

This unedited transcript of a SpeechPathology.com webinar is provided in order to facilitate communication accessibility for the viewer and may not be a totally verbatim record of the proceedings. This transcript may contain errors. Copying or distributing this transcript without the express written consent of SpeechPathology.com is strictly prohibited. For any questions, please contact customerservice@SpeechPathology.com.

Using Principles of Yoga to Benefit the Adult Patient Recorded July 30th, 2020

Presenter: Lisa Mechler, MA, CCC-SLP, RYT200
SpeechPathology.com Course #9403

- [Amy] And at this time, it is a pleasure to introduce Lisa Mechler this afternoon, who is presenting Using Principles of Yoga to Benefit the Adult Patient. Lisa received her master's in communication disorders from San Francisco State University in 2009, and has worked with adult patients in acute care, SNF, and outpatient settings. She has been a registered yoga teacher with the Yoga Alliance since early 2017 and is really excited to share how the principles of yoga can benefit our adult patients. So welcome, Lisa. Thank you so much for joining us today.

- Hello, everyone. Thanks so much for having me. Just adjusting my camera here. Thanks so much for the lovely introduction, Amy. I'm so excited to be here with all of you. Thanks for tuning in. So just to let you know, just a little logistics here, I have my notes off to the side. So if it looks like I'm lookin' away from you, that's why. All right, so before we get started, I would like to just take a moment here to center ourselves. So if you are seated, just go ahead and relax your hands into your lap. If you're standing, I know that these standing desks are really popular these days. So go ahead and just feel your feet on the floor. And take a moment to close your eyes, or maybe just soften your gaze onto the floor in front of you. And just take a couple of slow, deep breaths in and out through your nose.

And just notice the seat or the floor beneath you. Take a moment to just feel the breath, maybe on your nostrils, or on your chest and your belly. And when you're ready, go ahead and open your eyes again. Bring your awareness back to the screen. Welcome back. It can be really helpful to focus our awareness on the presentation today. So if you have your phone nearby or other tabs on your computer open, maybe just put those aside, close those out so we can really focus on the content for today. All right, so here are my disclosures for this morning or this afternoon, depending on where you're tuning in from. I'll give you a moment to read those. And talking about our learning outcomes for today, so after this course, participants will be able to describe

two simple movements to help facilitate respiration in adult patients or clients, and also be able to describe two yogic breathing techniques that can be used with our adult patients or clients, and also list some contraindications for use of these breathing techniques. And here is our agenda for today. So we're going to define what yoga is, and then we're gonna be talking about posture and pranayama, and then we'll have some time for your questions at the end. So before we jump in, I'd like to know a little bit more information about you guys.

So if we could pull up those polls... Great, and the first question that I have for you is, what environment do you work in? And you can select multiple here, just like to know a little bit of where you are coming from. And then the second question is, what is your familiarity with yoga? So have you never practiced yoga before? Maybe you've taken a few classes here and there. Maybe you've practiced irregularly for a long time, or maybe you have a pretty regular practice. Just kind of nice to know. So in terms of where you guys are working right now, it seems like we have a pretty even split, although most of us aren't currently working with adults. So that's great. I suspect that a fair amount of today's content will actually be beneficial if you're working with pediatric patients, too.

So maybe take what you learn and adapt for those people that you are working with. So that's fantastic. And then as far as your experience with yoga, it seems like most people have taken at least a few classes, if not have been practicing a little bit more regularly. So that's fantastic. There's a handful of people who have never practiced yoga before, and that's great. This course, this information is accessible to everyone, no matter what your experience is with yoga. So I hope that you all find it beneficial. So we can go ahead and close those polls. Thank you so much. All right. So let's talk a little bit about what yoga means. So yoga is a Sanskrit word, and it translates to union or reconnect. And what it does is it helps us strengthen our body, breath, and mind connection. So with this practice, we start to build this connection between our body,

our breath, our mind, and start to tune into a reconnect with what, in yoga, we call our higher self. The Sanskrit word for that is atman. So it's a really beautiful practice. It's very well rounded. And yoga is so much more than just poses. So we often think of yoga and we think about these fancy poses that you may see people doing on the cover of magazines or on Instagram. But really, yoga is such a deeper practice than just the poses. And these are three aspects of the practice that you might hear about. And these by no means are exhaustive. There's plenty of other aspects of the practice, but these three are really tangible ones that we see very often in the West. And these are pranayama, which are breathing exercises. We have asana, and this is our actual physical postures that we practice on our mat in a typical yoga class. And then we have meditation, of course.

And a fundamental principle of yoga is breathwork. So a lot of what we do both on and off our mat as a yoga practitioner is focusing on the breath. And the breath can be our anchor point to this moment right here, to what is happening right now. And I love this because, if you think about the work that we do as speech pathologists, so much of what we do is related to the breath as well, right? So there's this really beautiful parallel between yoga and our work as speech pathologists. And the teachings of yoga lend themselves really well to the work that we do with our patients.

Okay, so let's jump into posture, talk a little bit about our posture. So some of the research defines this head-forward posture as this type of thing that we see. And this picture on the right just makes me giggle so much, 'cause I didn't intend to look that unhappy. But we often find ourselves in this type of posture, right? We're on our phones or on our computer, and we're forward. Or after a really long day at work, you come home, you sit down on the couch, and you find yourself in this slouched position. So what we're looking at here is what I like to refer to as, like, smartphone asana, this picture here on the left. Let me see if I get my pointer to work here for us. All right. There it is. So this picture on the left here, this smartphone asana, one of my teachers

might consider this one on the right hunch asana, which I think is pretty funny. But we have the ears anterior to the shoulders, if you see that. And then in this posture on the right, we have this curvature of the spine, where we're really hunched forward. And so this is what we're talking about when we say this head-forward posture. All right, so again, we have head anterior to the shoulders and the shoulders really rounded forward as our arms are in front of us. And we may even assume this type of posture when we're driving, just any time our arms are forward, or using our mouse on our computer. And so what this posture does for us and for our patients is it results in decreased vital capacity. It results in decreased forced expiratory volume at one second, so how much air you can force out in one second. It also results in decreased anterior-posterior expansion of the lower thorax during inhalation.

So this translates to abdominal breathing. So as you're rounded forward, the abdominals have less room to expand and take in a really full breath. And then this posture, research shows us, also results in decreased use of accessory respiratory muscles, specifically the sternocleidomastoid and the pectoralis major. And you may be thinking, well, we don't actually really want to use those muscles anyway, so why does that matter? You're absolutely right. But if you consider, if you're in this posture, you already have decreased vital capacity. You have decreased abdominal breathing. You may wanna start using a little bit of these accessory muscles so that you can get a really full breath.

And this posture doesn't allow for that to happen, because the head is forward. All right, so the sternocleidomastoid doesn't have room to move anymore. And shoulders are forward, and that pectoralis major muscle gets really tight and stiff. All right. Just makin' sure we're not missin' any good, juicy points for you guys. Okay, so then we talk about, all right, so we don't wanna be in this smartphone asana all the time. So what is the ideal posture? What are we aiming for? And here is what we'd like to see. And again, unintentionally, look much happier in this photo on the right. But what we

see here is ears in line with the shoulders, in line with the hips. And if we take a look at the spine in particular, we have this natural curvature of the cervical spine. And then we have this natural, gentle, outward curve of the thoracic spine around the level of the shoulder blades and a little bit below. And then as we come into the lumbar spine, we have this little natural inward curve, and this is what we really wanna help facilitate with our patient so they can sit upright and have that really nice, supportive, expansive breath. So again, we're looking for this natural curvature of the spine. We're looking for ears over shoulders over hips. And this posture allows us greater breath support and allows for a deeper abdominal breathing as compared to our hunched-forward posture. Okay, so let's play around with this a little bit.

So if you're seated, I would like you to go ahead and just take that slouched position. I'm gonna adjust my camera so you can see me a little bit better here. So you're gonna find that slouched position, right, where you're rounded forward. Maybe even relax back into the chair and kind of slouch here. Shoulders are forward. You may even exaggerate it, pull your neck forward. And if you really wanna exaggerate it, go ahead. And here I'd like you to try to just take a few deep breaths. Try to expand your chest and your belly as much as you can, breathing in and out through the nose. And then just notice here any tension or resistance that you may be feeling. All right, you're really trying to force it. It can almost feel a little bit claustrophobic, right? So then let's take another approach.

So go ahead and sit upright. And what we're really trying to look for is that natural curve of the spine. So you'd ideally wanna have your feet on the floor or resting on something, maybe even a step-stool underneath your feet. And what we wanna see is this anterior tip of the pelvis forward. So again, adjusting here a little bit for you. So you wanna get the pelvis tipping forward so that you get that curvature of the low spine that we wanna see, that inward curve, and we're not tucking the tailbone underneath you. So try to facilitate that nice tall spine. And if that's challenging in the chair you're

in, you may even want to just stand up and find that curvature of the spine. And then once you've found that position, go ahead and try to take a few deep breaths here. Breathing into the chest and the belly as much as you can, allow the belly to expand as you inhale. And just notice the difference, if you wanna play with going back and forth, right. Something just as simple as just noticing the difference in the breath based on these really, sometimes even subtle changes in posture can be really significant, especially if you're talking about a patient who is already having some sort of disordered breathing, right, and we wanna put everything on their side as much as possible.

Okay. All right, so how can we facilitate this posture with our patients? Because we know now that just sitting up in a chair or just being upright in bed doesn't automatically mean that our patient's in the most optimal position for breath support, right. Now we know that we have to facilitate that open chest and the natural curvature of the spine. So how do we do this in the settings where we work? So again, we wanna try to find that slight anterior tip of the pelvis to facilitate that neutral spine. And what can happen is, if the hamstrings are tight, when a patient is seated or laying in bed, then it can start to tip that pelvis underneath you, right. So the patient has short hamstrings.

They are going to pull the pelvis underneath. And so you end up sitting on the sacrum, right. So what we wanna do is try to get that anterior tip of the pelvis to find that curve of the low back. So how do we do that? If a patient's sitting in a chair, we can elevate the hips higher than the knees. So this sort of gets the hamstrings out of the equation a little bit more so that there's a little bit more room for the pelvis to tip forward. And then if the patient is in the bed, we can of course pull the patient up, sit them upright, maybe get a little pillow behind their low back to help facilitate that curvature of the spine. But then this is where bending the knees of the bed comes in handy or putting some pillows underneath the knees so that the knees stay bent and the pelvis can tip

forward, and your patient can sit a little bit more upright. Okay, we can also help by bringing some mobility through the upper body. We can do some side stretches to help with shoulder mobility and movement of the intercostal muscles, which we all know are super important in facilitating breath. And we can also work on some chest openers. So stretching that pectoralis major muscle, encouraging this open chest so the patient has room for breath in the front of the body. And so for this, we want to encourage this external rotation of the shoulders to open the chest. So let's practice that a little bit. And apologize, I keep needing to adjust, but I want you guys to see. So if you take a moment here and just curl your shoulders forward, and you're going to feel that the shoulder blades spread apart a little bit, and there's a gentle rounding of the upper back. You may even find that your head sort of follows that trajectory where you start to get into this smartphone asana posture, right.

So then taking the tops of the shoulders and rotating those back, notice what happens. Right, so really naturally, you may notice that as you take this external rotation of the shoulders, the chest opens, and then the neck starts to follow suit, and we get a little bit more alignment from the ears over the shoulders, which is what we're aiming for. So we're really thinking about just trying even to get those shoulders to rotate back, squeezing the shoulder blades together. Right, and then of course, all of this comes into being able to take that nice deep abdominal breath.

Okay, so let's do a little bit of yoga. We'll do some asana practice together. So all of these can be done... Most of these can be done seated, just because I know this is typically the position our patients are in when they come to us, either walking into clinic or in the hospital or in our skilled nursing facilities. So... Sorry, just makin' sure I have my notes here. So the first one we're gonna do is just a little bit of some side stretches. So with your next inhale... Well, first of all, I want you to get into that nice tall posture. So if you need to find a pillow or blanket, something to put underneath your seat so you can facilitate that nice tall spine, go ahead and do that. And then with your next

inhale, we're gonna reach the arms up towards the sky. Take a nice deep breath in. If you can, clasp the hands at the top and flip the palms up towards the ceiling. All right, and this takes a fair amount of shoulder mobility. So if that isn't available to you, you can just keep your hands open to the sides, okay. And then from here, we're just gonna take a couple of just little, tiny side bends here, so just to start to bring a little bit of movement through the shoulders and the ribs. And then go ahead and release that. You can roll out the shoulders. All right, and then we're going to take some deeper side stretches. So with your next in breath... Sorry, I'm just adjusting so I know you could see me. Inhale, the arms up towards the sky.

And then with your exhale, the right hand's gonna come down to the side of your chair, and the left arm is going to reach over. And so common things to look out for here are this bottom shoulder hunching up towards the ear, right. You wanna try to push that right arm down to give space to the right side of the neck. And then we also want to try to avoid just leaning over, right, so my hip is coming up off the chair. I know you probably can't see that, but that's what's happening. So what we wanna do is anchor the hips down and keep the hips really stable, and reach up and out. So we're almost thinking about reaching up instead of over to the side.

And once you've found that really tall expansion of the side body, then we can start to bend over a little bit more. Again, shoulder away from the ear, feel that stretch at the intercostals. And then inhale slowly. Come back up. Both arms reach up towards the sky. And exhale, other side, left hand down. Right arm reaches up and over. Anchor that left, the right arm, I'm sorry, the right hip down, and reach up and out with that right arm. And you may feel this through the shoulder as well. One more time, each side, inhale, both arms up. And exhale, side bend to the right. Inhale. And exhale. And inhale, both arms reach up. And exhale, we bring our hands down to prayer. Good, go ahead and shake that out. All right, and let's do a little bit more work through the ribcage. So with your next inhale, reach the arms up towards the sky. And then, if

available, again, clasp the hands, flip the palms up towards the ceiling, and then exhale, side bend over to the right. And we're gonna pause here. Take a moment to really anchor down through the left hip. Reach up and out with that left arm. And then inhale here. And keeping the hips where they are, just fold your heart down towards the floor, so really minimal movement. And what I'm hoping you're feeling is a little bit of stretch underneath your left shoulder blade. Right, so we're stretching into the back of the ribs there, giving those muscles a little bit of chance to release to make space for breath. And then inhale, slowly come back up towards center.

Exhale, release that, just take a moment. And so what we're really doing with these postures is reaching with the arms really actively. So that's why it can be nice to just relax the shoulders or release those in between, okay. Inhale, the arms up. Clasp the hands at the top. Flip the palms. And exhale, side bend over to the left. Anchor that left, the right hip down. Sorry. I'm mirroring you, so I get a little mixed up with my right and my left. But you're gonna anchor your left hip, your right hip down, and then fold the shoulder down towards the floor.

Right, so again, really minimal movement here, but we're feeling an expansion, a stretch underneath the shoulder blade. Inhale, come back through center. And exhale, release. Great. All right. Let's take another one here. So focusing... So we got the side, the sides of the ribs, the back of the ribs. Let's focus a little bit on the chest. So with the next in breath, reach the arms up again. Exhale, right hand down. Left arm reaches up and over. Inhale here. And then exhale, open the heart, open this time. And the arm is gonna start to reach backwards behind you. And you can make a nice full circle with that arm, and then come back up through center. Inhale, arms reach up. Exhale, left arm down, right arm up and over. Inhale here. And exhale, open up the heart. Arm reaches back and down. So we're focusing on this part of the chest right here. And one more each side, the movement helps really warm up the muscles. Inhale. Exhale, side bend to the right. Inhale, here reach out with the arm. And exhale, open up the chest.

And in the next in breath, arms reach up. Exhale, side bend. Inhale, here reach out with the arm. And exhale, open the chest. So there's a little bit of a twist through the spine here, too. And we'll come back through center. Right, all right. Opening up into the chest a little bit more with your next in breath, reach the arms up towards the sky. If available, clasp the hands. Flip the palms again. If not, just keep your arms up and separated, totally fine. Inhale, reach up. And exhale, you're gonna round forward this time, bringing the hands forward. And if the hands don't clasp, you can just make stop signs with your hands, right. Rounding forward, and we're trying to, if available, tip that pelvis underneath you so there's a rounding through the spine and a real pronounced rounding through the upper back.

And then inhale, reach your arms back up. Exhale, we're gonna open the arms, open to cactus or goalposts so the elbows come in line with the shoulders. Start to squeeze the shoulder blades together and pull, or gently pull, the elbows back behind the shoulders. And then from there, keep squeezing the shoulder blades, and the elbows can come down towards the sides of your ribs. Okay, so let's put that all together. Inhale, the arms reach up. Clasp the hands at the top. Flip the palms. Exhale, round forward. Inhale, arms reach up.

Exhale, open the arms, open to cactus. Squeeze the shoulder blades. Open the chest. Inhale, arms reach up. Exhale, press away. And it's like you're trying to press a wall away. So it's really active here, really reaching forward. Inhale, arms up. Exhale, squeeze the shoulder blades. All right, and that's that. Go ahead and shake that out. One more here, just to get into that chest and try to encourage that external rotation of the shoulders. We can do some gentle twists, right. So for this, we're gonna, of course, with your next in breath, reach the arms up. And then keep the hips really planted where they are. And we're just gonna guide the heart towards the right. And the arms are gonna come to at T, right. So we're here. We're gonna keep the hips facing forward, and the heart, just the upper body turns. And we're gonna try to press that right hand

back behind you. And you should feel that, again, in that pectoralis muscle. Inhale, arms reach up. And exhale, other side, pressing the arm back behind you, trying to make one straight line with the arms. Inhale. Exhale to twist, really plant those hips down. Try to twist from the upper body instead of through the hips. And exhale. Inhale, arms up. And exhale. All right. So those are some simple asanas that you can do with your patients to help facilitate that neutral spine and opening up the chest. And I see a comment here that it feels awesome.

So glad to hear that, Gabriela. I think we could all use a few of these stretches for ourselves throughout the day, right. All right. So let's talk about pranayama. So what is pranayama? So pranayama is a Sanskrit word. It translates to... Well, prana translates to life force or energy, and ayama means to extend. So pranayama exercises are exercises of the breath where we control and/or extend the breath, and that there are many different pranayama exercises out there. For those of you who have been to lots of yoga classes, I'm sure you're familiar with many of them. The research sort of divides them into two separate groups.

We have fast pranayama and slow pranayama. And for purposes of this course, we're really going to just focus on our slow pranayama. Okay, so why are we gonna focus on this? Because slowing the breath can be really helpful. It has been shown to increase accuracy on working memory tasks as compared to our spontaneous breathing. So those of you working with patients with cognitive disorders, you may wanna keep this in mind. All right, so slowing the breath can also increase heart rate variability, which is a measure that's used to indicate stress levels. So the higher the heart rate variability, the more resilience we have to stress. And slowing the breath can also increase the parasympathetic nervous system activity. So this goes hand in hand with heart rate variability. So our parasympathetic nervous system, to remind you, is our rest-and-digest system, right. It allows us to calm down, thoroughly digest our food, and rest the body. Our sympathetic nervous system is our fight-or-flight system. And

so this is where we find ourselves when we're stressed, right. And in a society where we're having increasing stress and anxiety, we may start to find ourselves in that heightened sympathetic nervous system state. So with this increase of heart rate variability, what that means is that we have a greater ability to move between our parasympathetic nervous system and our sympathetic nervous system so that we're not always just in that chronic sympathetic state, or that fight-or-flight all the time. So greater variability, the more easily we can move between the two, and we have more resilience against stress. And of course, this also leads to perceived, decrease in perceived stress scales. So subjectively, patients also feel this as well. And slowing the breath, so what rate do we wanna look for?

So research shows us that we're really looking for somewhere between 5 1/2 to 6 breaths per minute. And the research is a little bit variable on that, but I think it's safe to say that somewhere in between there is good. And we're looking at a one-to-one ratio of inhale to exhale. So that's an even breath. Inhale and exhale is even. All right, so we talked about slowing the breath. Let's talk about diaphragmatic breathing now, more specifically breathing into the diaphragm, this abdominal breathing that we really wanna help facilitate with our patients.

So research shows us that this can be helpful in cases, or with patients who are suffering from GERD. And this breathing training can improve subjective quality of life. It can lead to decreased belching and decreased PPI use, which is fantastic, right, 'cause this indicates comfort for our patients. This is what we want. And this makes really a whole lot of sense, if we're understanding that slow, deep breathing can help us move our nervous system back into that parasympathetic state where we can rest and digest so we can better digest our food, and hopefully have some less reflux. And then, also, training the diaphragm to be a little bit stronger helps us, helps the diaphragm close around that lower esophageal sphincter to decrease those symptoms of GERD. And the research around diaphragmatic breathing, I found a couple of

studies that showed that four weeks of diaphragmatic breathing training helped achieve these results. Okay, so we talked about slow breathing. We talked about diaphragmatic breathing. And let's talk specifically about pranayama. So the research shows us that fast and slow pranayama techniques can improve sustained attention. They can improve working memory. They can improve both auditory and visual response times. And they can decrease perceived stress. Pretty great results. So slow pranayama has also been shown to decrease heart rate and decrease systolic blood pressure in hypertension patients.

And again, we're just gonna be mainly focusing on our slow pranayama today. And so these are several of the pranayama techniques that I found in our research that I'd like to just chat about today. And all four of these utilize the three-part breath. And the three-part breath is a technique where you guide the breath into three separate sections of the thorax in order to obtain a really full breath. And we're gonna play around with this in a little bit. But the first pranayama specifically is the Sukha pranayama. And Sukha translates to easy. And this is simply a five-count inhale and a five-count exhale using this three-part breath. And this can be really nice, 'cause it can be like a sustained attention exercise for some of our patients, too, and really easy for our patients to follow.

And there's no breath retention here, which is nice. The next pranayama is called Savitri pranayama, and this is a rhythmic breath. So it works on a ratio of two, one, two, one, of two counts of inhale, one count of holding, two counts exhale, one count of holding. And so, you know, you can increase this, of course. So you can do like a four-count inhale and two-count hold, four-count exhale, two-count hold, or six, three, six, three. And then there's Pranava pranayama. And this is more of a guided breath, listening to the sacred sound of om. So the teachings of yoga teach us that the sound of om is a sacred sound. It was the first sound of the universe. And it allows us to clear the mind and really come into this moment. And so when we're focusing on the sound

of om as we're doing this expansive three-part breath, we can start to focus our awareness on the inhale as an opportunity to breathe in energy, or prana, or life, and staying open to receiving for whatever the universe has to offer, and noticing, too, with that breath that the energy that we're breathing in is the same energy across the whole universe, and that we are something so much bigger than just ourselves, that we are interconnected and part of something much larger. And then with the exhale, there's this opportunity to really settle in, to be in the moment, to let go of anything that may not be serving you, even if it's just a little bit. Wish we could just let it all go with the exhale, not often how it works, but even just a little bit, this sensation of just settling into the seat and into the body.

So that's Pranava pranayama. And then Nadi Shodhana is alternated nostril breathing. And this is a really specific technique that we're gonna practice together. Nadi Shodhana breathing has been shown to lower both systolic and diastolic blood pressures. It can improve forced vital capacity. It can improve forced expiratory volume at one second, and also improve peak expiratory flow rate. And these last two points here are markers that can be used to measure obstructive pulmonary diseases and asthma. Okay, so let's play around with this. So go ahead and find your comfortable seat. Again, we wanna encourage that nice tall spine, open chest, ears in line with the shoulders, in line with the hips.

And I invite you to close your eyes, or again, you can just soften your gaze onto the table or floor in front of you. And just take a moment here just to breathe comfortably in and out through your nose. All right, and then go ahead and bring your hands to your belly. Fingertips can come to touch just below your navel. And as you inhale, imagine that your belly is a balloon and you're filling up that balloon with air with each inhale. And the fingertips come apart as you breathe in. And as you exhale, the belly pulls back in. The fingertips come back to touch. Inhale deep into the belly. And exhale. Good, and so just training a patient to breathe into the belly can sometimes be

challenging. I've worked with many patients, where I've tried this, and you know, in acute care where, you know, people are having a hard time breathing as is, it can be challenging to get them to do this. So this tactile feedback with the hands on the belly and this visualization of blowing up a balloon in the belly with each breath can sometimes be helpful. Another thing that you can do for diaphragmatic breathing, one of the trainings that the research shows is having the patient lie supine on their back. For those of you who have taken yoga before, it's like a premature Shavasana, that last pose, where we get to just lay there. It's the best one. So you have the patient lie on their back, if you wanna try it, you're welcome to, and breathe into the belly for four seconds. Breathe in, inhale, four, three, two, one.

Pause at the top for four, three, two, one. And exhale through pursed lips for eight, seven, six, five, four, three, two, one. And inhale nice and slowly, four, three, two, one, through the nose. Exhale, or sorry, hold for four, three, two, one. And exhale through pursed lips for eight, seven, six, five, four, three, two, one. And doing this supine, having the patient lie on their back, trains the diaphragm a little bit more because you're working against gravity, right, to expand the belly. All right, so let's practice our three-part breath now.

So again, finding your comfy seat, if you moved out of it, and you're going to bring your hands back down to your belly, fingertips to touch just below the navel. And you're gonna inhale 1/3 of your breath into your belly. All right, and then we're gonna bring the hands up to the ribs. So the low ribs here, our fingertips are gonna come to touch just beneath the sternum so the hands are on the low ribs. And then breathe into the chest, into the ribs. Feel the ribs expand and the fingertips come apart. And then as you exhale, fingertips come back towards the midline as the ribs come back in. Inhale again into the chest. And exhale. And this is all done through the nose. All right, and then we're gonna bring the fingertips up to the clavicle or the collar bones. And the fingertips don't have to touch here. But as you breathe in through the nose here, just

feel the lift of the chest, really breathing into the upper chest this time. One more just like that. Inhale through the nose. And exhale. Okay, so for our three-part breath, we put all three of these together. So we're gonna bring our hands back down to our belly. And with your next inhale, breathe 1/3 of your breath into the belly. Hands move up to the ribs. Breathe 1/3 of the breath into the ribs. Hands come up to the collarbones. Breathe into the upper chest. Pause at the top for a moment. And then exhale, release the whole breath. Let's take that a couple more times. Inhale, breathe in through the belly, then the chest, then the upper chest. Pause at the top. And release. One more time, inhale, low belly. Chest. Fingertips to collarbones, breathe into the upper chest. And release. Good.

Continue that on your own a couple more times. And if you're feeling comfortable guiding the breath to the three different parts, maybe you play around with releasing your hands down to your lap and allowing the breath to sort of naturally move to each space. And then when you're feeling comfortable here, maybe you bring your focus to erasing the lines between the three parts. So instead of having three sections of breath, you end up having one steady, continuous wave of breath up the body. And then notice if you're starting to feel light-headed or dizzy at all. If you are, you wanna pull the effort back a little bit.

So find that space where you can guide the breath to the belly, the chest, the upper chest, but not force it. We don't wanna push the breath too hard, right. We don't want our patients to get dizzy. All right, and when you're ready, go ahead and release that three-part breath. Just resume a natural breath. Then go ahead and open your eyes again, coming back to the screen. Hopefully, we're all feeling a little calmer. That parasympathetic nervous system kicked in by now. All right, and then let's look at Nadi Shodhana, so our alternated nostril breathing. And for this practice, we're gonna make the shaka symbol with our right hand. We're gonna hang loose, maybe get back to Hawaii at some point. And then we're gonna raise that ring finger. Okay, so the thumb

is gonna block the right nostril. Ring finger blocks the left high. Okay, so you can just play with that for a moment. All right, and then here we go. And take a nice deep inhale. Exhale completely. Thumb to right nostril, inhale through the left. Switch the fingers. Exhale through the right. Inhale. Switch fingers. Exhale. Inhale. Switch. Exhale. Inhale through the right. Switch. Exhale through the left. Inhale. Switch. Exhale. Inhale. Switch. Exhale. Inhale. Switch. Exhale. Continue breathing this way. Inhale. Switch the fingers at the top of your inhale. And then the next time, you exhale through the left. That's when you've completed your cycle.

All right, so we start with inhaling through the left and exhale through the right. Inhale through the right. Exhale through the left. So we start inhale through the left, and then the full breath cycle's complete after we've exhaled out of the left nostril. That's Nadi Shodhana. And Nadi Shodhana, there's lots of nadis in the body. These are energy channels. The Nadi Shodhana helps us incorporate right and left, and clear those channels. You may notice as you continue with this practice, the different space or resistance in one side, one nostril versus the other.

This can be a really nice practice, if you do have nasal congestion or your patients are really blocked up, just to try to get that energy flow through the nostrils and start to clear stuff out. You may wanna have some tissues ready after that one as well, or have your patient blow their nose before the practice, too. Okay, so contraindications, when do we wanna be careful with these breaths? So of course, as always, in any regard, we wanna be cautious with our patients who are acutely ill. So if our patients are having extreme challenges breathing, you may not wanna walk in with your Nadi Shodhana breath. But maybe some of those diaphragmatic breathing exercises can be helpful to try to facilitate, or even just getting some posture and some movement through the upper body to help facilitate breath can be something a little more safe. So just, you know, assess the needs of your patient and the risks as always. And then breath retention, so holding the breath, so like at the top of our three-part breath, we hold the

breath. You may want to avoid any breath retention. It could possibly lead to hypercapnia, CO₂ retention, and/or hypoxia. So you wanna be really careful with those, with patients who have COPD. And then forced breathing, so we didn't go over any of these particular exercises. But if you have frequented, for those of you who have your regular yoga practice or have been to many in the past, you may be familiar with breaths like the Kapalabhati breath. And that forced breathing can sometimes increase blood pressure. So we wanna be careful with that. And then if your patient... And because of that increased blood pressure, if your patient's at risk for bleeding, like they've recently had a hemorrhagic stroke or aneurysm rupture, or are at risk for aneurysm rupture, you want to be careful with those forced breathing exercises.

All right, so in summary, our head-forward postures, our smartphone asana, or our hunched asana, or our long-day asana, right, this posture can reduce breath parameters and impede our ability or our patient's abilities to take a nice full, deep breath. And we've all had those patients who are in their wheelchairs, and we're like, great, they're upright, but we're also seeing, you know, the arms on the armrest and the shoulders up and the forward posture.

And so anything we can do to help facilitate this neutral spine and bring movement through the shoulders and the chest, the mid-back, tipping that pelvis forward, all of that can help facilitate breath. And then our slow pranayama exercises can have multiple physiologic and cognitive benefits. And we're going to aim for that one-to-one inhale-to-exhale ratio at a rate of 5 1/2 to 6 breaths per minute. And you can easily achieve this if you do like a four- or five-count breath, right, so that Sukha pranayama, that inhale for five counts, exhale for five counts. And then breath retention or forced breathing may be contraindicated. So you wanna make sure to, excuse me, assess the needs and the diagnoses of your patients before offering these exercises. All right, so thank you very much for your time and attention. I hope this was beneficial. My

references are here and available for you to download as well. And I'd like to open it up for any questions that you might have for me.

- [Amy] Absolutely. I can help with the questions. Thank you so much, Lisa. This was amazing. And I know that I was doing all of the exercises right along with everybody else. So thank you for sharing them. The first question, "Obviously, material is excellent for voice. "We've been taught not to allow clavicular breathing. "Can you clarify?"

- Yeah. So the three-part breath, I'm assuming, is what you mean, so breathing into the upper chest. Yeah, we don't want to... We don't want our patients to always be breathing up in the clavicular region, right. We want to facilitate this abdominal and deep, deep lung breath. But we, for the three-part breath, it's just a matter of just slowing the breath down, right. And so we're not staying at the top, right. We're facilitating a full, complete breath by guiding the breath up the torso. So we're not just saying, just breathe up here and forget everything beneath. What we're really doing is trying to get a really, really expansive breath in all directions and incorporating as much movement through the pulmonary musculature that we can.

- [Amy] Great. Thank you. Next is, "Do you teach these strategies "to your patients and families to use at home? "Or do you implement them "at the start of your speech therapy session?"

- That's a great question. So personally, full transparency, I'm not actually working with patients right now, focusing most of my time on yoga. But I think that you could absolutely do both. All right, so the research is showing us that the training for diaphragmatic breathing, for example, was four weeks of training, but it was five minutes of breath, three times a day for four weeks. So you absolutely would want to train your patients to do this, and train patients and families to do it at home as well.

- [Amy] Okay. Perfect. Are there any videos available of the exercises that you know of?

- Not that I know of specifically for our purposes. There are tons of yoga platforms out there. And I'm not sure, Amy, if the recording of this is available to people after the fact. Maybe that's something you could help us answer.

- [Amy] Yeah, absolutely. We'll make the recorded course available within one to two days, usually is all that it takes. And you are more than... Anybody is more than welcome to watch the recording again. And obviously, since you used your webcam, we would be able to see your demonstrations very easily. So you're more than welcome to watch the recording when it's available.

- Great. Thank you.

- [Amy] All right, next question is, "Is a chair without arms better to use?"

- It can be helpful because the armrests can sort of get in the way of the side bends, right, not give people as much room to move, to lean over, or we see, you know, we see that arm chair too high, and people rest their hand, and then you get that shoulder up towards the ear. So yeah, if you have a chair without sides, that could be helpful. I've also seen people just kind of rest their arm outside of the armrest. So you could do that, too, if that helps just get that shoulder away from the ear as you lean over this way.

- [Amy] All right. Thank you. And I believe this is our last question. "Have you come across any contraindications "for patients with PVFM?"

- I did not come across any in my research, although I didn't look into that specifically. So it may be something that you wanna dig into a little bit more.

- [Amy] Absolutely. All right, well, that does-

- I will say-

- [Amy] Go ahead. Sorry.

- Sorry, I just-

- That's okay.

- That's okay, I just wanted to mention, you know, subjectively, I've known a lot of yogis who really do enjoy and found benefits of chanting. So you may look into that as something that can be helpful for patients with PVFM.

- [Amy] Great. All right, thank you. All right, so let's go ahead and wrap it up there for today. Again, thank you so much, Lisa. It was really great learning from you, and this was fantastic. So it can benefit all of us, as we are all well aware. So we appreciate you joining us today. Thanks to all of our participants for being here. We appreciate your time and look forward to seeing everyone again soon. Have a great rest of the day.

- All right. Bye, everyone.