrome Neuroendocrine Tumor Patients With Quality of Life Limiting Bowel Frequency - Full Text View - ClinicalTrials.gov Accessed 2/28/21
Questions

Penn Medicine