

Nutrition Concerns of Carcinoid Patients

Presented by:

Linda Leising, RD, CDN
Roswell Park Cancer Institute

Nutrition Assessment for patient with NET

77 year old female patient came to Roswell with initial diagnosis of small bowel mass, and a possible partial bowel obstruction.

Symptoms: abdominal pain, cramping rectal pain, bloating, and 20 pound weight loss.

The patient underwent a exploratory laparotomy with a small bowel resection and anastomosis. The final diagnosis was a mid-jejunal small bowel carcinoid tumor.

Treatment was Sandostatin LAR 30mg IM monthly, Creon for steatorrhea (excess fat in stool) and cholestyramine for diarrhea.

Nutrition consult was placed to address symptoms of diarrhea and high serotonin levels.

Nutrition Goals

- **Minimize diarrhea and abdominal pain** by eliminating foods that may trigger symptoms.
- Determine a meal plan that will **maximize absorption** of nutrients in foods and fluids.
- Promote a healthy weight recovery and **improve quality of life.**

Carcinoid Syndrome

Caused by hormone secretions (specifically too much serotonin) and can be triggered by certain foods.

Symptoms can include diarrhea, abdominal pain, sweating and flushing.

Niacin 25-50mg supplements may be recommended by your doctor.

Changes in your food selections and amounts consumed may help lessen the occurrence or severity of side effects.

Pancreatic Enzymes

Produced by the pancreas to help digest and absorb fat, carbohydrates and proteins

Lack of these enzymes may lead to diarrhea with poor absorption of nutrients and vitamins often associated with loose, greasy stools (steatorrhea)

Your doctor may prescribe pancreatic enzyme replacement, also known as pancrelipase. Some examples are Creon[®], Zenpep[®] & Viokase[®].

Be sure to take them as prescribed with meals and snacks.

Cholestyramine

Common brand name is Questran®.

Bile is made in the liver and excreted into the small intestine to digest fat, and is then returned to the liver.

The small bowel is where bile salts are reabsorbed. If a portion of the small bowel is surgically removed it may prevent bile salts from being reabsorbed. Bile acids can accumulate in the blood stream causing itching, and when bile reaches the colon it causes diarrhea.

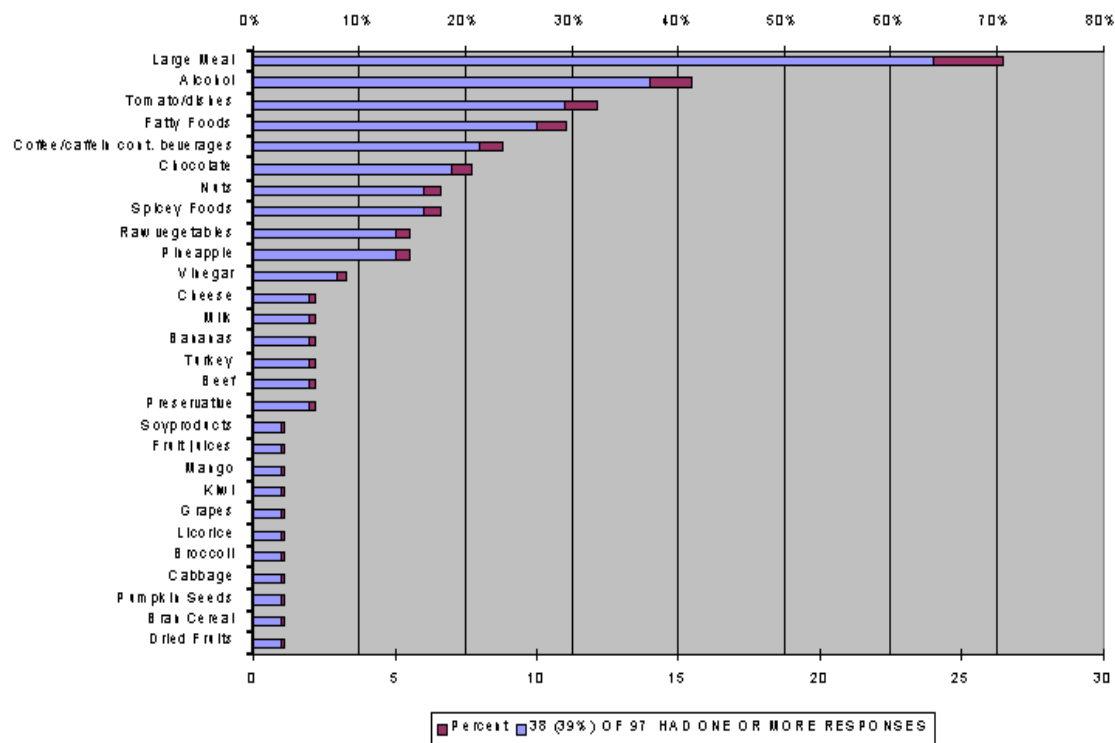
Cholestyramine binds to bile salts to prevent these symptoms.

Key Nutrition Recommendations

Avoid the following:

- Large meals
- High fat foods or deep fried, greasy foods.
- Alcoholic beverages
- Spicy foods with pepper, cayenne, mustard.
(Cinnamon and nutmeg are usually well tolerated.)
- Excessive amounts of caffeine and chocolate.

Foods reported to provoke reactions



Key Nutrition Recommendations

Avoid foods with high amine content such as:

- Aged cheese
- Soy/soybean products including soy sauce
- Alcohol
- Peanuts, Brazil nuts, walnuts, or coconut
- Aged, smoked, fermented and dried meats and fish (such as salami, corned beef, sausage, bologna, pickled herring)
- Fermented foods, such as sauerkraut, tofu, and miso
- Bananas, raspberries, avocados, and overripe fruits.
- Brewer's yeast, yeast extracts, sourdough, and homemade yeast-leavened breads.
- Fava or broad beans
- Chocolate

Key Nutrition Recommendations

Moderate fat, depending on tolerance, typically 20-30% of dietary calories. Choose unsaturated fats which are liquid at room temperature, such as olive, safflower, or corn oil.

May need to choose more water soluble fiber (found in oats, apples, beans/legumes, and fresh oranges) if having diarrhea and bloating.

Drink plenty of fluids to stay well hydrated, especially to replace losses with diarrhea.

Increased protein and niacin requirements due to increased serotonin synthesis. Choose lean proteins

Limit caffeine intake (chocolate, cocoa, coffee, tea, and cola) and avoid carbonated beverages.

http://www.carcinoid.org/content/nutritional-c Nutrition | The Carcinoid Canc... NUTRITIONAL CONCERNS ...

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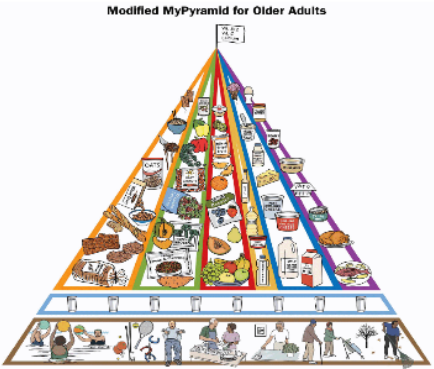
NUTRITIONAL CONCERNS FOR THE CARCINOID PATIENT: DEVELOPING NUTRITION GUIDELINES FOR PERSONS WITH CARCINOID DISEASE

Presented by Monica E. Warner, M.S., R.D., C.D.N.
Research Coordinator, Carcinoid Cancer Foundation, Inc., New York

It is with deep sadness that the Carcinoid Cancer Foundation announced the passing of Monica Warner in August 2009.

This 2008 update includes minor changes to the original lecture from year 2000. It includes results from a survey done in 2005. What we found is that the major recommendations from the original survey are very similar and are therefore as valid today as they were then.

The only truly new update are the Guidelines for Older Adults



Modified MyPyramid for Older Adults

However, we find that the best guidelines for people to prevent cancer and patients with cancer are those published by the [American Institute for Cancer Research. \(AICR\)](#)

I am here today to share with you our progress in developing food and nutrition guidelines for persons with carcinoid

3:32 PM 8/10/2015

Best Protection Comes From a Diet that is:

- ▶ High in fruits, vegetables and whole grains.
- ▶ Includes more lean proteins: lean cuts meat, fish and poultry, egg whites
- ▶ Includes non-fat and low-fat instead of full-fat dairy products.
- ▶ Includes nuts and olive oils instead of less healthy sources of fat, such as butter or saturated fats found in many processed snack foods.



Prudent diet: high in fruit and vegetables, poultry and fish.

Western diet: high in meat, fat, refined grains, dessert.

Limit Red Meat and Avoid Processed Meat

If you eat red meat, select lean cuts and eat smaller portions.

Choose fish, poultry, or beans instead of red meat (beef, pork, lamb)

- **Compelling evidence that red meat increases colorectal cancer risk (>15 studies).**
- **Processed meat (such as sausage, bacon, luncheon meat) raises the risk of colorectal cancer twice as much as red meat.**

(3.5 ounces of red meat per day increases colorectal cancer risk by 17%: the same amount of processed meat per day increased colorectal cancer risk by 36%)

Foods That Fight Cancer!



Garlic and onions - Allium vegetables contain many substances with anti-cancer effects, including quercetin and organosulfur compounds.



Dark Green Leafy Vegetables- contain carotenoids such as lutein and zeaxanthin, and flavonoids which act as antioxidants.



Red fruits- a great source of lycopene, a powerful antioxidant, linked to lower risk of prostate cancer.



Apples- contain quercetin, a flavonoid with anti-inflammatory and antioxidant properties.



Cruciferous- high in isothiocyanates and indoles which helps reduce the risk of many cancers. Eat vegetables raw or slightly steamed.



Berries- rich in anthocyanins, ellagic acid, quercetin and other anticancer phytochemicals.

Foods That Fight Cancer!



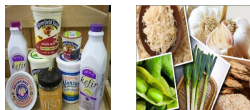
Green tea – Contains including polyphenols and flavonoids, which are potent antioxidants. Lowers risk of bladder & colon



Beans and Peas- Contains health promoting substances that may be protective for cancer, including lignans and saponins, resistant starch that feeds healthful bacteria in the gut, and antioxidants.



Curcumin in tumeric - An antioxidant and anti-inflammatory found to interfere with several pathways involved in cancer development, growth and spread



Pro- and Prebiotics-“Good bacteria” and the foods that feed them. Increases production of agents that deactivate toxic compounds.



Grapes and Grape Juice- Rich in resveratrol found in skins of grapes. Has antioxidant and anti-inflammatory properties. May slow growth and trigger death of cancer cells.

Choose Healthier Fats

Unhealthy

Saturated

- From animals



Trans Fats

- Mostly in processed foods.



Healthier

Polyunsaturated

- Plant-based foods and oils.
- Omega-3 fatty acids found in fatty fish especially beneficial.



Monounsaturated

- In olive oil, avocados, nuts.



Some Good Labels

“**USDA Organic**” means that at least 95% of the ingredients are certified organic.

Foods that contain at least 70% organic ingredients will not display the USDA seal but may list specific organic ingredients on the front of the package, i.e. “**Made with organic ingredients**” or “**Contains organic ingredients**”
“**No hormones added**” means that animals were raised without use of any added growth hormones. For beef and dairy products it can be helpful, but by law, poultry and pigs cannot be given hormones, so don’t pay extra for chicken or pork products that use this label!



Some Good Labels

The widespread use of antibiotics in farm animals encourages the growth of drug-resistant "superbugs" that can infect humans.

A "**Raised Without Antibiotics**" or "**No Antibiotics Administered**" claim on meat and poultry indicates that the animal from which the food came received no antibiotics during its lifetime.

"USDA Process Verified" means USDA has confirmed that the producer is doing what it says it is.

Beware of sound-alike labels that aren't approved by the USDA, like "antibiotic free" and "no antibiotic residues."



Labels that May not Mean What you Think

“Free-range” (poultry)

Means that producers only have to allow animals access to open air for an unspecified amount of time – even if only 5 minutes.



“Natural”

This claim is essentially meaningless.

For meat and poultry, it has nothing to do with how the animals were raised, but rather with how they were processed.

For everything else it has no standard definition whatsoever. And manufacturers can, and do, use it on all sorts of processed foods.



Answers to Common Questions



Does eating sugar and sugar-containing foods “feed” cancer?

Sugar intake has not been shown to directly increase risk or progression of cancer.

Sugars, however, add substantial amounts of calories to the diet, which can promote weight gain and obesity and lead to poorer cancer outcomes.

Researchers are currently interested in the role of refined sugars and insulin resistance, which may indirectly increase risk of certain cancers and lead to poorer disease prognosis. Therefore, limiting your consumption of foods and beverages with refined sugars and carbohydrates may help reduce cancer risk and/or recurrence.



Should I buy organic foods?

Currently there are not studies to show whether organic foods are better than other foods in terms of reducing the risk of cancer, the risk of recurrence, or risk of cancer progression.



If you want to buy organic..

Apples
Strawberries
Grapes
Celery
Peaches/nectarines
Kale, spinach and other leafy greens
Sweet Bell Peppers/hot peppers
Cucumbers
Potatoes
Cherry tomatoes
Summer squash
Milk
Beef



Is it better to eat my vegetables raw or cooked?

There is some data to suggest the cruciferous vegetables maintain more anti-cancer nutrients when eaten raw.

Cooking of most other vegetables increases your body's ability to absorb **carotenoids** (*antioxidants*), which are known to protect against cardiovascular disease and several cancers.



Should I Juice?

Pros

Can be a way to add to your diet fruits or vegetables that you normally wouldn't eat.

Fruit and vegetable juices contain many of the vitamins, minerals, and plant chemicals (phytonutrients) found in whole fruit and vegetables.

Cons

May be less healthy than eating whole fruits and vegetables because it removes the fiber.

Emerging evidence that non-digestible fibers are important for maintaining a healthy gut by feeding probiotics (good bacteria) that play a role in maintaining a healthy immune system.



Guidelines from AICR

Choose foods and beverages in amounts to help Achieve and maintain a healthy weight

Eat 5 or more servings of fruits and veggies

Select whole grains. Limit sugars and refined grains

Limit red meat and processed meats

Drink plenty of fluids and limit alcohol and caffeine

Be physically active everyday for 30 minutes



<http://www.choosemyplate.gov>

When to ask for a Nutrition Consult

Talk to your doctor about seeing a Registered Dietitian if you are:

- Losing weight without trying (5 pounds or more in a month)
- Experiencing difficulties with chewing or swallowing
- Experiencing persistent nausea, vomiting, constipation, or diarrhea