

**Program Title:** The Inflammation Connection

*This program is being presented in partnership with [NewYork–Presbyterian Hudson Valley Hospital](#).*

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**Moderator:** Robin Perlmutter, LMSW- Support Connection Peer Counselor

**Guest Speakers:**

**Dr. Jen Looby** is a Certified Lymphedema Therapist is the Senior Physical Therapist for Lymphedema and Breast Cancer Rehabilitation at [NewYork-Presbyterian Hudson Valley Hospital’s Center for Rehabilitation](#). Dr. Looby received her Master of Physical Therapy from New York Medical College and her Doctorate of Physical Therapy from Dominican College. She became a certified Lymphedema Therapist after training at the Norton School of Lymphatics. Dr. Looby has completed advanced training in head and neck cancer and axillary web syndrome from the Klose Institute.

**Emilie Berner, MA:** Emilie Berner, MA received her bachelor’s degree in English Language and Literature from Barnard College in New York City. Her passion for food led her to train at The Natural Gourmet Institute for Health Supportive & Culinary Arts. She later earned a master’s degree in Food Studies from New York University. In 2016 Berner joined the [Chef Peter X. Kelly Teaching Kitchen](#), which is part of the Harvest for Health initiative at NewYork-Presbyterian Hudson Valley Hospital. The larger program includes an organic garden, a farmer’s market and food service for patients and employees. The program’s goal is to teach people how to better manage their health through diet and lifestyle changes.

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**Program Description:**

The first part of the program will include a presentation by Senior Physical Therapist Jennifer Looby, PT, DPT, CLT, about how to manage and soothe symptoms of lymphedema and other inflammatory issues.

After Dr. Looby’s presentation, Chef Emilie Berner will conduct a live cooking demonstration. Learn which 13 foods help fight inflammation as well as how to use them in a few recipes.

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*NOTE: You may find it helpful to view and listen to the slides from this webinar (which are posted on our website and YouTube channel) while reading through this transcript.*

**Robin Perlmutter:** Welcome, everyone. I'm Robin Perlmutter, peer counselor at Support Connection. I'd like to welcome you all to our nationwide webinar, The Inflammation Connection, with Dr. Jennifer Looby, Certified Lymphedema Specialist, and Chef Emilie Berner. This program is in partnership with NewYork-Presbyterian Hudson Valley Hospital. Remember that Dr. Looby and Emilie are sharing their expertise. Any information from tonight or questions pertaining to individual concerns should be discussed with your doctors.

I'd like to introduce Carolyn Padiar, Director of NewYork-Presbyterian Hudson Valley Hospital Cheryl R. Lindenbaum Comprehensive Cancer Center Rehabilitation Services at NewYork-Presbyterian Hudson Valley Hospital. Thank you, Carolyn.

**Carolyn Padiar:** Okay. Good evening, everyone. The NewYork-Presbyterian Hudson Valley Hospital Cheryl R. Lindenbaum Comprehensive Cancer Center offers the highest quality of cancer care close to home, making screening and treatment more convenient for you and your family. Our cancer center features seamless access to the world-class medical experts, advanced technology and clinical trials

through our affiliation with NewYork-Presbyterian. Our Breast center is staffed with surgeons from NewYork-Presbyterian Columbia University's Herbert Irving Medical Center, offering the most advanced and innovative approaches to the treatment of breast cancer. We also have a holistic approach to wellness that nurtures mind, body and spirit with a wide range of education, programs and resources.

Our comprehensive services are all in one location, including clinical and diagnostic surgical pathology services, clinical laboratory services, diagnostic imaging, women's imaging and infusion center, radiation oncology, rehabilitation and a full array of support services. And our survivorship care is there to meet your personalized blueprint for healthy living.

It's my pleasure to introduce my colleague, Dr. Jennifer Looby. Dr. Looby is a Certified Lymphedema Physical Therapist and the Senior Physical Therapist for lymphedema and breast cancer rehabilitation at NewYork-Presbyterian Hudson Valley Hospital. Jennifer received her Master of Physical Therapy from New York Medical College and a Doctorate of Physical Therapy from Dominican College. She became a certified lymphedema therapist after training at the Norton School of Lymphatics. Dr. Looby has completed advanced training in head and neck cancer and axillary web syndrome from the Klose Institute.

I give you the floor, Jennifer. Thank you.

Jennifer Looby:

Thank you, Carolyn. And can you hear me? Good? Okay. So as mentioned, my name is Dr. Jennifer Looby. And as Carolyn said, I am the Senior Lymphedema and Breast Cancer Therapist here at New York-Presbyterian Hudson Valley Hospital.

A lot of you may be asking what lymphedema is or what inflammation is after our cancer surgery, cancer treatment. So lymphedema, it's an abnormal accumulation of a protein-rich fluid in the affected area. There are generally two forms of lymphedema. One is primary, the other is secondary. So primary is when someone's born with the lymphedema. It's usually due to a vascular anomaly, or sometimes it's a genetic mutation. Everyone here at this webinar today, secondary lymphedema would be relevant to you. So that is the result of a trauma, surgery, lymph node removal, and sometimes it's a complication of radiation therapy.

Our signs and symptoms of lymphedema include sensations of fullness or heaviness in our limbs, tightness of our skin, visible swelling, difficulty fitting into our clothing or our shoes, or changes in the fit of jewelry. Most women say that the first thing they notice is that their wedding ring isn't fitting. It's tight. They can't get it off. Any noticeable symptom or sign of swelling in the body or in your limb warrant medical attention, even if the swelling seems to go away on its own.

Lymphedema will develop in a progressive manner. It starts mild, and it can go all the way to severe, making early identification of the condition important. There are four stages of lymphedema that we will go over. So Stage 0 is when your lymphedema begins to develop within the tissues, and it can progress very slowly. There's early changes that happen without obvious noticeable swelling. However, fluid can still congest, and it causes sensations such as tightness, heaviness, diffuse tingling, and that's all at the at-risk limb. So despite normal appearance of the limb, there may be subclinical changes occurring that can be measured and identified.

When we are responding to these changes in the early stage, it can help to prevent the onset of the condition or the progression.

Next, we'll go to Stage 1. This is an early stage. Swelling may or may not be present all the time. Swelling can come and go intermittently. When swelling is present, skin will pit, meaning that the area will indent to pressure and holds indentation. Elevation of our swollen limb is going to provide us relief and reduction in our swelling. It's important to seek treatment for lymphedema management at this early stage to help prevent the condition from becoming progressively more swollen, and it's easier to control at this stage.

If we've missed treatment at Stage 1, we'll go into Stage 2. Stage 2, the tissue now has an obvious sign of stagnant swelling that does not go away with elevation. The skin, the tissue will become firmer and show less signs of pitting. The tissue consistency is changed, and that's caused by the formation of fibrosis. So fibrosis is the scarring of the tissue due to the prolonged presence of stagnant lymph fluid. This will mark the hardening of the skin in the limb, and progressively, we will develop more aggressive swelling. Seeking treatment at this stage will help to reduce limb volume and improve the tissue quality. The treatment is going to be more intensive and will require more vigilant follow-up to maintain the swelling. At Stage 2, your duration of therapy is probably going to be longer than someone who was in Stage 0 or 1.

The last stage of lymphedema would be Stage 3. At this stage, the tissue becomes very hard. It's fibrotic. You begin to develop thickening of the surface of the skin. We get excess skin that forms on the limb. We have a greater potential for open and weeping, seeping areas. The lymph fluid will start cracking through the skin. Due to the high concentration of our lymph fluid, the swollen limbs become an ideal culture medium for bacteria to thrive, and recurrent infections can be common at Stage 3. Moreover, the untreated lymphedema can lead to a decrease or a loss of function in our limb. We'll get skin breakdown, chronic infections. Treatment is still beneficial at this stage and can have a remarkable impact on our tissues softening and decongestion of the swelling. But again, this is going to be our more intensive stage of treatment.

So these stages, they represent the natural progression of lymphedema when the condition is left untreated. If we are treating you at Stage 2, and we're following all the guidelines and you're following, you're not going to progress to a stage 3. You'll probably go down more towards the Stage 1. At any stage, the lymphedema can be treated and the progression is halted, and in some instances, we reverse it.

I must say, the importance is early identification and early management because lymphedema begins to congest in the body tissue before it's visible as swelling. So when you're feeling symptoms such as heaviness, aching, tingling, anything that you're feeling, you're going to feel that before I or one of your physicians can visually see it. So it's important that you're letting your physician know of any of these symptoms that you're having.

Any individual who has had lymph nodes removed from the body is at risk for developing swelling in that area. Most lymph node removal surgeries are a planned part of your cancer therapy. So what we try to do is take tissue measurements. We try before the lymph nodes were removed to establish a baseline lymph volume. If we can't do it before, we try to do it immediately after surgery or within a week or so. Because repeating this measurement through the duration of your cancer

treatment will allow myself, your provider, your physician to assess the tissue and determine if there's any meaningful changes in girth. This approach will promote early identification of tissue changes at Stage 0 or 1 when the condition is less severe and you'll be more responsive to our conservative therapy.

Here at NY-P HVH, we use circumferential measurements to determine changes in your limb. So whether it's your leg, your arm, we have pre-determined landmarks that I will be measuring, your physician, the nurse, just to keep monitoring you. And early detection will depend on having a baseline normal measurement and repeating that measure over time like we just talked about. We do measure both limbs so that we can have comparison to your non-affected and your affected arm. We can use that, and that will help us with the sensitivity of early detection. Along with your tissue measures, we give consideration to your individual weight, your level of activity.

For treatment of lymphedema, complete decongestive therapy, which we refer to as CDT, that's our gold standard of care for lymphedema therapy. So your treatment here at NewYork-Presbyterian Hudson Valley Hospital, it will always be performed by a certified lymphedema therapist who's either a physical therapist or an occupational therapist. This type of treatment includes both the treatment phase and the maintenance or a self-care phase.

The treatment phase will consist of regular therapy sessions. Some of the things that we do during therapy would be manual lymph drainage, or as we tend to call it, MLD. MLD is a specialized form of massage that stimulates the lymphatic system to improve its ability to absorb and transport your fluid. MLD is a light skin stretching technique to stimulate healthy lymphatic vessels and to enable decongestion of swollen body regions.

Another thing in our toolbox, as we call it, is our multi-layered short stretch compression bandaging, and that's applied following your MLD treatment. So the bandages increase the tissue pressure and assist with the absorption and transport of lymphatic fluid from the limb into your normal circulation. These bandages will also provide support to the limb and comfort when the limb's at rest, and it will facilitate gentle pumping pressures when the limb is moving. When you're bandaged, we encourage you to move, we encourage you to perform gentle exercises, to go for a daily walk, because that's going to help get rid of that fluid faster. We don't always bandage, because sometimes someone in a Stage 0, Stage 1, they're not going to need all those layers of bandaging. So we can use a compression sleeve or a compression stocking. We can also use alternative Velcro wraps.

The next most important part of your therapy is the education that you'll receive from your therapist. It's education on skin care and risk reduction. We want to reduce the risk for wounds and infections. So proper skin care. It will promote healthy tissue and can prevent skin breakdown and infection in the affected tissues. Skin care includes moisturizing the tissues, the arm, the leg. We recommend that you use a moisturizer that's perfume free and dye free. We recommend always keeping the limb clean if you're attending to small cuts to prevent infections or chronic wounds. If you're out gardening and you get stuck by the rose bush, we recommend you stop doing what you're doing, go inside, wash the area out, put Neosporin on it, cover it up with a band-aid, however you would normally treat a wound or a cut.

Exercise and training. For a home exercise program, we incorporate that in both phases of therapy.

You'll be doing it here in therapy and as part of your self-care. The exercises are low intensity, and they're repetitive. We do recommend that you do them with your compression bandaging on if we're at the stage where you need to bandage. The exercises will encourage gentle muscle pumping, which aids absorption and transport of the lymphatic fluid out of the limb. When the fluid goes out of the affected limb, it does mix into your circulatory system, and you will excrete it in your urine. New research is constantly suggesting that exercise is safe for individuals with lymphedema. They encourage it to help improve limb volume, build muscle strength and promote a healthy lifestyle.

Our next topic would be compression garments. Compression garments are the primary mode of compression therapy in self-care. Garments play a key role in maintaining the results achieved with skilled therapy. Compression garments need to be fit for the correct size, correct pressure. And that's all based on the individual's condition, their severity of swelling and their physical ability. Garments are available for any body region. It can be for your trunk, for your chest, legs, arms. And they're ready made in various sizes and colors, or we can get them custom made for you. Pressure ranges for the compression garments are variable, and they should be recommended by your lymphedema therapist, your garment fitter, or your physician.

I know some people have heard about intermittent pneumatic compression therapy. It's a supportive intervention for individuals going through their CDT treatment and after. The pneumatic compression pumps, it's a pneumatic sleeve that's applied to your limb. It inflates and deflates sequentially, applying pressure to encourage fluid absorption and decongestion in the limb. It's used both in treatment and in self-care phases. There's various types of pneumatic pumps that are around to treat lymphedema. Selection and use of your pump should be always done in consultation with your therapist and your physician. There are different types of pumps. Some work on your central lymphatics. Some bypass that, depending on the surgery, the type of cancer, that we'd be very selective in which one we're applying for and trying to give you.

We're always going to instruct you with self-care activities to better improve your independence with long-term management of lymphedema. Unfortunately, lymphedema is manageable, but there is no cure. So our biggest job is to make sure that you're able to care for yourself. The maintenance or self-care phase will begin immediately during your regular therapeutic intervention, and it's going to continue upon discharge from your treatment with us.

So your self-care, we're going to try as much as we can to reduce any risks to have increased swelling or any risks to have an infection. Anyone who had lymph nodes removed, with or without radiation, should be aware of these strategies to reduce their risk for developing lymphedema or progressing their lymphedema.

We always want to have a healthy lifestyle. We want to maintain healthy weight. And exercise has been shown to significantly lower the risk of developing lymphedema. During exercise and activity, we want to monitor the at-risk areas for changes in shape, size or sensations that are different from the rest of your body. If you're performing an exercise and you notice, hey, my hand felt a little swollen after that, that's something to bring up to your therapist or your physician because we will modify that exercise, that technique for you. Any exercise or activity should be gradually built up for your own tolerance over time. You should never feel that you're being strained. This approach will help to protect your lymphatic system while getting it in shape to tolerate more activity.

Again, skin care, we can't emphasize it enough. We want to use moisturizer. We want to protect the skin with sunscreen. We want to use insect repellent. Anything to help reduce the risk of irritation and inflammation from sunburn, bug bites.

When -- sorry. The next thing that we want to always avoid is limb constriction. Tight clothing or constriction of a watch or jewelry can obstruct the normal blood flow of blood and the lymph and may overload your lymphatic system. Things would include to not take blood pressure on your affected arm. Not have blood drawn on your affected arm, unless it was critical to be done. If it's a matter of life and death, the physician absolutely needs to, then you're going to have your blood pressure taken on that side, and we'll just adjust things in therapy.

Another example, and I'm only saying this because I am guilty of it every day, is you don't want to leave hair ties on your wrist, because those hair ties are going, if you're here, it's going to occlude therapy -- occlude lymphatic flow, and your hand is going to become swollen.

The other thing that we're all guilty of is carrying all our groceries up at once. So you want to avoid hanging all the bags off your affected arm and carrying them all at once. Because all those bags are going to cause for areas of lymph constriction, and we can increase our risk of lymphedema.

With extreme temperatures, we just want to make sure that we're always protecting our skin. If it's cold outside, we want to wear appropriate clothing, make sure that our hands are covered with gloves. We try to avoid going in prolonged heat. So if you're outside, go in the shade for a while. Try to avoid a hot tub for a prolonged period of time.

Prolonged inactivity. So gravity obviously makes it difficult for lymphatic fluid to move out of our limbs. Movement encourages muscle contractions and facilitates our improved lymphatic function. So we don't want to be sitting all day long at our desk. Set a little timer. Every half an hour, just get up, do a quick lap around your office, do some marches in your chair. We just want to promote that lymphatic flow.

As we said before, the lymph fluid is rich in protein. And when the fluid is congested in the tissue, it presents a favorable environment for bacteria to grow and thrive. This is especially when you're very swollen and you have a larger or greater stage of lymphedema. So the introduction of bacteria to the tissue through the open area, it can foster a rapid onset of infection.

If you are at risk or you have lymphedema, I need you to make sure that you understand the signs and symptoms of infections. Those signs and symptoms are always redness, rash, pain, itching, increased temperature of your skin. You'll have newer onset of swelling or increased swelling in that area. You'll have flu-like symptoms. You'll have fever, chills. If you have any of these symptoms in the affected extremity, affected area, I want you to contact your physician immediately.

If it occurs outside of your doctor's regular office hours, which things usually do, then you're going to go to the emergency room. They're going to use antibiotics to treat the infection. And the infections -- the other thing to remember is even if you don't have lymphedema, but you're at risk and you get an infection in that affected arm, that can trigger lymphedema. So I do always recommend that you have someone look at the arm, take another girth measurement, compare it

to your baseline. When you do have an infection and you're on antibiotics, you should wait at least 48 hours before you're performing your own manual lymph drainage or before you put your compression garment back on, because we do not want to spread that infection anywhere else.

So in regards to exercise, I'm just going to do really quick because we could talk forever about that. The American Cancer Society has a nutrition and physical activity guideline for cancer survivors. General guidelines are, again, to avoid inactivity. Return to your normal daily activities as soon as possible after diagnosis and treatment with your physician approval. You want to take part in regular physical activity. You want to slowly build back up to your previous level of activity. Your goal is to get to 150 to 300 minutes of moderate intensity activity each week, or 30 minutes a day, 5 days a week of moderate. Or if it's vigorous intensity exercise, 20 minutes, 3 days a week.

So moderate activity would be defined as an activity in which your heart rate is only elevated greater than 50% than when at rest. When you're doing a moderate activity exercise, you should be able to have a conversation with whomever around you. So exercise, we want to exercise several times a week for at least 10 minutes at a time. You always want to include resistance training exercises at least 2 days per week, do your stretching exercises at least 2 days per week. Our ultimate goal is to walk between 7,000 and 9,000 steps a day with performing 8 to 10 strength training exercises.

The general rule of thumb is to combine all types of exercise, aerobic exercise such as walking, running, bicycling, anything that increases your heart rate. And if you intersperse that aerobic and cardiovascular exercise with strength training, the body's metabolism and lean muscle mass increase while your body fat will decrease. Walking is always deemed safe for anyone having cancer treatment.

So I just want to thank each and every one of you for participating today. I'm happy to answer questions, if Robin can read them to me from the chat.

Robin Perlmutter: Absolutely. Thank you so much, Dr. Looby. I have couple of questions here. One woman wants to know, she had lymph nodes removed during her breast cancer surgery, and after her vaccines for shingles and the COVID booster, she had severe swelling under her armpits. Wondering if there's any way to prevent that going forward.

Jennifer Looby: I think a lot of women, whether they had lymph nodes taken out or not, developed swelling in their axilla after the COVID vaccine. Your lymphatic system is where your immune system is housed. So if you did have swelling under the armpit, your immune system was just mounting a response to that vaccine. Usually within two to three days, it'll settle down. If it's any longer than that, then I would contact a physician.

Robin Perlmutter: Thank you. Next question. A woman wants to know -- that she has lymphedema. She's letting you know that she has lymphedema in her toes, and that her calves -- well, she wants to know if that could be lymphedema, I guess. She has tingling in her toes and calves. She swims, and her feet seems to hurt after she swims.

Jennifer Looby: So it could be, because generally, the distal most part of your extremity will swell first. So that's your toes, your fingers, you're going to feel the changes there first. It could also be from

neuropathy, it sounds like. But I would advise her to speak to her physician, get a prescription for an evaluation.

Robin Perlmutter: Okay. Another woman wants to know, and I don't know if you can answer this. I guess she's wanting to know what kind of exercises. But she's not really saying specifically for what. And I imagine that's not something -- I don't know whether that's something that you can provide, somebody wants to know if you can provide as a follow-up, exercises in writing for people to follow. I imagine you want to answer that.

Jennifer Looby: We can always -- there's general exercises that you can do. We say walking, swimming, anything to keep you moving. But if it's specific to the arm, to the trunk, to the legs, we can't do that without assessing each individual person.

Robin Perlmutter: Of course. Of course. Thank you. And I'll be sharing that information at the end of the presentation tonight, information so that you can get in touch with Dr. Looby if you'd like to make an appointment. Okay.

And then another woman wants to know, she had a lumpectomy and nodes removed from her axilla, and she developed a seroma. She went to a physical therapist for lymphedema and was recommended that she wear a compression bra. Afterwards, went to a surgeon who said you can just wear a comfortable bra. Is there any standard protocol for that? Do you have an opinion on that?

Jennifer Looby: It would depend on the severity of the swelling that she has in her breast. We would compare one breast to the other. Generally, the compression bras are uncomfortable. They're not flattering. So we'll usually find a sports bra that works.

Robin Perlmutter: Okay. Great. So we have time for one more question. And then everyone, I just want you to know, Dr. Looby is going to be able to answer a few questions during Emilie's presentation. So we'll take one more question for now so we can move on to Emilie's cooking demonstration.

One woman is saying she has full blown lymphedema in her arm band and would be interested in bands or weights and is a little bit nervous about getting started. So any recommendations?

Jennifer Looby: So if she has -- I think you said full lymphedema, is that what you said? I didn't quite hear.

Robin Perlmutter: Full blown -- yes, full blown.

Jennifer Looby: Full blown? Okay. Then I would -- me personally, I would recommend her come in and see one of our therapists so that we can assess which stage she's at, what muscles she would need to strengthen, and also provide -- help her figure out what type of compression she needs to wear. Does she need to be bandaged during her exercise.

Robin Perlmutter: Okay. Thank you so much.

Jennifer Looby: You're welcome. Thank you.



Robin Perlmutter: Thank you, Dr. Looby, and thank you everyone for those great questions.

I'd now like to take the opportunity to introduce, for the second part of our program and the cooking demonstration, Chef Emilie Berner, who brings passion for food that led her to train at the Natural Gourmet Institute for Health-Supportive and Culinary Arts. In 2016, she joined the Peter Kelly Teaching Kitchen, which is part of the Harvest for Health Initiative at NewYork-Presbyterian Hudson Valley Hospital, which is aimed at teaching people to better manage their health through diet and lifestyle changes. Emilie, thank you so much for coming and giving us these wonderful recipes tonight.

Emilie Berner: Thank you, Robin. And thank you so much, Dr. Looby, for a fantastic presentation. I always learn so much from you. The tips between the hair ties and the bug bites and the sunburn and groceries, and even just thinking about those daily things and how -- what a difference that can make. So thank you for sharing that with all of us.

Jennifer Looby: You're welcome.

Emilie Berner: Wonderful to be a part of this, and thank you so much, Robin, for facilitating this conversation.

I'm here today to talk to you a little bit about inflammation from a dietary perspective and to cook some delicious dishes as well. We're going to be making some anti-inflammatory recipes. One is our tofu with peppers and mushrooms. The second is going to be our cream of broccoli soup. And the third is the famous anti-inflammatory golden milk. And I say that it's famous because it's something that we didn't see anywhere, and now places like Starbucks are carrying golden milk. And it's like this mystical, magical potion. Really, it's just turmeric, cinnamon, ginger, black pepper, but all of those wonderful spices have anti-inflammatory qualities. So I'm going to be discussing, as I go along with the cooking, I'll be discussing each ingredient, why I've chosen this ingredient to be a part of our dish today, and to look at these dishes from this anti-inflammatory perspective.

I'd like to start with our tofu peppers and mushrooms. I like to choose foods that spark a little bit of a debate. So tofu is definitely one of those, especially when we think about the tofu and cancer connection. Tofu is -- first of all, it's a wonderful food containing many nutrients. Half a cup has 8 grams of protein, 20% of your calcium. It has selenium, magnesium, iron, zinc. So it's a very nutrient dense food, and it's very low calorie.

But where it gets a little bit tricky is it can activate these estrogen receptors in the body. And this is where it's best to speak to your doctor and figure out if soy is an appropriate food for you to enjoy. If not, this dish can totally be substituted. You can use chicken instead. I like to use chicken breast or chicken tenders if you want to make that swap. But really, tofu is more of a concern for women specifically with that estrogen receptor positive breast cancer, which is that breast cancer fueled by estrogen. That's where things can get a little tricky. But I wanted to sort of demystify tofu and share that it is a safe food for most people to enjoy. And if you have a concern about that, speak to your healthcare practitioner and see if they have a good answer for you.

So we're using a firm tofu today. You just want to -- when you open the package, it's going to come in some water. You want to drain that water off. If you're not going to use your whole block of tofu, you can always put it in a bowl, cover it with fresh water and change that water every day for about

five days. You don't have to use the whole block of tofu if you're just cooking for one person or you want to make a smaller batch. I like to do a nice big batch because this freezes well. It keeps for five to seven days in the refrigerator. So it's nice to make these healthy meals ahead of time that you can really enjoy throughout the week and not have to worry so much about cooking.

We're going to start by cutting this into 1-inch thick slices and 2-inch long pieces. I'm just going to start by cutting this right in half. And then I like to make these a little bit thinner. So now I've got my block in half. I'm going to turn this on its side and cut right down the center to get these longer kind of -- these longer slabs.

So now we have four pieces cut into slabs. And then we're going to go ahead and cut this into, let's do three. One -- as you can see, it's not an exact science when you start chopping tofu. So I like this kind of a shape. I don't like to cut things too, too small, because then they kind of get lost in the mix, and I like to have these nice big pieces.

So there's our tofu. We're going to chop that up. We're going to make a very quick, simple marinade for this. You can mix together more of what you enjoy, but this particular recipe calls for hoisin sauce. If you're not familiar with hoisin sauce, it's a nice mix of ingredients that adds a lot of flavor. I'm only using 2 teaspoons here. A little bit goes a long way.

And then we're going to add in 1/4 cup of soy sauce. So feel free to use low sodium soy sauce. We want to -- trying to minimize the amount of sodium that we're enjoying. It's a flavor enhancer. It doesn't have to be the main thing here. And then a little bit of toasted sesame oil. I call for 1 teaspoon in this recipe. I really love toasted sesame oil. So if you feel the way that I do, just take a moment to smell your toasted sesame oil. It's just like, it smells wonderful. So if you want to add a little bit more, that's fine, too. Have some creative license there.

So that's it for the marinade. It's three ingredients. You can use a whisk or even just a fork and mix that together. And then we're going to pour that over the tofu and let it sit for about 10 minutes or so, just to give this tofu some flavor. Because tofu, let's be real. It's not everybody's favorite protein. And I think that's because people don't -- like we don't really learn how to season it well. I've had tofu that's seasoned wonderfully, and it adds -- it just makes all the difference. It's like if you think of it as a sponge, whatever you put on it, it's going to soak that up. That's where you're going to get most of your flavor. So think of it as a vehicle for flavor; not flavor itself. Because tofu itself is not so powerfully flavorful.

Okay. So we're going to just chop up our peppers and our mushrooms. I have a cast iron skillet heating up back here. I'm going to turn it up a little bit more. I'm going to be using some avocado oil to do our sauté today. You can use any kind of high heat cooking oil. The best high heat ones are avocado oil, coconut oil, and what's the third one, ghee, which is clarified butter. People don't really like to use the coconut oil and the clarified butter, the ghee, because they're pretty high in saturated fats, and that can be a concern for folks with heart health issue. So avocado oil is a really good, safe choice for that. It's a monounsaturated fat. We'll talk a little bit more about avocado when we make our cream of broccoli soup.

But I'm going to be chopping up some mushrooms here. So as you can see, I have these fabulous little shitake mushrooms. Shitake mushrooms are really low in calories. I chopped some up ahead

of time just to stay on track with our timing today, but I'm going to show you how I work with these. I used to cut the stems off entirely of the shitake mushroom, and then one day I thought, maybe I can eat these. What would happen if I did? Turns out, a little bit chewier, but fantastic and still lots of flavor and good fiber.

So now I just start by trimming the bottom. In culinary school, we really work with vegetables a lot, but there's so much of a focus on having things look a certain way that there's a lot of food waste in the culinary industry. So I just trim the bottoms, and then leave the rest. And then we're just going to chop these up really thinly.

So shitake mushrooms specifically, low calories. High in those B vitamins -- B5, B6, B9. High in selenium as well as zinc. And there's a really cool fiber in shitake mushrooms called beta-glucan, which has a cool impact on cholesterol and helping to lower cholesterol. Mushrooms are also one of the only food sources of vitamin D, along with seafood, especially mushrooms that are grown in environments where they're exposed to a lot of sunlight. So if you get mushrooms from your farmer's market, maybe they have an outdoor growing facility. You're going to get more vitamin D in your mushrooms.

So, shitake mushrooms, fantastic. Also just delicious. So that's one of the reasons I enjoy them. You can use a different variety of mushrooms. If you prefer cremini or maitake is a great source as well. Asian varieties of mushrooms, maitake, shitake and reishi, all of those mushrooms. I wouldn't use reishi for this because it's a little bit of a different kind of usage, but those mushrooms in particular are very nutrient dense. Instead of -- sometimes we're used to using these white button mushrooms. There's not a lot of nutrient density there. So just try to think about how can you start to move the needle a little bit more towards nutrient dense foods. That's always how I'm trying to frame things.

So I've got my mushrooms. I've got my bell peppers. For the bell pepper, how sweet is this little bell pepper. Bell peppers are really high in vitamin C. They're a wonderful anti-inflammatory food. I'm going to start by trimming the top. Then I'm going to disconnect one, two, three, those spots using the tip of my knife.

And there's a really -- again, I chose peppers for a reason. There's a lot of controversy around peppers, tomatoes, eggplants. Can anybody guess why? I'm just going to pop my hands in, twist and pull. Tomatoes, eggplants and peppers. What do we know about -- maybe people don't know this, but they're in a particular kind of botanical family called the nightshades. So nightshades, interestingly enough, are not always recommended for people with arthritis, and that's because they can have an inflammatory effect for some people.

So I chose peppers because I, again, wanted to kind of debunk this idea that peppers, tomatoes and eggplants are inflammatory for everybody, because they're not. They are really healthy foods that we can enjoy that are very nutrient dense. Peppers in particular are very high in vitamin C. But for some people, they may have that effect. So I always encourage people to explore and see for yourself. Just because we've read something on the internet doesn't mean it's true. This is what we're all quickly learning.

So I'm cutting this in half. I'm using the curvature of the pepper to roll my knife along and get these nice thin pepper strips. So you can use a wok or cast iron skillet or whatever kind of nonstick pan you'd like to use. All of that is well and fine. And let's get our sauté going.

So, avocado oil's going in the pan. I've got about two cups of mushrooms, a bunch of red peppers. We're going to add that avocado oil and just get that going for maybe two to three minutes, get a little color, a little heat on there. I'm adding enough oil to cover the bottom of the pan. And you know your pan is hot when your oil starts to ripple. So you can always move the oil gently across the pan, and if you see that it moves like a little -- like there's a little river kind of effect, like little wave effect, then your pan is hot. We should hear a nice sizzle. You hear that? I don't know if you can all hear that through my headphones. But that's what you want. You want a nice sizzle. Not too strong either.

And then we're just going to move this around a little bit to make sure there's nice exposure to all the peppers and mushrooms. And -- whoops, escapee. I'm going to turn the heat up a little bit. Whenever you add something to a pan, the heat's going to drop. Because whatever you've added, peppers, mushrooms, tofu, whatever it is, it's going to bring the temperature of the pan down. That's natural because that's cold, that's hot. So whenever I put something in a pan, I bring the heat up a little bit. And then once it comes more back to temp, then I might drop it down a bit more.

We'll let that cook 30 seconds to a couple minutes, and then we're going to add the tofu. We're going to add a couple other things here, some nice flavor. Some garlic and some ginger. I'm going to peel a little extra ginger because we're going to use it in our golden milk as well. So let's see. Let's do one and two.

And I'm just going to pause as I crush and chop our garlic and peel and chop our ginger and check in with you, Robin, and see how is our audience doing? How's everybody feeling about these foods? I brought up nightshades. I brought up tofu. I brought up some kind of scary stuff. So how is everybody feeling right now?

Robin Perlmutter: Hungry.

Emilie Berner: Hungry.

Robin Perlmutter: Absolutely. It sounds delicious. So I'm going to just read you -- check in and maybe ask a question, if that's okay.

Emilie Berner: Wonderful. Yep. That's what I'm here for.

Robin Perlmutter: Okay. Somebody wants to know the name of the first sauce that you used that she couldn't hear what you said.

Emilie Berner: It's called hoisin sauce, H-O-I-S-I-N. I don't know if you can read that, hoisin. And it's written on the recipe as well. So you'll find it in your recipe packet. And if you didn't get a recipe packet, I know Robin is so diligent about emailing folks after programs as well. We can make sure that you get them if you didn't.

Robin Perlmutter: Yes. So everyone did get that packet. I can resend if you just let me know after the program. One of the women is mentioning that she was told that she cannot have soy. Yeah. So is there maybe a substitute?

Emilie Berner: Absolutely. Yep. Instead of using the tofu, I recommended use chicken. You can use a nice piece of chicken tenders or chicken breast, if you kind of hammer it out so it's all the same width all around. That's a great substitute.

You can do the same marinade, but instead of soy sauce, there's a fabulous product called coconut aminos. And coconut aminos can now be found pretty much everywhere. I get them at Stop and Shop and Shop Rite. I know they sell them at Trader Joe's as well. So coconut aminos are made from the tree sap of coconuts. And it's this wonderful sort of salty umami flavor that tastes a lot like soy sauce, but without any of the soy. So that would be your soy-free alternative. You would just use 1/4 cup of that instead of the soy sauce, and then follow the recipe as it's written. You would marinate the chicken. You would let that go for about 10 minutes in your marinade.

And then the only difference I might say is it might take a little bit longer, just because you are using chicken, you want to make sure it's cooked all the way through. Whereas tofu, tofu's already a cooked product. You don't technically have to cook tofu. You can eat it raw, even though I wouldn't recommend it because it doesn't taste great if you just had it raw. You want to marinate it, cook it and then do all kinds of wonderful culinary things with it. So the chicken might take a little bit longer to cook. That's the only difference. Yeah. Great question. Thank you so much for asking that.

Robin Perlmutter: Okay. Thank you. You have time for another one?

Emilie Berner: Absolutely. What else you got?

Robin Perlmutter: Okay. Someone saw an article on turmeric that said you shouldn't have turmeric. Have you heard of that, any negative information or unfavorable information for turmeric? Is that a recent development?

Emilie Berner: So, turmeric -- okay. So here's the thing. We're always going to find something that says the opposite of the thing that everybody else is saying. There's always going to be that person that says, hey, wait; I don't think that's good.

So turmeric has been used for centuries, especially in ayurvedic cooking out in India for centuries. Effective doses of turmeric, that's another story. I'm going to give these a quick stir. It's smelling really good back here. Peppers and onions are starting to -- I'm sorry, peppers and mushrooms are starting to soften a little bit. I can really feel that heat come up now, so I'm going to turn it down. And I'll bring this over as well so you can all -- I don't know how well you can see from there. But I'll bring this over so you can see a little bit better when it's almost complete.

But let's add in our tofu, our ginger and our garlic. And all of the sauce is in there as well, so that's going to add a bunch of flavor. And then I'm going to get back to that turmeric question. So in goes the garlic. I'm going to add in about half of this ginger because we're going to use the other half for our golden milk. And we'll just let that together for a little bit. Smells so good in here. I know

(inaudible). We're going to drop the heat down and let those flavors sit together.

Notice I'm not adding salt to this recipe. There's reasons to that. Soy sauce is very salty. So even if you're using the low sodium stuff, don't be fooled. Low sodium is not no sodium. We'll turn that down and let it cook just a little bit longer.

I'd love to talk about turmeric. Typically, the studies that have looked at turmeric used doses of 500 to 2,000 milligrams of curcumin -- curcumin is the active component in turmeric -- per day. So those are the studies. When you're using the spice on its own, a common rule of thumb is 200 milligrams of curcumin, which equates to 1 teaspoon of fresh or ground turmeric. About 2 to 3 teaspoons per day is a good general dose, but of course, you should speak to your doctor.

High doses of turmeric and curcumin are not recommended long term since research confirming their safety is lacking. That's where we get into too much of a good thing can be a bad thing, right? So too much of any good thing. The World Health Organization has determined that 1.4 milligrams per pound of body weight is an acceptable intake. So that equates to 1 teaspoon of turmeric per day. That's coming from the World Health Organization.

Keep in mind, all herbal supplements, all kinds of -- if you're using these things in a sort of medically minded way, you may want to speak to your healthcare provider about what the appropriate level is for you. So that's my answer about turmeric.

I'd love to turn our attention to the following recipe. We're going to make a cream of broccoli soup. And I'm going to keep us moving along here. So I have a pot of salted water that I boiled back there. I added the broccoli, and I boiled it just for about 5 minutes until it was nice and bright green. I have the cooking water in there. I have my blender here. And I love this soup because it's really quick, it's really easy. It uses a lot of healthy ingredients. So I'm going to draw this tray forward so you can see here. And everything goes in the blender. So what could be easier than that? I'm looking for quick, easy, anti-inflammatory. That's kind of my goal and vision for this class.

So we've got our broccoli. We've got our cooking water. I'm just going to use my little Nutribullet. I just moved to -- this is my very own home kitchen. I just moved to a new place, and I don't have a big blender yet. But I have this broccoli here. I'm going to use -- this is a very thin broccoli. It's young broccoli. So I'm going to use the stems. We'll pop that right in. I might have to do this in a few batches because I'm using my little baby blender. But essentially, what you want to do is blend all of the ingredients together.

So we're going to add -- I'm going to do like a mini batch so you can all see. We're going to add the broccoli. We're going to add some red pepper flakes. We're going to add some yogurt and some -- plain yogurt. Any kind of yogurt that you like. It's going to add a nice tang to this. If you want to add a dairy free yogurt if you're making this dairy free, be my guest. That's a wonderful alternative. Just make sure it's not sweetened because you'll have a surprise.

Let's add a little bit of that broccoli cooking liquid, as well as some vegetable broth. Let's add some garlic. Again, I have a nice garlic clove here. I'm going to use the side of my knife and press that down and pop the skins off. I'm going to add half a garlic clove, because otherwise it's going to be a lot for my baby batch. And then fresh lemon juice.

So this fresh lemon juice, it has a very important task here. Vitamin C helps to absorb iron. So anytime you're having any kind of veggies with iron in it, try to ensure that you add a little vitamin C to it, some fresh lemon juice, some fresh lime juice. Even if you're just having it in your water, while you're drinking that as you're eating the soup, that's fine, too.

We're going to add in some fresh parsley. I have some avocado here. Let's add that in. So I talked a little bit about avocado and the monounsaturated fats that are in it. It's because of the oleic acid. Oleic acid is the same monounsaturated fat that you find in olive oil, actually. That oleic acid is anti-inflammatory in nature. So really great stuff for you in that.

All right. We're almost done with this soup. We can add a little pinch of salt. Keep in mind that the water that I cooked the broccoli in is salted, so you may not need to add too much because we added some of that cooking water. And then let's just pop the top on and let it blend. It'll just take a minute or so. Oh my gosh, it smells so good.

And I chose to use broccoli today because broccoli in particular has 3 grams of protein in 1 cup. It has 3 grams of fiber. It's great for blood sugar management. It's particularly high in sulforaphane, which has these interesting potential anti-cancer properties. So it's a great thing to learn to enjoy. And it's soup season, so why not have a nice big bowl of cream of broccoli soup? And you saw how easy that was to achieve.

The creaminess comes from the avocado. So often we'll make a creamy soup, but we'll use things like potato and rice, and those are not necessarily anti-inflammatory in nature. Whereas you're getting that creaminess from the avocado, paired with the broccoli to get this wonderful anti-inflammatory, quick and simple soup. Once you boil the broccoli, the rest is really, really quick, as you saw.

Any questions about that before I turn to the golden milk?

Robin Perlmutter: Okay. Let's see if we have another question. I think we're -- are you -- oh, here's a good question. Are you using mostly organic vegetables when you cook?

Emilie Berner: Great question.

Robin Perlmutter: Given today's rising costs, it's a challenge for a lot of us. So what's your take on that?

Emilie Berner: So, great question. I use organic foods selectively. And by that, I mean I follow the Dirty Dozen and Clean Fifteen guidelines from the, I think it's the EPA, or maybe it's the Environmental Working Group. I never remember which one. But either one. The point is, the Clean Fifteen and the Dirty Dozen is a great list. You can find it online. It's a website resource. If you just put that into Google, you would find the 12 foods, the dirty dozen that are heavily sprayed with pesticides. Try to buy those organic. That's going to be -- that's my priority and focus is on those foods as organic.

The Clean Fifteen are foods that you can purchase conventionally because they're not heavily sprayed or sprayed at all. There are some foods that just naturally -- they naturally create their own sort of protective mechanism and pesticide resistance. So that's what I follow is those two things.

I think broccoli is on that Clean Fifteen list. I can't remember off the top of my head. I once tried to memorize all of them. I was like, I'm going to learn the Dirty Dozen and Clean Fifteen, and I thought that would be a cool party trick. But it proved to be a little bit harder. And as soon as I thought I was close to memorizing them, it shifted a little bit, because every year they renew the list. So I was like, forget this. I'm going to have to find it online.

Robin Perlmutter: Perfect. Thank you. That's great information.

Emilie Berner: Thank you. So I'm going to make our golden milk now. If you want to turn to the last page of your packet. It's 2 inches of ginger, peeled. We chopped that up a little bit. We're going to be using some cinnamon. The variety of cinnamon that I'm using today is Ceylon cinnamon. I always make a point to say that because most of the cinnamon that we buy is the cassia variety, which is lower in cinnamaldehyde. And cinnamon is a wonderful anti-inflammatory spice. It's cinnamon season, everybody. Like how exciting is that? So please, use your cinnamon. Try to get the variety that's Ceylon instead of cassia, just to get even more anti-inflammatory qualities.

And then we're using our turmeric. So we talked a little bit about the effective doses. The curcumin is where all that anti-inflammatory compound is coming from that curcumin. It's that golden, golden spice. So in this, you're going to use about 1 teaspoon, which is the effective daily dose as recommended by the World Health Organization.

A little trick for turmeric. You're going to add some black pepper in there. And I know what you're thinking. Black pepper in like a golden milk tea thing? That sounds a little bit strange. But black pepper does have this -- well, it helps if I take the cap off. Black pepper does have this cool compound called piperine. Never know if I'm saying that correctly, but that's what I think it sounds like. I always read it, and you know when you have to say words that you read, you're like, is that really how you say that? So you can use that black pepper to activate the curcumin in the turmeric. That's going to -- I always think of them as like, they're a team. They work together. If you're just having turmeric and not black pepper, I'd like you to think again and think how can I add some black pepper into this dish, into this meal to increase the bioavailability -- that means the amount that your body can latch onto and hold onto -- of the turmeric. So you just get more bang for your buck if you use a little black pepper with it. So why not?

We're going to add the milk. I'm using almond milk today. You can use any kind of milk that you prefer. And then we're going to again blend this. I rinsed this, but I didn't wash it with soap. So we may have little remnants of broccoli in here. But a little broccoli in your golden milk, never hurt anybody, right? Let's blend this, and then I will take another question, if you've got more. Any other questions? Can you all hear me still? Or Robin, did we lose Robin?

Robin Perlmutter: Yes. Somebody's asking about potatoes, whether they're recommended and if they're considered a Dirty Dozen item.

Emilie Berner: I don't actually remember if tomatoes are on the Dirty Dozen or Clean Fifteen list. I'm just going to trim up some scallions for our tofu dish for our presentation.

Robin Perlmutter: Emilie, it was potatoes.



Emilie Berner: Potatoes. Oh, okay. So potatoes, I'm sorry. Well, I still don't know if it's on the Dirty Dozen or Clean Fifteen list. I don't recall.

But potatoes in general, we think of them as a vegetable. They're not. Botanically speaking, maybe they are. But they're a starch, and they should be treated as a starch. So they're something to enjoy. It's better -- if you're going to have potatoes, it's better to enjoy sweet potatoes. They just have more beta carotene. They have more fiber. Again, just dialing that needle over a little bit more towards nutrient density, that's what we're looking to do here. So you're not saying no potatoes ever. I'm saying potatoes thoughtfully, in moderation. Treat it as a starch. And then if you have the opportunity to include sweet potato, maybe try that out.

So here is our skillet. Our tofu, our mushrooms, our peppers. Smells really good. I'm going to add some fresh scallions on top and just show you all how quick and simple, right? And you can serve this over a nice brown rice, serve it alongside some sweet potatoes, since we're talking about that. And I think we have another minute if anybody has any last questions. I know it's 4:30. I'm sorry, not 4:30. I'm a different time zone. So 7:30. So I just want to be mindful of everybody's time.

Robin Perlmutter: Sure. Thank you, Emilie. So we do have another question. Somebody wants to know if you can substitute frozen broccoli for fresh broccoli in that recipe.

Emilie Berner: Yep. Absolutely.

Robin Perlmutter: Okay, great.

Emilie Berner: That's a great hack if you don't have the fresh stuff or you just don't want to make that extra trip to the store, go for it.

Robin Perlmutter: Beautiful.

Emilie Berner: Simple, quick. And then the final steps for the golden milk, after you blended it, you're going to pass it through a strainer, and you're just going to heat it on the stove until it's a nice comfortable drinking temperature. The reason I strain it is because even though it's blended really well, you're still going to get some filaments of ginger. Okay, it's good fiber. If you want to go for it, go for it. I won't stop you. But certainly the straining, it just makes it a little bit more enjoyable to have it that way.

So you've got your peppers and your tofu. You've got your cream of broccoli soup. And then you have this beautiful -- look at that color. It looks like a mango lassi. It's so pretty. If you wanted to add a little bit of sweetness to this, after heating it, if you want to cool it down a little bit, you can add some coconut sugar or some honey is a really nice addition. As well as sometimes I put a little drop of maple syrup if I'm feeling particularly fally and festive. So have some fun with it. Make it your own. And all of these dishes help to combat inflammation in their own way, from the avocados and the oleic acid, from the turmeric, from the broccoli. The main takeaway here is try to include a wide variety of fruits and vegetables you know have these fantastic anti-inflammatory properties. All of the colors, all of those antioxidants.

And then the other thing that we don't often think about when we think about inflammation is stress. Stress is inflammatory in nature. So anything that we can do to help to combat stress, whether it's taking a deep breath, whether it's getting a little bit of sunshine, taking a walk, taking a moment for yourself, just staying connected to your body and breath before a meal, anything you can do to bring down stress in your life, that's something you can create a stress toolkit. Create a checklist for yourself. Remind yourself every day, these are the things that work for me. That will also help to bring down inflammation in a real way. So stress and diet, these are things we do have some control over and we can leverage and try to utilize to mitigate stress.

I almost forgot, the broccoli soup I think has a little bit of za'atar on it. I forgot to put the za'atar. So if you want to add za'atar, it's a nice space mix. Again, using our herbs and our spices to create more anti-inflammatory qualities in our dishes. And it looks really pretty, a little sprinkle of za'atar on there. So, thank you.

Robin Perlmutter:

Thank you, Emilie. This is fabulous. And I also want to thank Jen Looby, Dr. Jen Looby. Both of you, what a wonderful pairing and presentation from both of you. So informative and delicious.

So what I'd like to do now is share the information for you to get in touch with Dr. Looby if you'd like to make an appointment, find out more about how you can manage or prevent lymphedema. I'm going to share a slide right now. So there you go, folks. You can now see the information. I hope everyone can see that to jot down. I'll give you a minute or two to jot down that slide, the information there. And if you can't jot it down, you don't have a pen or paper handy, you can certainly email me tomorrow or whenever or call the office, and we can get contact information over to you as well.

So again, I thank you all for coming out tonight and taking the time, and especially for NewYork Presbyterian Hudson Valley Hospital, Dr. Jen Looby, Chef Emilie Berner for this wonderful presentation.