

00;00;00;02 - 00;00;27;14 WNPR Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital. Welcome to Yale Cancer Answers. The director of the Yale Cancer Center is Dr. Eric Winer. Yale Cancer Answers features conversations with oncologists and specialists who are on the forefront of the battle to fight cancer. Here's Dr. Winer.

Dr. Winer 00;00;28;10 - 00;00;53;27 Many know that eating our fruits and vegetables is good for health and good for boosting our immune system. But did you know that getting proper nutrition is also very important when it comes to cancer recovery? So in tonight's episode, we're going to talk to two experts in the area about optimizing nutrition. We're also going to talk a little bit about exercise. Both nutrition and exercise can play a critical role in both cancer treatment and cancer recovery.

00;00;54;23 - 00;01;22;19 Dr. Winer Joining us tonight is Leah Ferrucci, who is a cancer researcher and an assistant professor of epidemiology at Yale School of Public Health. And we're also very pleased to have Maura Harrigan, a registered dietitian and oncology nutrition specialist at Smilow Cancer Hospital. We're and more. Thank you for your time and welcome to Yale cancer answers.

Leah/Maura Thank you for having us, Eric.

00;01;23;00 - 00;02;03;20 Dr. Winer Why don't we start and let's first talk about why nutrition is important and the part plays in cancer recovery and survivorship. And maybe you can explain how food choices can potentially impact someone's well-being and help in terms of getting them to feel better Maura, do you want to start because these are, of course, questions that patients ask their doctors and often ask for referrals to dietitians and often seek you out.

00;02;03;27 - 00;02;32;03 Maura So nutrition plays a key role in your cancer treatment. And number one complaint from patients is fatigue. And so important role of nutrition is to make sure you're fueling your body properly and in the right mix of fuel in terms of protein and fat and carbohydrate. So that you help with reduce fatigue and also prevent loss of muscle that happens from the treatments of cancer.

00;02;33;03 - 00;02;57;17 Maura So in in by meeting people's energy needs and fueling their bodies and nourishing their bodies, we prevent undernutrition and we call it or even development of malnutrition, which can occur from treatment.

Dr. Winer Can we spend a minute just talking about what is very common during cancer treatment, which is loss of muscle mass and the role that nutrition plays there?

00;02;57;26 - 00;03;21;08 Maura Well, from a nutrition standpoint, you need to have adequate protein in your diet so that your body can rebuild muscle mass that's lost from treatment. But what? But it's not necessarily just eating more protein. You have to eat it in the right context that you have enough carbohydrate in your diet to spare the protein to go for rebuilding.

00;03;21;08 - 00;03;46;03 Maura You know, a lot of people misinterpret that. They think more protein is better. They think keto diet, and it really has to be a more balanced intake. So again, we're fueling the body with the carbohydrate and some fat and then we're replenishing the body with the protein. Leah Maybe you want to address this, but when you think about loss of muscle mass.

00;03;46;28 - 00;04;18;17 Dr. Winer Talk to me a little bit about the role that exercise plays there and if not, exercise preventing inactivity. Because of course, nothing harms our muscle mass more than just taking to one's bed or chair and not moving around. And it's dramatic, particularly as one gets older, how quickly muscle mass goes away.

Leah Yeah, that's a great follow up to that. 00;04;18;17 - 00;04;46;09 Often are interventions that we work on in cancer patients complement the dietary recommendations with exercise, and a lot of the recommendations that we make simply start out with walking because we know that that's often an achievable goal for many of our cancer survivors, regardless of if they're in treatment or after treatment. So we certainly encourage walking as we're talking, though, about specifically kind of muscle loss.

00;04;46;09 - 00;05;09;01 Leah We also have often incorporated some strength training exercises as well and more. I can probably speak to this because she (Maura) has counseled many of our patients, but even that does not need to be sort of the typical, you know, huge weight lifts that have to be done in gyms. We can incorporate small dumbbell weights into manageable exercises. We can use resistance bands.

00;05;09;07 - 00;05;46;00 Leah But having that complementary activity is definitely an important piece. And sort of what we often say is, you know, even if you can get in a little bit of movement each day, that is going to be better than just sitting on the couch, as you had mentioned. And as you said, when doesn't need to go to the gym and bench press 150 pounds, it's oftentimes using small weights, 3lb weights, 2lb weights, 5lb weights to help stimulate some of the maintenance of muscle mass.

00;05;47;15 - 00;06;13;18 Leah And I may and we often encourage patients when we're the emphasis that going from nothing to something is the biggest bang for your buck in terms of exercise. So just having less sedentary activity is a huge benefit to the body. And we also encourage people to enlist Walking Buddies. When friends and family say, How can I help you?

00;06;13;18 - 00;06;32;05 Leah Ask them to be you become a walking buddy so that they get you out. And even if it's walking around the block, especially when you don't want to and you don't feel like you have the energy by the time you come back from that ten minute walk, 15 minute walk, you feel more energized and you've just helped rebuild some muscle mass.

00;06;32;28 - 00;07;01;23 Dr. Winer Well, you know, it's interesting. I recently wrote a recommendation for a young man who was applying to medical school,

and he told me about his volunteer experience on an inpatient oncology unit and how he would often function as the I.V. pole walking around the floor with patients. And I think, you know that that's, of course, an extreme example of someone who's hospitalized and in the bed.

00;07;02;14 - 00;07;31;19 Dr. Winer But just getting a little activity is so much better than remaining said. And Terry. And, you know, you mentioned the biggest bang for the buck is just doing anything. It's also probably the hardest thing psychologic is going from zero to even, you know, ten miles an hour or what have you.

Leah I think that's absolutely true. And, you know, it is overcoming that initial fatigue.

00;07;31;19 - 00;08;03;01 Leah I think that Maura and I mentioned that before as well. So it can feel counterintuitive that the physical activity. Can you know, help you with the fatigue. But we actually have seen that that can improve fatigue. So, yeah, as you said, overcoming that initial hurdle of just starting the activity. Well, I often tell patients who are complaining of fatigue that it's really titrating the exercise very carefully and getting some exercise can make you feel a lot better and a lot less fatigued.

00;08;03;13 - 00;08;45;19 Leah On the other hand, you can take it too far. And so, you know, patients need to really be there. They're their best self coach.

Dr. Winer So what do we know about research connecting? We'll go back to diet rather than exercise for the moment, but diet and cancer recurrence and how people do. I mean, the truth is we know less than we would like to know here, but Leah, maybe you can just fill us in on what little is known and what we can make of it.

00;08;46;08 - 00;09;08;00 Leah Sure. So in epidemiologic research, we have what are known as observational studies. So that's where we kind of look at populations and see what are people doing before they have a disease. And then we follow them forward to the development of a disease. Or if they've had a disease already, we can follow them to that survival or mortality outcome or the recurrence of a cancer.

00;09;08;11 - 00;09;27;21 Leah And so in those studies, we are a little bit limited because you're asking people, you know, what have you eaten? These are often difficult questions to characterize. But we do our best in terms of characterizing diet. And then we look to see, you know, are there differences in terms of risk of the disease and then also these recurrence or mortality outcomes among those who have had a cancer.

00;09;28;00 - 00;09;51;07 Leah And what we tend to see is that those who have a higher quality diet and so that would be characterized by high intake of fruits and vegetables, whole grains, as well as lower intake of saturated fats and red meat, that those individuals with that higher quality diet tend to have better survival after cancer as well as lower recurrence.

00;09;51;16 - 00;10;14;04 Leah Now, again, in these observational studies, we can't often fully tease apart. Is it just from the diet, you know, that we're seeing these associations, these individuals also might have better physical activity. We just mentioned before lots of other components to their lifestyle and other factors that we're not always fully able to kind of control for is the word that we use.

00;10;14;04 - 00;10;39;15 Leah But in general, we do see that these higher quality diets seem to improve outcomes in cancer survivors. Yeah, no, it is hard to tease apart because of course these same people who have higher quality of diets, higher quality diets are probably the people who have more in the way of financial resources, more social support. They may be living in neighborhoods where there isn't a so-called food desert.

00;10;40;21 - 00;11;16;16 Dr. Winer So these things are really hard to sort out, but certainly suggests that it's not a bad thing to focus on fruits and vegetables and grains and and certain proteins and what have you. You know, when patients ask me about diet, I often just say that, you know, eating a balanced diet that focuses on fruits and vegetables and some amount of protein and whole grains is a good way to start.

00;11;17;17 - 00;11;47;01 Maura Now, I have a feeling this is going to take more than the couple of minutes we have left before the break. But I think sometimes our patients get very focused on diet. And of course, one of the reasons is that it's something that each of us is, to a very large extent, able to control. We can master our diet even if we don't feel like we can master the cancer.

00;11;58;07 - 00;12;24;14 Maura They feel that they can master the diet even if they can't master the cancer more.

Dr. Winer Maybe you can comment on your conversations with patients about steps they've taken with their diet to to try to take control.

Maura Yes. And that sense of control is very empowering to cancer patients because they feel so much of what they're going through is out of their control.

00;12;25;00 - 00;13;12;11 Maura So by focusing on the quality of the foods they're eating, they feel like they're contributing to their care and they get great satisfaction out of that. And again, by focusing on what I call a predominantly plant based diet, where two thirds of your plate, your foods are coming from plants and one third from animals sources, that that proportion and helping people get that focus put shifts the diet quality into beautiful alignment of high fiber, low added sugar, low saturated fat and the key component is what we call the phytonutrients, the nutrients that come from plants which are contained in the colors of the fruits and vegetables.

00;13;12;25 - 00;13;43;05 Maura So they start thinking eating the rainbow. That's where that comes in. And they find how much better they feel when they do that. So it's a combination of sense of control, but also feeling better.

Dr. Winer Yeah. Now, I think that that's very helpful. Well, it's going to be

time now for a brief break. We will be back in just a minute with our guests talking about cancer and nutrition and a little bit of exercise. We'll be right back.

00;13;43;28 - 00;14;11;23 WNPR Funding for Yale Cancer Answers comes from Smilow Cancer Hospital, where a multidisciplinary team of physicians employs state of the art diagnosis methods for patients with sarcoma and other bone cancers. Smilow Cancer Hospital Dawg. Breast cancer is one of the most common cancers in women. In Connecticut alone, approximately 3500 women will be diagnosed with breast cancer this year.

00;14;11;29 - 00;14;44;09 But there is hope thanks to earlier detection, noninvasive treatments and the development of novel therapies to fight breast cancer. Women should schedule a baseline mammogram beginning at age 40 or earlier if they have risk factors associated with the disease, with screening, early detection and a healthy lifestyle. Breast cancer can be defeated. Clinical trials are currently underway at federally designated comprehensive cancer centers such as Yale Cancer Center and its Milo Cancer Hospital to make innovative new treatments available to patients.

00;14;44;24 - 00;15;26;02 WNPR Digital breast tumor synthesis, or 3D mammography, is also transforming breast cancer screening by significantly reducing unnecessary procedures while picking up more cancers. More information is available at Yale Cancer Center, dawg. You're listening to Connecticut Public Radio.

Dr. Winer Welcome back to our second half of this show on nutrition and diet and exercise. Again, I have Lisa Ferrucci, assistant professor of epidemiology at Yale School of Public Health, and Maura Harrigan, a registered dietitian and oncology nutrition specialist.

00;15;27;06 - 00;16;00;23 Dr. Winer When we left off before taking the break, we were talking about the desire that many people have to control their diet and how that can often feel very good to someone because it at a time when they feel that their life is out of control, they can master their own diet. Maybe we could spend a few minutes talking about a topic that comes up in clinic a great deal, and that's dietary supplements.

00;16;02;01 - 00;16;39;10 Dr. Winer We know that the U.S. population spends truly astronomical clinical amounts of money on dietary supplements, and certainly there are many individuals with cancer who do as well. Maura, what you hear from patients about dietary supplements? And perhaps more importantly, what do you tell them?

Maura Oh, it's a it's a challenging topic because some patients have a very strong health belief system in their supplements.

00;16;39;21 - 00;17;09;27 Maura So the first one I'd like to say that the dietary supplement usage among cancer survivors is greater than among the general adult population.

Dr. Winer Does that surprise you?

Maura It does not. And we have looked at this in a few populations, and it is unfortunately there. And I you know, I think it's people trying to help themselves in a situation where they are looking for every possible advantage.

00;17;10;13 - 00;17;38;21 Maura I do spend some time finding out how are they actually eating and looking at the quality of the food that they're eating and first and try to address those issues, because I find a lot of people because they don't always know why they got this cancer and they suspect they suspect it may have been something they ate.

00;17;39;01 - 00;18;10;22 Maura So they develop a fear of food and they thought something they ate caused their cancer particularly. People feel that way about sugar and then they fear that something they will eat will cause their cancer to return. So they tend to stay, start turning towards dietary supplements as a better way to nourish their body. And so it sets up a scenario where they have like a poor nutrient content of their food and a high overload of dietary supplements in the whole intake and great imbalance.

00;18;11;04 - 00;18;42;15 Maura And the caution also is that the dietary supplements can interfere with other medications that they're taking in other treatments. So it's it's a lot to tease out. So it takes a lot of patience and understanding and respecting where the patient's coming from. Absolutely. And I think what a lot of people don't understand is that the best way to get vitamins and nutrition general is through food, not through supplements.

00;18;42;24 - 00;19;23;15 Dr. Winer And that's, you know, for someone who eats a balanced diet, really the best approach that one can imagine. Now, you mentioned that people are afraid that eating something will help bring their cancer back. Leah earlier was talking about a high-quality diet and the fact that it is associated with an overall better prognosis. But, Leah, let me ask, how convincing is any evidence that a specific food type causes the the opposite, that is, that it causes recurrence?

00;19;24;01 - 00;19;51;17 Dr. Winer Do we have any really sound evidence to suggest that?

Leah Not to my knowledge that we could definitely pinpoint. I think the one thing that I have seen, again, this is more limited to these observational studies are the caveats that are there is that we have seen some data among breast cancer patients as well as cancer survivors that if they have high alcohol intake after their cancer diagnosis, this has been associated with poorer outcomes.

00;19;51;27 - 00;20;23;00 Leah But again, that is in those setting a study where we can't truly isolate and pinpoint that it's specifically the alcohol.

Dr. Winer Well, as a breast cancer doctor, that comes up frequently and I tell people that drinking an excessive amount of alcohol is bad for you in general and probably not good from a breast cancer standpoint, but that having an

occasional drink or maybe even a little more than occasional is really probably okay.

00;20;23;19 - 00;20;58;07 Leah Yeah, I think most of the time we can have that message of kind of moderation. And when it's those things that people often do enjoy and have as kind of a treat in a way, and again, that can be incorporated as part of those generally higher quality dietary patterns.

Dr. Winer So, Maura, you brought up something in fact, you brought up something that I was about to bring up, and that was the dirty word, sugar, because that comes up repeatedly.

00;20;58;07 - 00;21;38;27 Dr. Winer And I think the question that one often receives as a clinician is doesn't sugar fuel my cancer? And how do you respond to that? And then I'll ask where to just comment on any evidence that sugar specifically causes problems, not that eating a diet full of sugar is necessarily a good thing by any means.

Maura Well, the sugar topic, again is a complicated one, but people confuse the sugar in foods with blood sugar and blood glucose.

00;21;38;27 - 00;22;03;29 So what? You know, blood sugar is blood glucose, which is our bodies fuel and yes, blood glucose fuels all cells in the body, including the cancer cell. So there's that line of thought.

Dr. Winer But most people think, oh, I ate that Snickers bar and that is directly feeding my tumor. And that's not the case. So I have to disavow them of that pretty strongly.

00;22;03;29 - 00;22;27;02 Maura And it's often a great relief to the patient. So we talk about the naturally occurring sugars that are in fruits and vegetables, and those are fine because they're packaged with fiber by Mother Nature, who knows best. But we do go after added sugars, which are intentionally put into foods that don't naturally exist there, and that we have to keep a handle on.

00;22;27;07 - 00;22;49;24 Maura And that's now separate it out on food labels through a recent, you know, recent change by the FDA. So it's very helpful to track added sugars and to keep those grams of sugar is below 30 grams a day. And this is where a lot of people make significant improvements in the quality of their diet by paying attention to added sugars, which is mostly in things they drink.

00;22;50;12 - 00;23;16;22 Maura If they get a very loaded, you know, mocha laka, you know, triple decker drink from Starbucks, if they look at added sugars, it could be 80 grams of sugar, added sugars in that one drink. So often it's a big aha moment for people when they start tracking added sugars. So I have I shift the focus to added sugars and lowering that in their customary eating.

00;23;17;07 - 00;23;46;16 Dr. Winer Well, I'm going to get to the question I asked Leah in just a second, but I feel compelled to tell the story, which is that of course, gaining a lot of weight after cancer treatment can often be

a problem. And there's at least some concern that it could have a negative consequence. And there's some evidence of that. I many years ago had a patient who complained of gaining a great deal of weight after her cancer treatment.

00;23;47;05 - 00;24;07;02 Dr. Winer And I said, well, you know, what are you eating? Is there anything different, your diet? And she said, No, no, no, I'm seeing the same thing. She said, Oh, but wait, there's the hot chocolate. And I said, Well, tell me about the hot chocolate. She said, Well, I go to Starbucks three times a day and I get her chocolate.

00;24;07;02 - 00;24;39;17 Dr. Winer And I said, Are we talking about a tall, grande? She said, Oh, Venti, nonfat whole milk with whipped cream. And, you know, we calculated that she was probably consuming 2000 calories a day in hot chocolate. But I think most people are surprised by these things. And just to follow up on the sugar question, if someone said to you, I love M & Ms would you say you never should eat them again?

00;24;41;08 - 00;25;08;01 Maura Oh, of course not. I love M & Ms...It's the same way I tell those patients with diabetes, if they want to have M&M s You have it after a meal, you have it as dessert so that the mixed meal is in front of the like the sugar, and that slows down the absorption into the bloodstream.

00;25;08;06 - 00;25;30;03 Maura So it's how you eat it, though. You know, another pitfall that cancer patients have is the taste changes that occur from treatment. And some people find the only thing that they can taste is sugar. And they tend to go down a rabbit hole with it. And I've had patients end up only eating sugar because it was the only thing they could taste.

00;25;30;12 - 00;25;57;19 Maura So I had a woman said, I'm only on Skittles and Mountain Dew, and it took a long time to wean her back off of that into Whole Foods.

Dr. Winer And what where do we know about sugar and cancer prognosis in particular?

Maura/Leah I think the data in that space are actually a little bit more limited. So we have looked at the added sugars piece in some of these large observational studies.

00;25;57;27 - 00;26;16;27 Maura And like I had mentioned before, a lot of times that gets analyzed as these diet quality measures so that added sugars can often be wrapped into those types of metrics. And so when you have a higher diet quality, you're going to have lower added sugars in the diet. And so again, we see those general, you know, the better higher quality.

00;26;16;27 - 00;26;44;26 Maura So lower added sugars would tend to be associated with better prognosis and survival.

Dr. Winer And tell us for a minute about obesity and the risk of getting cancer. Of course, I mentioned earlier that with certain cancers, there's some suggestion that gaining weight could be associated with the worse pregnancies.



But we know much more about the Association of Obesity with the development of cancer, and maybe Leah you can comment on that.

00;26;45;14 - 00;27;10;09 Leah Sure. So with the most recent analyzes that I'm aware of, we now have identified 18 obesity related cancers. Again, most of these data come out of these observational studies where we can look at individuals body mass index as a measure of obesity. And so we tend to see that those who are in our obese category have a higher risk of many of these cancers.

00;27;10;26 - 00;27;46;28 Leah This can include breast that we were mentioning before as well as colorectal cancer. And we also see this very strongly for endometrial cancer. And again, there's now this growing list of up to 18 cancers that we identified and more. Maybe you could just comment on a problem that does occur for some people, which is simply that because of the cancer, they're not getting adequate nutrition either because there's some inability to swallow or many other potential reasons.

00;27;47;12 - 00;28;15;01 Dr. Winer And how do you work with those people? Because there it may be less about the specifics of the diet and just making sure that some calories get in.

Leah/Maura Yes, that's true. There are many obstacles that the cancer treatment presents in order to eat well. And it could be loss of appetite, difficulty swallowing, mouth sores, taste changes, smell changes.

00;28;15;09 - 00;28;39;18 Maura And as registered dietitians, we have a whole toolbox of different strategies to help patients. And we individualize it depending on their particular presentation of what are their symptoms and side effects of the of the treatment.

WNPR Maura Harrigan is an oncology nutrition specialist and Lisa Ferrucci is a cancer researcher and an assistant professor of epidemiology at the Yale School of Public Health.

00;28;40;06 - 00;28;59;02 WNPR If you have questions, email them to [yalecancer-answers.edu](mailto:yalecancer-answers.edu) and past editions of the program are available in audio and written form at [YaleCancerCenter.org](http://YaleCancerCenter.org). We hope you'll join us next time to learn more about the fight against cancer. Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital.