

Testing. Testing. This is a test. This is where you will be reading the captions. Testing.

Live Captioning by Ai-Media

(Video plays)

PATRICIA ANDERSON:

Hello everyone, we are experiencing technical difficulties with the sound on the video. Thank you for joining us today.

We are just going to dive in, if you have not seen the video, it is on the Yoga Alliance YouTube page. Hello my name is Patricia Anderson, my name -- my pronouns are she/her. I am the host for today.

... They type very fast, they are our life captioner. We have all experienced gloom -- zoom glitches, you will have to use a separate link to access the caption. Cybill will go ahead and pop that into the chat for all of you who are accessing the captions.

That is our behind-the-scenes, now let us talk about what we are up to today. We will be together for 75 in its, it is the afternoon on the East Coast of the United States. We will be talking about the lymphatic system, on the preshow, we were having a funny conversation about the word length stop -- live -- lymph.

Better that Jenny will be here to talk about the lymphatic system, and many of you know that Jenny Loftus. She is the beloved presenter, E-RYT 500. She also brings us some medical training as a registered nurse, however, Jenny is not your medical profession or or my medical professional. She will be careful to stay within her scope within a yoga teacher role, and will not be giving out specific medical advice. Might be frustrating for you that she may not be gave -- may not be able to view an answer.

Joining us today our folks from North America, Central America and the Caribbean, Europe, and Middle East/Western Asia. And one person from South Asia, and one person from Australia. Welcome all of you, thank you for joining us today.

More housekeeping as we move ahead, I want to let you know that we will be talking specifics of anatomy. I wanted to name that, when we speak about the physical anatomy of the body, we might use the terms male or female. We are not assigning gender identity, we are talking about assigned sex at birth bodies. That is what we know about the human body... Just wanted to call that into the space as well.

I think that is it. We will give you more information about Jenny, you will see more in the description of this session in the chat. But Jenny always has a lot to say. Which is wonderful. And she also has slides, which you will be able to access in the archive. I will stop there. Turn it over to Jenny. Welcome Jenny. Thank you for joining us today.

JENNY LOFTUS:

I'm excited to talk to you about the lymphatic system. Let's see if we can get my slides up and running.

First of all, to touch in on what Patricia was saying about the lymph, I think people have a lot of misconceptions about what it is. We do not learn a lot about it especially in yoga teacher trainings, or our happenings through our schooling. So I think there is a lot of unknown about the lymph, it is this beautiful system in the body.

So first of all, most of us know that the lymph has something to do with the immune system. We think of it as concurrent with what the immunity is. It is only a part of the immune system. First, I want to talk about – one of the main ways I want to -- how it impacts... It is fluid regulation, it has his beautiful capacity to – I think of it as this, you water the plant, it goes down to the soil, and somehow, that soil gets picked up through the vessels, not the vessels that the roots of the soil and gets brought all the way up through the plant. A lot of the time, we think of our fluid system as our bloodstream, of course it is, but it is also regulated by our lymphatic system.

About 20 L of fluid, roughly, this is on average – move from your heart to all of your body tissues. Every time you have this passage through of the heart pumping fluid through your arterial system, you get a little -- about 20 leaders that seep into your body tissues, and somehow the fluid has to get back to the heart and get pumped again. Only about 17 leaders of that 20 leaders return via your veins. What happens to the other 3 L? It is like the water that seeps into the soil and does not get brought back up through the roots. We have this beautiful system for reclaiming the extra water that we have loss that needs to be reclaimed and brought back into the cardiovascular system.

So those 3 L enter those tissues and the space between yourselves, the (unknown term) space, and there are all of these lymph capillaries that sit, and they absorb this extra fluid. So it is a conduit between the tissues and your body and your bod -- your bloodstream. It is very much in charge of your fluid regulation, so if you have some issues with fluid regulation like swelling, fluid retention in your extremities, the lymph has a big part of maintaining that. We will get into that in just a little bit.

The next function of the lymphatic system is our immunity. It is part of our immune system. White blood cells, which are famously known for their ability to fight infection, and there are lots of different types of blood cells – they are produced and released in the lymphatic system. But they are also

produced in the bone marrow and the spleen, the thymus, and the lymph nodes. It is not just the lymph vessels themselves. So those are all organs that are part of our immunity, part of our lymphatic system.

So our main goal of white blood cells is to destroy pathogens that enter the body. We will get into that as well.

The next function that the lymphatic system has, it is often not well known, it is part of your fat absorption system. There are fats, you absorb through your diet, and there are these things called lack tails in the villi, if you remember what it is – in your small intestine, these little finger like projections that increase the surface area of the inner lining of your small intestine and they are highly vascular. We absorb a lot of the nutrients from the food we eat. We have these lack tails in the villi, that absorb into the lymph system instead of just into the cardiovascular system.

So we can absorb fat through these lack tails, and it produces chyle which is lymph with a milky consistency which returned back to the bloodstream.

And then lastly, waste removal. If you think about all of this fluid that sinks into the (unknown term) of the body, there is a lot happening. We are constantly having cellular repair going on, and what happens to the (indiscernible) of cells? We think about dead skin cells of our skin, but what about inside the body? A lot of the waste removal of cellular debris, it gets reabsorbed from the tissues into the lymphatic system and it is filtered and removed via the lymph. The lymph – hold on. My slides are not – there you go.

The lymph... We have to remember there is no pump to the lymphatic system. This is where, I will get into the yoga aspects of it, but yoga can really help us out. Because there is no heart pumping this fluid through our body, there is a lot of passive, low-pressure flow of this fluid. Movement is what helps us move our limbs. So this cellular debris has to return to the cardiovascular system so it can be filtered again through the kidneys, liver, all of our capacities in our body to filter waste.

So let us take a moment marvel at how amazing our bodies are. Truly. We are so complicated, and we know so little really, about the inner workings of our body. Every time I learn something new, I am just blown away by our grand design and how intricate, and how perfectly made we are. I think the lymphatic system is just another example of the beauty of our system.

So what makes up the lymphatic system? So first, lymph. This is a clear, too milky fluid, unlike what you see on anatomy charts. Somehow it always labels the lymph as green, and it is not green. It is a clear fluid, it can get milky from that fat absorption. It is this beautiful, shimmering fluid that moves through our vessels and there is a lot in there besides the ability to fight pathogens. There is plasma,

white blood cells, all sorts of other essential nutrients. Pathogens that flow in there, debris, cancer cells. There are a lot of things that can flow through lymph fluid.

So the lymph vessels, because there is no pump, we start at all of the extremities of the body. Our fingers, toes, crown of our head, and all of these vessels start small and little Capella race, and the -- Capella race, and then they get bigger... All of these vessels have to drain back to two main vessels right here in our collarbone. They are called our collection ducts... Everything from the right side of your arm and the right side of your head drains into this right lymphatic duct and it drops right into the sub (unknown term) vein. These two ducks on the other side are the only two places that lymph turns - returns to the bloodstream.

Think about it the lymph fluid from your feet has to go up to the collarbones to drain back into the lymphatic system.

PATRICIA ANDERSON:

I am so sorry to interrupt you. And may be useful to show the visual at this point if you do not mind.

JENNY LOFTUS:

Yes, sure. Hold on, one second. Let me get this app up.

OK, move this over.

Can you see this?

So this is an anatomy app called 3D for medical, it is a wonderful app. I have the lymphatic system up on this app. It is not my favorite view of the lymphatic system, but I think what is cool about it is you can see there are lymph vessels throughout your body. Draining from your head, your arms, your legs, all the way up right near your collarbone. These vessels, I will remove the collarbones for a moment. Let's just hide those so you can really – let me isolate actually. Oops, that is not what I wanted to do.

Sorry everybody, one second. Let us hide those. Remember, they are there. And I'm going to put in the venous system here, so you can really see, right here is the thoracic duct. This one right here on the left, where my cursor is, this is the main lymphatic duct that drains the entire left side of your body. Your left arm, left leg, as well as your trunk hello your diaphragm and your right leg, and the left side of your head.

PATRICIA ANDERSON:

Oh my gosh, it does not look that big.

JENNY LOFTUS:

That is why I think this app is a little deceiving, because it cannot be that small.

Here's the right lymphatic ducts right here. The one on the left is a little bit bigger than the one on the right. While I am here in this app, let us talk about some other aspects of the immune system. I am going to remove the sternum here – this is your sternum. I will hide that. This gland right here is your thymus gland, and it sits right above the heart. It is about the size of a deck of cards. It is really important aspect of your lymphatic system. It matures T cells, lymphocytes, it is a type of white blood cell that – if you think of white blood cells as your soldiers fighting off infection, T cells are like the special forces. They are really specific in what they fight against. And they are matured in the thymus, and brought into the lymphatic system. So they can hang out in the nodes, and fight off some infection.

In the other gland I want to throw -- show you is this plain, it is in the left, upper (indiscernible) and the screen filters blood and also produces a lot of white blood cells. Ensures a lot of white blood cells, and it is connected to your white blood cells as well. This is where we create a lot of the capacity to have a strong immune system to fight off infection.

There is only one other part of the lymphatic system that I want to show you here. I'm going to remove the veins for just a minute. Do you see this right here? Once again, this app does not do this justice I think. I'm going to back out so you can see where this is. It is around L2, around your vertebrae. It is behind your organs but in front of your vertebrae. (indiscernible) this is called your cisterna chyli -- (unknown term) it is a little bit of a reservoir, where all of your limbs from your trunk and your legs pull in here and it begins the thoracic duct.

It is highlighted in pink right now, this thoracic duct, comes all the way up to right below your left collarbone. And drains back into the cardiovascular system into the subclavian vein. Right at your collarbone. This is a really big deal that this one vessel drains lymph from your legs, and from your trunk into that subclavian vein. So it is an important part of your lymphatic vessel system. You hear me talk about it when we come into the old aspect of things later.

Let me back out so you can also see lymph nodes. If you notice these little T-shaped, there like being shaped nodes in the cluster in your armpits, and the cluster in your neck and head, and the cluster in your groin. You can kind of see that here. There's clustering of a lot of lymph nodes right around your pelvis, your groin, and your armpits in particular.

Lymph nodes are found everywhere in the body. Whoops, now he's tiny. I wanted to back out so you could see there's even a lot of lymph vessels in the bottom of your feet, and you actually have a lot of lymph in your feet, lymph vessels in your feet because that's where gravity, we tend to be most against gravity in our feet so we need a lot of these vessels to draw up.

PATRICIA ANDERSON:

That explains why the feed can be so easy to swell, right?

JENNY LOFTUS:

Yes, and Bill get into that.

PATRICIA ANDERSON:

The visual was super helpful for me.

JENNY LOFTUS:

Any questions about it before I get out of here?

PATRICIA ANDERSON:

I'm sure there are going to be questions, but let us not interrupt you any further.

JENNY LOFTUS:

You can always interrupt. We talked a little bit about these beautiful lymph vessels, and I think it's kind of amazing that they only go back into your cardiovascular system right at your collarbones. That's kind of important. Let's talk about the lymph nodes a little bit more. There's approximately 600 lymph nodes. That's a lot of lymph nodes that you have through your body.

They can be very superficial in your body, they can be very deep, they can be lone rangers or they can be nestled in groups, and like I said the nodes tend to cluster in the pits of the body, the armpits, the head and neck and groin, and also behind your knees and in your elbow pits. Anywhere there's a pit in your body you probably have a grouping of lymph nodes.

What do lymph nodes do? Why do we have these little bean shaped things? There where we filter a lot of cellular debris such as all of the damaged cells from tissues, as well as cancer cells. Nodes produce and store lymphocyte. Along with the spleen and lymph they can produce and mostly just store them for sites to destroy pathogens.

One of the cool things about the way our immune system is is that each node also has blood supply. Blood is coming in there and finding its way around the node, and so you have a lot of white blood cells that are finding their way to lymph nodes, either through the limb or through the blood kind of touching the lymph, and nodes are where these immune cells can taste lymph all over the body. If you think about it it's coming from tissues everywhere. So what better way to kind of be on guard and notice, fluid is coming from everywhere in the body so I'm going to pay attention to what's in this fluid. The nodes are where paying attention really happens.

When we noticed a pathogen, any type of microbe, a piece of that microbe, even if it's not a full microbe but it just is a protein filament, it gets presented to the lymph nodes to the T cells, and the T cells are like, oh that's a pathogen I don't want. We get the B cells over here so they can help me out to fight this pathogen, and also to develop antibodies. Antibodies are kind of where we have memory to remember, I've seen this virus before. I've seen this bacteria before. I have resources to fight this, let me gather those troops and bring them out.

There's a lot of presenting in the lymph nodes of paying attention to these pathogens, and that's why there's a lot of lymphocytes in there, in those nodes. You'll notice when you get sick everybody's had the feeling when you get swollen lymph nodes in your neck, or from an infection. This is the body doing its job. There's a lot of white blood cell production happening when we were fighting off a lot of these pathogens, which is creating a lot of debris, which the body is clearing out through the lymph. It's kind of amazing.

The lymph nodes are really responsible for a lot of rapid travel and communication of the immune cells throughout the body, because remember immune cells are also in the blood. There's this interchange of the cardiovascular system and at the nodes as well. Nodes are really important.

The cisterna chyli, I already talked about that when I showed you on the app. I always think of it like a rain barrel. You numbly collect all this water from the rain into a rain barrel? The cisterna chyli starts the thoracic duct to bring all the fluid back, particularly to the left (indiscernible). And then the spleen of course, a lot of white blood cells. The thymus, the thymic T cells, but you also have some other lymphoid tissue around the body that are exactly like lymphatic organs, so the tonsils and adenoids, they contract pathogens in your oral nasal cavities, obviously our alimentary canal what comes into our mouth is a place where pathogens can enter our body very easily. The tonsils and the adenoids are the first line of defense. We also have some lymphatic tissue all throughout our small intestine, besides those black seals that absorb the fat we also have these things called Peyer's patches which destroy the small intestinal tract.

There's lymphoid tissue in your appendix that can destroy pathogens. Recent studies have shown there's also development of healthy bacteria in our appendix that can support our microbiome. And lastly is the bone marrow. Even though it's not exactly part of your lymphatic system, in your bone marrow that's the birthplace of all of your white blood cells, as well as your red blood cells and platelets. It's the nursery for all the cells to develop. It's absolutely part of your lymphatic system even though it's not connected.

So, a few examples and some challenges that can come out, and there's lots of challenges that can happen with the lymphatic system. Lymphadenopathy. This is enlargement of the lymph nodes and



this can happen typically from infection, we see this all the time especially when people get them in their throat. Also from inflammatory processes in the body, trauma, that can cause a lot of cellular damage. Remember this is part of our waste removal system as well. We also can have autoimmune conditions that can cause havoc in our lymphatic system. In cancer, the lymph nodes in particular are a place where our body catches like a net catches the cancer cells but start to watch out for primary masses. That's where we find the first example of metastatic cancer that has spread, metastatic cancer lesions.

Lymphedema is a big one that we often see in the realms of the yoga classes. There's a lot of people who have an accumulation of fluid especially in the feet or arms, this is due to a blockage somehow and it can be caused by damage to the lymph nodes, or the vessels themselves. We see this a lot with people who have gone through treatment for cancer.

If they've had surgery to remove lymph nodes, some lymph nodes, a lot of lymph nodes, because we have interrupted the lymphatic system there's going to be scar tissue there, diverging the fluid of the movement of the fluid, so a lot of times we can have a backflow of lymph that cannot pass through the vessels very easily because of the blockage in the flow.

And it doesn't have to be just cancer treatment for radiation or surgery, it could also be damaged, that can happen to the body as well.

I'm sure you have seen people, or maybe yourself have had lymphedema, and this can be minor. You take a long plane ride and you get off the plane and your feet feel swollen or just tight from sitting for prolonged periods of time. The first day Sherry for a long time especially on our dependent limbs, at the bottom, we will have fluid buildup in these places.

You'll notice if you have that feeling you get off the plane simply walking can be some of the best things you can do to move that fluid again.

But people who really struggle with chronic lymphedema instead of situational lymphedema like that really can struggle, and there's all sorts of things that people do to help. There can be sleeves that people wear, compression sleeves that people wear on their arms or legs to help compress and make the lymph move. Also people who have had some of their lymph removed from their groin in particular for colon cancer resections, or melanoma. It could be any kind of thing, but they are almost like sleeping bags that you put on your legs than they are attached to a pump and you squeeze and release. It helps with lymphedema, it moves the lymph.

This is the place where yoga can have some impact, both on the subtle pieces of lymphedema like we all experience at times to the more severe forms of lymphedema that come from damage to the lymph



vessels, not just from too much stimulus.

And then of course there's cancer of the lymphatic system. We can have metastatic lesions like I was saying before, but cancer that can spread to lymph nodes, but we can also have primary tumors and lymph vessels and those are called lymphomas. There's a lot that can happen with the lymph system to burden us with challenges.

So, how can you help? Yoga is amazing for helping our lymph move. The first thing we always want to remember is that lymph likes to be warm. If you are warm, and I have a scarf on today, it's a little chilly, notice that when you are feeling a little under the weather to put a scarf on, to keep the lymph nodes little warm? Is that kind of a natural... Do you do that instinctually just to keep your lymph nodes warm when you are a little under the weather? The lymph flows really well when you are warmer so of course exercise, of any kind, will warm your body, but yielded particular. You want to make sure when you are doing yoga, especially if you are considering doing yoga for lymph that you have a warm room.

This doesn't have to be hot yoga, but making sure you are in a warm space to do yoga. And like I have been saying, movement is the pump that moves lymph. The movement of your muscles, contraction and release, opening and closing under joint spaces, this is what moves lymph through your body. So, the more you move your better lymph is going to. It can be as simple as heading out for a walk, and it can be all sorts of yoga postures, all yoga, and he will feed you will help him live through your body. Pressure. Just some gentle pressure on the body, as well as stretching. Stretch muscles, this gives a lot of feedback to the lymph vessels to move. And vibration.

I do not know if any of you have experienced a vibration plate. There are these plates that you can stand on or sit on, or whatever you want to do. And they vibrate. You stand on there, and your whole body vibrates. Or if you have a little mini trampoline, bouncing on it, or just very simply – you do not even need to leave the floor to do it. You can stand up and just have that sense of, I do not know if you can see me – but just bouncing and especially if you have trouble with... Just standing and vibrating can be really good. Jiggling the body. Get a good jiggle on, yes. Dancing. Good jiggles are excellent for moving lymph.

Another aspect for this is open chest breathing, we are also slumped these days. We lean over a computer, the weight of the world is on our soul – my folders – my shoulders. This can really impact the movement of lymph. Remember, those vessels that are right at your collarbone, where the lymph, the only place that lymph filters back into the bloodstream – when we slumped, our collarbones collapse. We have this shrinkage of space. So have a lot of trust opening and deep, open chest breathing can be really helpful for moving lymph. You have a lot of lymph in your torso. A lot of lymph nodes as well.

Having a lot of movement of your diaphragm can massage the internal organs a little bit, and the organs themselves then become the pump to help move lymph through the trunk of the body. So good deep breathing can be really helpful.

One of the best things that we can do in yoga is to open and close the pits of the body. So the armpits, the growing pits, the knee pits, the elbow pits, the clavicle's. And then also the face and neck. We can have a lot of squeeze and release, squeeze and release in these parts of the body, this can help move lymph a lot. And lastly, we can have some gentle skin brushing. It can be with your hands, it can be with a scrubby brush, like your shower. You can do this in yoga class, just smacking their body with their hands. Moving everything from the extremities back toward the heart.

There has been a lot of classes where I have people just smacking their bodies, like up there leg and just by brushing, just by Swedish -- squeezing, tapping. These are a lot of movements that you can add to a yoga class that will help move the lymph.

But remember, even if you are not teaching a class specifically to help, or taking a class or doing yoga, to specifically help move your lymph, there are a lot of ways that we move in every yoga pose that really does a lot of these things. We get warm, move, have a lot of stretch and rhythmic movements. We do a lot of deep breathing, open and close the joints of our bodies a lot. Some of these things are natural to all aspects of yoga classes, but if you are feeling under the weather or want to brighten up your immune system, or you feel like – maybe, you have had some tissue damage in your body from inflammation or whatever. You can do a lot of these things to help move the lymph, and for member, the reasons why we want the left to move. Move waste, immune system strong, fluid regulation. All of these things can be helped by keeping those things in mind for your practice.

So now, to just talk very specifically about – I am going to come out of here. I am going to stop sharing my screen, can you see me?

OK. I will show you a lot of these poses, and like I said, a lot of these things – we do all of the time. This is not anything unusual from what we do in a typical yoga practice. So first, the breath work. Lots of pranayama can help with the lymph, but very specifically, (unknown term) most specifically because it is this really brought this that happens we deep breathe. But also (unknown term), the shining breath where you are pumping the diaphragm. Quickly. This can really help massage the trunk a lot, and keep the lymph moving in the trunk of the body, that is the sister not highlight -- cisterna chyli, you have a lot of movement there that can help transmit the movement of flow back towards...

If you are doing skull shining breath or (unknown term), you have to have caution, because if you have high or low blood pressure, heart disease, or have glaucoma – there can be a lot of pressure gradients

that shift in the body when you do something as strong as (unknown term). You have to be mindful that you are choosing a breath that is right for you or your students and that is something that is going to have too much strain on the body.

(unknown term) is mostly available to most people, so that is a great way to begin. Gentle vinyasa, remember this rhythmic opening – if there is nothing else that you think about when you are practicing yoga, and think, "I want something for my lymph." The simple opening and closing. It can be simple – take off my warm layers so my lymph is going to be chilly. But simple things.

Moving from child's pose which closes the knee pits, and the growing pits to rising up and lifting, and back again. It can be very simple things, and you can have your arms down close against your armpits as well. Open them back up, you can start a practice for with very gentle, simple movements. And of course, if you have challenges with deep hip action or knee flexion, there are a myriad number of ways that you can work with flexion in those parts of the body that do not require so much bearing down into deep flexion.

Simple things like sitting in a chair, if you are doing chair yoga. You can have people bend to wherever they can bend, and rise up. You can have people straightening one leg and flexing, back and forth. There are a lot of ways.

PATRICIA ANDERSON:

It is also useful when you are sitting on an airplane.

JENNY LOFTUS:

The best thing that you can do on an airplane is get up and walk down the aisle and go back your seat. Even just moving your feet, flexing and pointing your toes. It will have movement because your calf muscles will start to engage. There are so me creative ways to move lymph in the body your yoga practice, as long as you remember the basics of, "I have to close and open the pits of my body." Simple things, I start just about every class I teach – I start with having a sense of spreading your limbs out and bringing your limbs and. Spreading your limbs out, with breath of course. And bringing them in. It is such a simple way to warm the spine, warm the joints of the body, and to start moving lymph in your body.

Like I said, there are a million ways you can do it but remember – opening and closing, the elbows, armpits, groins, and knees. This is a great way to move them. Through your body.

So specifically, a few poses that are very specifically good for lymph, Eagle pose. if you are doing Eagle pose, and this is too hard, you can do it against the wall. Or even in a chair, where you can be sitting and cross and cross. So when we cross our thighs, and you can have your foot on the ground

as well, there is no reason it has to come into a balance pose. You can have both feet on the ground, and if you do this and squeeze your inner thighs toward each other, when your elbows – squeeze your armpits, I often tell people to imagine that they have oranges under their armpits and they are trying to squeeze the juice out of it. We have a sense of a deep squeeze in the elbows and armpits, knees, and hips.

Remember, it is not just the squeeze, it is the release. So after doing Eagle pose, standing star, or any post that is going to allow you to open your body out and come back in. Open your body out, other side, come back in. You do not have to move super rapidly, it is not like what I showed before with the child's pose. Where you are coming breath up, breath down. It can be one breath moving, but in impose like (unknown term), stay for a little bit. Feel the deep squeeze, give your body a chance to file depth.

Remember that the lymph nodes and lymph vessels, are very superficial and deep. You have some things that are very superficial on your body where tapping can really stem -- stimulate lymph, and then you have deep places where if you hang out in there for a little while, and stimulate a little bit more depth.

So (unknown term), in all the ways that you can do. Against the chair, against the wall, 2 feet, one fee, all of that squeezing. And for member, the arm. If your hook! If you're -- if your hands cannot hook, you can hold your shoulders, and you will have the squeezing of elbows and armpits and open up, and squeeze. Switching sides. There are a lot of ways that you can modify all of these things so that even if somebody is really struggling with movement capacity, there are ways for you to move.

If someone just had surgery, like a vasectomy with lymph node removal. You are just going to go where your body can move for today. Whatever today allows.

So how I am sitting, (unknown term) sitting on your feet, the ground, a block, whatever you are comfortable. It will help you have a good squeeze in the back of the knees, as well as child's pose. There is a lot of postures that we can do to give us the squeeze.

A simple lunging you can do as well. If you have 1 foot forward in 1 foot back, you can go back and forth with opening and closing the back of the knee. Same thing happening in the hip, you open the groin and you close the groin. So there are simple things that you can do with breath that can have a lot of focus on this opening and closing of the pits of the body.

So a couple things – if you have a strap, you can do, will start talking about just a little bit. How important it is to keep the chest open for those thoracic docs, and the drain toward the club. If you stand on the strap and put it underneath your feet, I like it underneath my heels, because it stays put.

This drop is short, the other one is long, if it is long, you can wrap it around until you get to a place of traction. And you can bend your knees, keep your chest – not around it, but lifted a little bit. And then when you come up to stand, come -- open the chest and come back in.

So you have broadening across the collarbones, turning the palms out, and you have this stretch across the collarbone. This openness, and a little bit of softness. Which is different than collapsing. So from the side, what you do not want to do – not popping the ribs forward. You want the sense of opening the chest. So you can get a lot of the lymph nodes right along the tops of your collarbones and those vessels that we want to keep nice and free and open.

PATRICIA ANDERSON:

External rotation of the shoulder, right?

JENNY LOFTUS:

Yes. Open, and relaxing. There is a subtlety, because the clavicle's are not a pit, or a neck is not a pet of the body that can close and open – The same with the neck. If you have your hands up you can get some nice in your arms as well, just have your hands open, so however you want to be and you can do this. Standing pose is like, don't do it on a slip of paper. When you come into oppose like your virasana that's your intention of opening the collarbones and you can try lifting to the ear, listening to the other ear that you get that movement across the neck.

Remember, there's a ton of lymph vessels or lymph nodes in front of your ears, and your jaw, and the base of your skull and around your neck. Having some movement there, and the other thing I do often is let's say you are in a lunge. Whenever this shows up in your practice you can open your arms all the way up. There's ways for you to have all of this movement going on that supports lymph, it's these rhythmic opening and closing movements that you can be so creative in how you add those movements into a typical yoga sequence.

I need to look at my notes. Let's talk about that cisterna (unknown term), behind our organ in front of our spine. Things that create a little pressure on the abdomen where the diaphragm has to pump and move can really stimulate that cisterna (unknown term) and help fluids move up the thoracic duct into the vein on the left side.

Simple things like coming onto your belly. Any prone back ends where you are lying down on your belly, whether it be cobra close, or better yet any variation of locust, you don't have to have your arms interlaced behind you, you can come up here and if you are lifting your legs, or keeping your legs down, but if you're lifting all of your limbs and breathe really deeply the diaphragm is going to move a lot. You can feel like your whole body moves from just the pump of your diaphragm, and the diaphragm then becomes the pump for the lymph to move through those deep vessels in your trunk.

So, besides the deep breathing having some prone back bends the diaphragm has pressure on the floor and your breathing deeply while sending a lot of the deep trunk link. Those are a lot of the good ones as well.

Anything that opens the collarbone. Bridge pose, and shoulder stand. Those are two posers that have this broadness across the collarbone. Those are really good things to add. You can do a couple of unique ways of finding this pose. In bridge pose, for instance, you can come up into a typical bridge pose, but perhaps not just that, maybe you like to have your feet on blocks so that when you come up to the pose your pose is a little higher than your heart, and remember that drain back towards those vessels is what we want. Any emergence of any kind will help the lymph move.

Things like putting your feet on blocks will make it higher in your bridge pose so that you can drain fluid through the trunk back, the collarbone staying broad. You can even move and put your feet higher onto a chair. If you are noticing I am shoulder stand for whatever reason, it's a way to put your feet on a chair, it's a way for you to get that in version with the collarbone that's really broad without having to actually do shoulder stand work which can put a lot of pressure on your neck.

Sometimes when I do that bridge pose and put my feet that high up on a chair I will have a blanket underneath my shoulders. Shoulder stand is a whole other beast that maybe we will do a workshop on to break down shoulder stand. But having some support underneath your shoulders will ensure that your neck isn't going into 90° in flexion and your keeping it a bit more neutral, which will be a little safer.

Get on the floor, feet on the block, feet on the chair and bridge pose can be nice. Shoulder stand if that's in your practice. A lot of people are taking the headstand and shoulder stand out these days because of some challenges with carotid artery compression. Like I said, that's for another workshop.

Remember that inversions do not have to be a handstand, headstand and shoulder stand. There are so many more inversions. Dog pose is a great way to move lymph from your trunk to these vessels. (unknown term), if your legs are wide and you are bringing your hands down onto the blocks, anything where your pelvis is above your heart, whether it's bridge pose, dog pose, all of these postures will drain lymph from your trunk back towards the (unknown term) veins. Remember inversions, and probably the very best inversion for the LinkedIn general's legs on the wall.

Especially if you have a long blanket or if you find any wall, and I do this regularly at airports. If I have a connecting flight I will find a little tiny corner somewhere where no one is looking at me, and I will sit with my legs up a wall. It's a great way to drain length back towards your veins.

Even simple things like lying down and putting your feet up. Put your calves up on the couch. It doesn't

have to be the classic laid up the wall pose. If you are going to do the (unknown term) I would suggest having a blanket, or maybe two blankets, something with a little height under you so your pelvis is a little bit higher than your heart when you coming to the posture. Anything that brings the angles, if we are thinking of following the pathway of gravity normally, our lives has a far way to go from our feet back to our collarbones. Think about that.

Our lives has to go from our fee to our collarbones while you're standing all day. Kind of amazing we don't all end up with swollen feet by the end of the day. Movement and breath are key.

This is a really great way, I love this pose,

PATRICIA ANDERSON:

We are doing great on time but I just want to give you a heads up that we've only got about 20 minutes left.

JENNY LOFTUS:

This post feels really nice. Especially if you are a little under the weather, and you are feeling a little sick and you want to treat your lymph with respect, but you don't want to do the big strong asana practice. All these supportive postures are very passive so you can add them when you don't feel well. Simple things like coming into bridge pose with your pelvis up. This is another thing besides putting your feet on a block, or you can put a block or bolster underneath your pelvis for bridge pose and do it passively, that's a great way.

You need two blocks for this. One on either side of your bolster, and if you don't have a bolster you can use blankets or pillows or whatever you have.

Bring your knees up, and we are going to drop our knees over to one side. This is where the blocks come in because you need a little support. You can have the block on high height, or middle height, whatever feels good for your body. A very passive supine twist, so often in our yoga practice when having your pelvis up on the edge of a bolster when we come into this twist with our shins supported with the block is a fabulous way of both getting the breath to come massage the deep internal self, which will move into your trunk, but also your pelvis is higher than your heart so you get the gravitational flow of your lymph back towards your heart, and your legs are supported higher than your heart as well.

Very simply a twist over bolster. I don't know if you can see that, I have a block underneath. That's a really nice way of doing the posture as well.

You can do all sorts of back bends that are supported that will help you open your collarbones that are



little bit more passive than some of the standing poses that we can use to open ourselves up.

Simply rolling a yoga blanket, and you can half roll it, all the way roller, control one into the other. If you really open and have that capacity. You can just simply do a back bend. Some people need a block under their head to support their head. If you need extra support you can put it there. Just simply hanging out with the blanket underneath the chest and across your shoulder blades in the back. It's a great way to open the collarbones, to open to this really beautiful deep breathing, and give you this passive, relaxing, restorative way of moving a lot of lymph in your body.

Any supportive backbend but a rolled blanket is a good thing.

Twists in general, because when you twist your oblique muscles and your diaphragm kind of have like an antagonistic relationship to each other. Your diaphragm will have to move just a little stronger with any twist. Reach asana this way where you are coming and you have the compression across your abdomen the pressure of that will massage deeply limp into your trunk. That's a nice thing to do as well.

Anytime you come into chavasana.

remember you want to stay low.

Weighted sandbags on your shoulders, your pelvis, a weighted blanket, anything that provides you with we can feel really good for your lymph.

The last thing I forgot to mention earlier in the more active poses, this is a sampling. If you remember the biggest thing here is in versions and opening and closing the pits you can get so creative in how you go about sequencing your practice to help you with lymph flow.

One other thing I think is a really nice way is a happy baby pose. This is another one that moves into the groins, and the knees. But if you come in the more active portion of your practice, if you have your hands behind you kind of like a classic old school sit up, but instead of crunching up you can have that sense of opening and closing the arms while still resting the head on your hands. We don't want to yank our neck up, but we can have the sense that we can close our armpits, and then open, and then even better we can move just the top of our shoulder blades off the floor, the tips of your shoulder blades are still down.

Feet on the floor so we are nice and supported and you can go sideways like an oblique engagement where you are stressing one armpit and compressing the other one and then going to the other side. Stretching one armpit and then opening the other. All while letting your head rest in your hands so that you are not having this yank on your neck.

Those are just some ideas. Like I said, there's so many things that you can do if you just remember the basics that lymph likes warmth, gentle rhythmic movements, vibration and pressure, and stretch, and it likes to open and close the pits of the body. If you can keep those things aware in your mind as you are sequencing you're going to do right by her lymph. You will have beautiful lymph flow in your body, it's going to be this beautiful fluid that's thin and mobile, and treating your body with deep respect.

Start to fall in love with your lymph instead of being like, ew gross.

PATRICIA ANDERSON:

I know it's not gross I know it's important.

JENNY LOFTUS:

And it's not green.

PATRICIA ANDERSON:

I actually enjoy lots of green things so I'm not against green. Just like slimy green doesn't seem appealing. Like May folks in the audience as well, appreciate the session. We have all learned so much. I will get to people's questions. One of the things, right off the bat when you explain the lymph system, thankfully – I have had some of these education before. But it clicked to me today, that it had not before, like one of the many reasons why I feel so much better when I am moved him and specifically when I am able to practice asana, your body needs to move. This is one of the many reasons why.

There was lots of light bulbs going. I will let the audience speak, you hear from me enough.

OK, top photo question – asking about tapping. Jenny, if you do not have a lot more to say about it. That is cool. I will ask anyway.

When you are tapping, do you want to focus towards the heart?

JENNY LOFTUS:

Remember your thymus gland is right behind your sternum, thymus tapping and collarbone tapping, yes, excellent for lymph. And everywhere. Those are really good places to pay attention to. But a lot of lymph drainage is superficial, massage, back to the heart. There can be a lot of tapping, light stroking, skin stroking. Tapping all over and certainly around the collarbones and thymus gland is really helpful.

PATRICIA ANDERSON:

Perfect. By the way, today is the first time I thought of my clavicle as a pit of everything -- or anything.

It makes great sense.

JENNY LOFTUS:

Open and close.

PATRICIA ANDERSON:

Headstand – people were asking about new versions. What is and is not an inversion? Particularly since we have so many different ability to focus -- folks. There are so many other options.

JENNY LOFTUS:

Anything that puts your pelvis above your heart is going to be an inversion that will support your length. Even if your legs are not above your heart, like bridge pose for instance. Your legs are down but your pelvis is up. You will get a lot of trunk movement back toward the cardiovascular system. Anytime your pelvis is above your heart will be helpful. So that can be leaning over, forward fold, dog pose, (unknown term), but it could also be like bridge pose. And of course the more traditional inversion, (unknown term), like up the wall. It is passive and everybody can do it, just about... If you have someone in your class or if someone has lymphedema, like up the all pose, miracle pose. If you have been at your feet -- in your feet all day, specially concrete. Like a museum or walking streets, where there is not a lot of yielding. You do not have this absorption of rebound – getting your legs up after that will be very, very helpful to move the limp and get some of that extra fluid to return from the tissues, return back to the cardiovascular system.

A lot of people do not – not cannot do headstand amount for a lot of reasons, fear, lack of strength, lack of training, cervical spine issues, glaucoma, high blood pressure. The list goes on and on of problems that can prevent one from doing the traditional king and queen. The headstand and shoulder stand. But that is OK. You do not have to do it, you can. And hand stands too, but you do not have to do those in order to get the affects. Anything that brings your pelvis above your heart, but especially your legs also. Which is why leg up at the wall and all fashions is really good.

PATRICIA ANDERSON:

Awesome, thank you. OK, a couple of things about pathology of lymph nodes. Lori was asking about having tonsils removed, Jessica was asking about what is going on when your lymph nodes file key. Audrey was saying – I feel super sick after a night of dancing, a lot of this is related to hydration I think. But I want to let you – and then a question about white blood cells. But I will let you get into the pathology of it more.

JENNY LOFTUS:

Yes, so hydration. First of all, besides all of this movement. The very best thing you can do for your lymph is keep yourself well hydrated. If you are dehydrated, you will probably feel a lot, your lymph will

get sludgy. So you want to stay very well hydrated.

Sometimes achiness around the lymph, it is hard to determine – if you have superficial, achiness everywhere. And you think it is lymph, it may not be lymph. You might just have some inflammation process going on, I do not know. But if you are having very specific pain in your lymph nodes, that is pretty clear. Like yes I have achiness in my lymph nodes – it just might mean that it is doing your job. They are processing. Whether it is increasing the amount of white blood cells to fight infection, or moving processing cellular debris. Both of those things can stimulate lymph nodes to grow in size, and production increases. So there are a lot of work to be done.

It is not necessarily a bad thing, but a sign that your body is doing the work it is supposed to be doing. But of course, if you are unwell, seek medical advice in any way. If you have chronic pain in your lymph nodes, you should go see your doctor. Find out what is going on.

PATRICIA ANDERSON:

Yes, for sure. Thank you Jenny. Let's see... Chris was wondering if using yoga balls – I'm going to editorial and add any other props, will help move lymph around. I would say yes, like smashing, for recovery is useful I would say.

JENNY LOFTUS:

Yes, they can be softballs, they have some give to them that can be very helpful. These are really nice, miracle balls. They come in a set, they are kind of squishy as well. But smaller. And of course, there is foam rollers. -- Foam rollers, I have a whole basket. I would really avoid super hard balls like lacrosse balls, or golf balls, I mean – golf balls hands or feet. But really firm, it will just mush, and not give you that juiciness. Remember, we are working with the fluids of the body. So if you are just smashing things, it is less effective than if you are offering breath or a little flow.

Muscle release balls, Pilates balls. These are better to be moving around on, rather than something hard. But it all works. Doing some self massage, massage is great for your lymph. Massage of any kind, and I'm not saying that just because I am a massage therapist, but a lot of lymphatic drainage massages, it is very superficial and light. Not super deep, so you can use less deep, less firm things and get a lot of movement without it being too intense.

PATRICIA ANDERSON:

Yes, thank you – often times when we are doing muscle recovery, we call it smashing. It is an important distinction.

Jenny, would you – folks are curious/confused when you remove these organs related to the lymph system. Specifically your tonsils. You want to say more about that?

JENNY LOFTUS:

Yes, first of all, let us take a moment to marvel at the miracle of our bodies that we can have a part of us removed and adapt. We have so much redundancy built into our bodies, that you can have your tonsils removed and your immune system is not going to fall flat on its face. Yes, we have had a piece of your immunity removed, but it does not mean you now have fighting with one hand behind your back. You want to remember that there is a lot of built in systems to help you with immunity my tonsils is just one piece of it. It used to be, the tonsils were removed much more frequently than they are today.

If you are my age, just about everybody you know, had their tonsils removed when they were a kid when they had strep throat twice, they go and take your tonsils out. Now, you have to have a lot of chronic, harboring of infection in your tonsils that do not go away for them to take your tonsils out. It is not a quick something, so I think people all -- are a little bit more conservative for removing these organs. Same with the appendix. But if you have appendicitis, and you need to have your appendix out, it is just that simple. Your body can function perfectly well without your appendix a.

Just remember if you have your organs removed, or your lymph nodes and you are struggling with lymphedema, you are still moving some length... Probably struggle more than people with chronic lymphedema and it is so hard. There are a lot of tools out there to help, like I was mentioning the palms and sleeves, the postures that we did today. Being very consistent with doing these things can make a big difference for people who are struggling with lymphedema. As well as seek out some physical therapy or lymphedema clinic, or massage therapist that does manual lymph drainage. There are manual techniques that people can help you with lymph drainage if you are really struggling because you have had some body parts removed like a lymph node or something.

PATRICIA ANDERSON:

Thank you Jenny. I think I'm going to finish this out here.

I was really fortunate to have my annual mammogram yesterday and even more so fortunate to have it be cancer free. Love that, very grateful. (unknown name) was writing about how they teach yoga for cancer patient classes, and was curious about, I think this can apply to folks experiencing breast cancer or had other surgeries happened here in the chest area. You have some suggestions about working around or with the fear and the healing that might come with this area after something like breast cancer or other, 20 of other things I can think of. Open heart surgery, lots of things were folks might be challenged here?

JENNY LOFTUS:

Yes, I have smoked -- worked with evil and all of those categories, slow and steady wins the race.

What you are experiencing, six weeks after surgery, and top surgery included, there is no lymph removal when people just have their breasts removed, so it is a little bit dicey when it comes to that. Versus people who have had lymph nodes removed. Same with open heart surgery, and thoracic surgery. Not always, they can have lymph involvement for sure, but it is very common to have lymphedema post mastectomy.

You do not want to do a lot of deep tissue, so if you are working with balls in your class, where you are having these kinds of things, deep work will not be right for people who have had lymph nodes removed, you do not want to stick a foam roller under your armpit and roll on it. You want to be very gentle. But more important, a lot of people come back to yoga class and they are like, "I cannot do plank –" it is very hard to engage the chest and the amount of scar tissue is hard to open sometimes, so doing things as passively, slowly, rhythmically, with breath – and like I said before, what is available today.

When you come into a movement pattern like opening your arm up, what is available today? I am going to breathe where I am available, and then back away from that. Not pushing beyond your comfort level and there is a lot of things you can do when you start to be able to come back in. You can support anything that is vigorous like a plank pose, you can do it against a wall. There are a lot of ways that you can support the movement of the body, as you are recovering from any of these things.

So slow and steady – if you are struggling with surgery, post surgery, and you do a yoga class – make sure you tell the yoga teachers so they know. First of all, not to come over and be pressing on your shoulders or chest or anything. But also, you want to be able to be clear what is happening with your students and what is happening in your own body you do not overdo it.

A lot of people can get their mobility back, but they just, they have to go slowly. I have a woman who comes to the yoga classes on the regular, who had a mastectomy five years ago and she just celebrated her five year cancer free mark. It is a huge blessing. But she still wears her sleeve on the regular to every form of exercise. She wears it all the time, because otherwise, she has a lot of lymphedema. And she does things differently in the class. She cannot do certain things because her range of motion from started you, from having nodes removed is just there. She just has found her movement pattern that works for her. You just want to remember: slow and steady, and if you are touching somebody who has had lymph, or who has lymph edema, be mindful of what you're doing, and make sure you know what you are doing. Very superficial, you do not want to be adding a lot of pressure onto people's limbs who have lymphedema.

PATRICIA ANDERSON:

I think that's a beautiful place to finish. Anything else you want to say before we finish?

JENNY LOFTUS:

Take good care of your lymph.

PATRICIA ANDERSON:

lymph is great, not gross. I want to thank your offerings and your beautiful teachings. Want to thank all of you who have joined us today or replaying it, we appreciate your interaction and your support. We hope to see you again soon. Please stay well and keep moving.