

# THE LACNETS PODCAST

With Meghan Laszlo, MS, RD, CSO

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## Transcription:

**Lisa Yen, NP, NBC-HWC (00:00):**

Hi! It's my pleasure to welcome Meghan Laszlo, NET Dietician from Cedar-Sinai Medical Center. Meghan, welcome to the show and I'd love to have you introduce yourself first.

**Meghan Laszlo, MS, RD, CSO (00:14):**

Thank you, Lisa. So wonderful to be here. Thank you for inviting me. As you said, my name is Meghan Laszlo and I'm an Oncology Dietician at Cedar-Sinai. I support one of our neuroendocrine oncologist, Dr. Hendifar, and I've been supporting him for the past 10 years at Cedars.

**Lisa Yen, NP, NBC-HWC (00:36):**

Yeah. We're so glad you joined us. We had you join us for our in-person meetings when we were doing that prior to COVID some of our weekly support groups and our patients and caregivers, our community has learned so much from you. So we're really excited to have you today to answer some of our top questions about NET nutrition. So, let's get started with the first question. This is a very common one. The first question is what kind of diets benefits NET patients?

**Meghan Laszlo, MS, RD, CSO (01:04): [here](#).**

Well, the type of diet that's beneficial is one that your body tolerates, nourishes you and helps you maintain weight and muscle mass. You know, individuals with non-functional NETs, those that don't have hormone producing tumors generally benefit from a plant-based diet. The Mediterranean diet is a well-known example of a plant-based diet, that centers on legumes, vegetables, whole grains, nuts, and fruit with small amounts of animal protein. Protein is an important nutrient for all cancer patients. It helps maintain muscle mass and immune function and aids in our coverage from surgery and other cancer directed therapies. Now most cancer patients benefit from eating high quality sources of protein, like fish, chicken, meat, eggs, soybeans, legumes, and dairy with each meal. Individuals that don't eat animal products, they need to supplement with protein powder to get adequate amounts of protein, especially if they don't eat soy, in addition to being vegan. Individuals with functional NETs that have hypersecretion of the hormone serotonin, gastrin, glucagon, vasoactive intestinal polypeptide, and somatostatin often suffer from diarrhea. So the best diet for these individuals is one that helps manage diarrhea by slowing GI motility and increasing absorption of fluids and nutrients. Therefore these individuals generally benefit from a high protein, low fiber, low lactose diet. And while a low fiber diet may not sound like a healthy diet, it's a healthy choice to help the body better absorb nutrients and

energy. And you can ensure adequate nutrient intake by choosing cooked vegetables, soft fruits, refined grains, oatmeal, and healthy fats, like nut butters, olive oil, and also lean proteins. Now those individuals with insulinomas struggle more with hypoglycemia and need to eat very frequently and also choose complex carbohydrates like legumes, whole grains, fruit, and proteins throughout the day to manage blood sugar and energy levels.

**Lisa Yen, NP, NBC-HWC (03:26):**

Thank you for that very thorough answer. So what I hear you saying is there's not one diet, there's a range of diets and it kind of depends.

**Meghan Laszlo, MS, RD, CSO (03:34):**

Exactly. It's very individualized, depending not only on the person's food preferences, but also the diagnosis location of the disease and surgical history as well.

**Lisa Yen, NP, NBC-HWC (03:48):**

We're all zebras and need to kind of tailor the diet to our individual stripes. Okay. So the second question, which is somewhat related, and this also comes up a lot, which foods cause carcinoid syndrome symptoms?

**Meghan Laszlo, MS, RD, CSO (04:04):**

Well, foods can be a trigger for carcinoid syndrome. Carcinoid syndrome can also be triggered by exercise alcohol, epinephrin and emotional stress, as well as eating. Large meals are a common trigger because the presence of food and the stomach initiate and intestinal hormone production. So for most individuals, small frequent meals are best. Other food based triggers for carcinoid syndrome are spicy foods, fried foods, raw vegetables, and also high amine foods such as histamine tyramine, tryptamine, etcetera, are a type of protein that occur in foods that have been preserved or fermented. Things like alcohol aged cheeses, yeast extract, kimchi, sauerkraut, tofu, and fish sauce. They're also found in some fresh foods, such as avocado, banana, peanut, Brazil nuts, coconuts, Cola, and coffee as a non-intuitive ingredient to avoid, especially with diarrhea because most people gravitate towards the BRAT diet and start to eat more bananas to help manage the symptom of diarrhea. But bananas can actually worsen diarrhea from carcinoid syndrome. Now food triggers are very individualized and I encourage everyone with carcinoid syndrome to keep a food and symptom diary to help identify which foods are triggers for you. You know, not everyone with carcinoid syndrome has symptoms after eating high amine foods. Some individuals may unnecessarily restrict their diet by trying to avoid all foods that could contribute to carcinoid syndrome.

**Lisa Yen, NP, NBC-HWC (05:58):**

Thank you. That's really helpful to understand which foods to avoid. And again, that could be individualized as well. So the third question, what foods make diarrhea better or worse?

**Meghan Laszlo, MS, RD, CSO (06:12):**

Certain foods such as those that are high and soluble fiber can improve diarrhea by binding stools and slowing and GI transit time. Examples of these foods are oatmeal, bananas, apple sauce, cooked carrots, and cooked other starchy vegetables like potatoes or turnips. Refined grains like white rice, white bread, white pasta are generally better tolerated than whole grains like brown rice, or quinoa. Cooked vegetables are better than raw vegetables. And this is because the cooking softens them and makes them break down more easily. And they're just better tolerated. Sometimes beans can be tolerated, especially if they're the canned beans or beans that are sold in a tetra pack. Those are digested easier

than dry beans that are perhaps cooked at home. Those with diarrhea should avoid greasy, fried, very spicy or concentrated or foods that contain concentrated sweets like cake or icing. Caffeine and alcohol can also make diarrhea worse and are dehydrating. Persistent diarrhea can cause lactose intolerance. And so individuals that have ongoing just persistent diarrhea may need to avoid lactose containing foods like milk, cream and foods commonly made with milk like waffles, pancakes, scones, cream sauces, and muffins. Lactose-free and non-dairy alternatives like oat milk or almond milk would make great substitutes, if you need to avoid lactose. Coconut and soy milk may not be well tolerated by those with carcinoid syndrome if there is a sensitivity to amines. In addition to that, certain dietary supplements can worsen diarrhea like magnesium and vitamin C because these can have a laxative effect and something that may be helpful as soluble fiber supplements like psyllium fiber can help treat diarrhea or help manage it in the same way that eating bananas or applesauce does. You can usually take psyllium fiber up to three times per day. And I usually prefer the wafers instead of the powder products for psyllium. And for those that take pancreatic enzymes, it's important to take the psyllium fiber separately from meals so that the extra fiber doesn't interfere with the digestive enzymes. So, while managing food choices and considering that supplements can help manage diarrhea, it's important to try to get to the cause. Is the diarrhea caused by fat malabsorption? Is it carcinoid syndrome? Is it an infection? Surgical changes in anatomy like short bowel syndrome or removal of the ileocecal valve, which can result in bile acid diarrhea, or is it a side effect from treatment? And these are all valid questions to ask your healthcare provider to try to get to the cause.

**Lisa Yen, NP, NBC-HWC (09:27):**

That's very helpful. And you've named a lot of foods that people may be sad to give up and also some nice substitutes so that we can have maybe not regular cake in icing, but you know, a modified one as you kind of noted.

**Meghan Laszlo, MS, RD, CSO (09:45):**

The goal is not to limit the diet too much and still have a wide variety of choices.

**Lisa Yen, NP, NBC-HWC (09:52):**

So I can have my cake and eat it too. Maybe just a different kind of cake. So the next question is what kinds of fluids and how much are needed with diarrhea?

**Meghan Laszlo, MS, RD, CSO (10:06):**

Fluid replacement is vital for individuals with diarrhea to help prevent dehydration. Now on average, you need about 64 ounces or two liters of liquids every day. With diarrhea estimate that you need an additional eight or 248 ounces or 240 milliliters of fluid for each bowel movement of diarrhea to replace losses. For those with neuroendocrine tumors, sometimes you can have many, many, many bowel movements of diarrhea. So it's still important to try to replace those losses every time. Good fluids for rehydration include rehydration beverages like Pedialyte and sports drinks. Pedialyte is more concentrated and electrolytes and has about as much sugar as the low sugar sports drinks. I think it's a really great choice, especially if you're struggling with rehydrating yourself. I would caution against some products labeled as electrolyte water because they may be deceptively low in electrolytes and are not good for rehydration and a clinical sense. If you don't have sensitivity to tomatoes from carcinoid syndrome, tomato juice is also good for your hydration because it's high in sodium and potassium. Other liquids high in electrolytes are things like broth, vegetable broth, beef broth, coconut water, and juice. And if drinking liquids is difficult, you could also try eating high water content foods like fruits, oatmeal, or cream of wheat, soup, smoothies, and popsicles can also help with hydration.

**Lisa Yen, NP, NBC-HWC (11:48):**

Thank you for that. There's lots of helpful practical suggestions there. And I know this question comes up a lot, so thank you for those suggestions. So our next question is which dietary supplements are beneficial for NET patients?

**Meghan Laszlo, MS, RD, CSO (12:02):**

That is a common question. You know, I will say not everyone should take dietary supplements. So check with your doctor and dietician to see if there's a good reason to take a supplement such as a nutrient lacking from the diet or evidence of a deficiency like a low vitamin D level or severe diarrhea or malabsorption. It's important to be aware that some supplements can be harmful. Some can interfere with medications and also treatment, for example, there's conflicting but concerning research about the use of antioxidant supplements during chemotherapy and radiation treatment. So do exercise caution with dietary supplements. That said, there is limited research on nutrient deficiencies in NET patients. Most commonly, it's Niacin deficiency among those with carcinoid syndrome and then also vitamin D deficiency. So I would suggest asking your physician to check your vitamin D lab to see if you are deficient. And if you are that lab value can help guide the amount of supplement to take. For individuals that have very severe deficiency, you may need quite a bit of vitamin D. Whereas if it's just a normal lab, just small amounts of vitamin D like a thousand IUs would be adequate.

**Lisa Yen, NP, NBC-HWC (13:30):**

Thank you for highlighting two specific areas that there might be deficiencies that we can check in on. So you mentioned Niacin. What is Niacin and why is it important for individuals with carcinoid syndrome?

**Meghan Laszlo, MS, RD, CSO (13:45):**

So Niacin is also called vitamin B3. It is an important nutrient in the body that's needed for energy metabolism and DNA production. Individuals that have carcinoid syndrome have serotonin producing disease. So, in the body tryptophan is used to make serotonin and Niacin. When this happens, most of the body's tryptophan gets used to make serotonin instead of being used to make Niacin. And so without adequate tryptophan to produce Niacin, a deficiency can occur. In other words, the presence of carcinoid syndrome increases demand for Niacin. It also appears that the longer you live with carcinoid syndrome, the more likely you are to have a Niacin deficiency. Some signs and symptoms of Niacin deficiency when it's severe are diarrhea, dementia or other neurological changes, also dermatitis. More research is really needed in this area to help identify subclinical deficiencies, because it is a big concern for these patients. And Niacin deficiency can cause death, as well. It's a very important nutrient. Current recommendations support taking around 40 milligrams of Niacin twice daily to prevent deficiency for individuals with carcinoid syndrome. Those with a known deficiency diagnosed by a urine test should take at least 100 milligrams per day. And I think it's important to find these low dosages of Niacin and because high dosages of Niacin, and that are commonly available in pharmacies or online can cause flushing of the skin and it can be quite uncomfortable. Although this flushing is different than the flushing that occurs with carcinoid syndrome.

**Lisa Yen, NP, NBC-HWC (15:47):**

Thank you for that and exercising caution with the dosing, as well. So our next question is how this felt absorption affect digestion. So we hear a lot about fat malabsorption with the somatostatin analogs. Tell us a little bit about that and how that might affect digestion.

**Meghan Laszlo, MS, RD, CSO (16:08):**

For NET patients, fat malabsorption is commonly caused by treatment with somatostatin analogs like Octreotide and Lanreotide. It can also happen when there's disease of the pancreas. A recent study showed that 40% of patients on somatostatin analogs developed pancreatic exocrine deficiency. And this means that the pancreas isn't producing enough digestive enzymes, and this lack of enzymes causes malabsorption, which is a condition where the body can't fully break down and absorb nutrients, primarily fats. When this happens any fat that can't be broken down and absorbed, it passes through your intestine. And this can cause abdominal gas, bloating, cramping, and diarrhea. Individuals with fat malabsorption may also see oil floating in the toilet with bowel movements or see a yellow or orange stools. And these are sometimes turned light colored stools. So these clinical signs and symptoms of Steatorrhea mean that the fat that you're eating in your diet is going through you and digested and used. And this is problematic, not only because it causes these symptoms, but if your body isn't able to absorb the fat that you're eating, you don't get the calories or the energy from your food. And this can result in weight loss and malnutrition. And it can also result in fat soluble vitamin deficiencies, including the vitamin D deficiency that I mentioned earlier.

**Lisa Yen, NP, NBC-HWC (17:46):**

Thank you for that. And you know, that ties back into what you were saying earlier about the vitamin D deficiency. So it's important to kind of make sure we have appropriate supplementation. So, follow up question to that. How do I know if the prescription enzymes are working?

**Meghan Laszlo, MS, RD, CSO (18:04):**

Well, the enzymes should help with those GI symptoms, the gas, the bloating, the diarrhea, the color of the stools should be brown. You shouldn't see oil. So if you see those signs and symptoms resolved, then that's one way to identify that they're effective. The prescription enzymes can also help with weight loss. So if you continue to have GI symptoms and weight loss after starting enzymes, first be sure that you're taking them appropriately, make sure that you're taking them with your first bite of your meals and your snacks. You may need additional enzymes with multiple course meals if you're having a lengthy dinner or a holiday meal where you're having multiple courses over a long period of time. If you're having second helpings or desserts, be sure to take your enzymes again. Enzymes also need to be taken with snacks as well. I usually tell my patients that they're just snacking on a piece of fruit, like an apple, they don't really need to take the enzymes with that because it's just pure carbohydrate, but for most foods that are mixed, that contain proteins and fats as well, you should be sure to take the enzymes with those foods. And then, be sure to take them at the beginning of your meal and usually around the first bite, if you take them before after your meal, it decreases the effectiveness because you really want those enzymes to travel with the food that you've eaten through your digestive tract, so that they can open up when they get to the small bowel and help break down the food. That said, if the enzymes are ineffective and controlling your symptoms and you're taking them appropriately, you may need a higher dose. You know, the adult dosing range is actually quite large at 25,000 to 80,000 lipase units per meal. So if you look at your dosage and see the number of lipase units that you've been prescribed, and it's really low, let's say at 6,000 lipase units per meal, that's not going to be effective. So if you think you're not getting the full benefit from taking them, follow up with a prescribing physician. Sometimes you just need a higher dose than you're taking. And I do advise against over the counter enzymes that are non-prescription enzymes. These are poorly regulated and the dosing is usually too small to be effective. So if you have difficulty affording your prescription, ask about assistance programs.

**Lisa Yen, NP, NBC-HWC (20:44):**

Thank you for that. So many helpful tips and pearls that you mentioned, and so many common questions that come up surrounding enzymes. And just like you said, with diet, it needs to be customized, right? There's not a one size fits all.

**Meghan Laszlo, MS, RD, CSO (21:01):**

Right. Yeah.

**Lisa Yen, NP, NBC-HWC (21:03):**

So another question that comes up often is in this area of bacteria overgrowth. What is small intestinal bacteria overgrowth or SIBO?

**Meghan Laszlo, MS, RD, CSO (21:17):**

So we commonly call this SIBO. SIBO is a disease in which the small intestine is abnormally colonized by a large number of bacteria or abnormal types of bacteria. And so while there isn't current research that links SIBO with NETs there is evidence that disrupt disruptions to the protective mechanisms that prevent bacterial overgrowth, can be affected by individuals with NETs. So those protective mechanisms that can be disrupted that relate to NET patients include reduce gastric acid and pancreatic secretions. Surgical changes to small bowel anatomy, such as strictures fistulas, the creation of blind loops and also the removal of the ileocecal valve, and patients that have had extensive intestinal resection that results in short bowel syndrome are also at risk for SIBO. The signs and symptoms of SIBO overlap with most NET symptoms and include abdominal pain, bloating, flatulence, and excessive gas production, and diarrhea. SIBO can also cause fat malabsorption as well. So if you feel like this may be something that you're at risk for, you just feel constant bloating, that's not resolved by other measures like taking enzymes and things like that, and you just feel like something's wrong, follow up with your doctor, see if you can meet with a gastroenterologist. The tests for SIBO is to do a breath test. And then the treatment is usually antibiotics that help control levels of bacteria and the intestinal tract.

**Lisa Yen, NP, NBC-HWC (23:17):**

Thank you for that. That's really helpful to shed some light on this area. The last question, but definitely not the least this comes up quite frequently. Megan, what can be done to help with weight gain?

**Meghan Laszlo, MS, RD, CSO (23:36):**

I'm so glad that you asked that question because I think that weight gain can be such a struggle, especially for individuals that are having persistent diarrhea or don't want to eat, start eating, or are having side effects from treatment that are impairing oral intake. Some things that can be done are, one, try to eat throughout the day, try to eat something every three or four hours and make sure that, that something has a good source of quality protein, like chicken or fish. Maybe a protein powder, for example, a protein shake could be a great way to supplement the diet, especially if you don't feel like eating. So smoothies can be made to be quite caloric. I think the trick with the smoothie is to make sure you have a source of protein in it. That could be protein powder. For individuals with diarrhea, I would suggest just 100% whey protein isolate, and then that would ensure that there's no lactose in the protein powder. Fruits are a great addition and whatever liquid you want to use is fine. Maybe almond milk or something like that since you already have the source of protein being the powder, and then make sure you add some source of fats and that's what's going to give this smoothie more calories. And that could add a tablespoon of almond butter. It could be a tablespoon of coconut cream. If that's something your body tolerates, it could be an avocado if you wanted to do more like a green smoothie, but those sources of fat are going to make it higher in calories and help with weight gain. Now other options would be to

purchase ready to drink nutrition shakes. There's a wide variety of these options. They can be very caloric. The highest calorie option in this realm is Boost, a very high calorie option. This is a product that's eight ounces and has 530 calories in it. It's also very high in fat. So for individuals taking enzymes, you may need more enzymes with this and you do with most of your meals just to help your body digest it, but it can help with weight gain. Another other option is Boost Soothe. This is a clear liquid option that is eight ounces and 300 calories, but a lot of our patients like it because it's not sweet. So that is a good option for those that don't like sweets. That said it doesn't mean it's low in carbohydrates. So for individuals with diabetes or struggling with hyperglycemia, Boost Soothe isn't a great option, but I would suggest a low sugar nutrition drink. And that could be one that's formulated for diabetics like Boost glucose control or Glucerna. Another option is by Orgain and they make a vegan option that is also low sugar and very similar to a diabetic shake. And so those supplemental nutrition drinks can really make a difference. I find that you may need to drink two a day to help if you're really not able to eat that much, but those products can be quite helpful in addition to trying to eat small frequent meals throughout the day. And then another option for individuals with fat malabsorption would be to consider using what's called MCT oil or medium chain triglyceride oil. This is a special type of fat that you could add to your food and that you don't need pancreatic enzymes to digest, it's just readily absorbed. And so that could be another way to just get an extra a hundred calories from trying a tablespoon of that once per day, see how your body tolerates it and maybe use up to three tablespoons a day. You can add it to a smoothie toast or other things just to give it a calorie boost.

**Lisa Yen, NP, NBC-HWC ([27:46](#)):**

Thank you. Again, you gave lots of little practical little tips and as we've been talking about throughout a lot of individualizing care, because there's so many things to navigate, not only with NET, but with potential diabetes, with the high fat content in some of these, as well. Well, thank you for all of this. I mean, there's so much helpful information here. And I forgot to say this in the beginning, but as just a reminder that all of this, our podcasts, all of our content are done for educational purposes only and do not substitute for medical advice. So we encourage all listeners to talk to your medical team. If you have any questions or concerns about your individual care treatment, as we heard today, so much of this needs to be individualized. So it's really important to include your medical team and to talk to them and ask them about your individual care. We all have our own opinions and these are our own opinions. They do not necessarily represent the opinions of LACNETS. That being said, we really want to thank you, Megan, for joining us today for sharing from your really incredible amount of wisdom experience and insight, and for the way you serve the community as a whole. So thank you so much and we're so grateful for you!

**Meghan Laszlo, MS, RD, CSO ([28:59](#)):**

Thank you for having me. It's always a pleasure to work with you all.