SHARON CYRUS:  
Good afternoon members. So great to see you again. Before we get started, please take time to take a look at this location poll. We want to see where you are viewing this event from. It helps us collect data and gives us ideas about when we should schedule other events like this one. So if you can take time to look at that, that would be awesome. My name is Sharon Cyrus. I’m a member representative for yoga alliance. I’ve been working with this organization for about a year. I’m happy to introduce again Heather Seagraves. She is a mother, a partner, a student and a movement educator. She’s been working in New York City as an independent dancer. For over a decade. She is also a certified Pilates teacher, FRC mobility specialist and she holds a BFA from dance from SF with a concentration on performance movement conditioning and kinesiology. So much trouble say that. As a senior teacher and trainer with yoga works she leads both 200 hour and 300 hour affectional yoga programs online and throughout the US. She is also a freelance birth doula certified. Welcome again Heather. It is so nice to see you again. If you want to give us a little bit more about your background for those who are new to your work. Go ahead.

HEATHER SEAGRAVES:  
Thank you so much Sharon. You did a great job giving an intro. (Laughs) For those of you at SFU and specifically SFU dancers out there. So my work and really one of my lifelong passions is to work with people who are interested in creating a deeper relationship with their self and who are interested in creating more of an understanding within themselves about their body. And a lot of that comes with listening and feeling and the listening comes from many different waves of information input. Through the way we feel things with our skin, with our muscles, the way we understand things with our mind. And the way we have experienced sensation in the past. So it is really one of the most inspiring things that propels me to continue to offer the supports for people to empower themselves through movement and empower themselves through listening and understanding and a deeper relationship of the self so we can create more meaningful and deeper relationships out in the world.

Something I have been focusing on since my existence as a student and also as a teacher but especially this week is the idea that we are called to action. We are called to action within ourselves, we are called to continually self-study. So thank you all for joining me and for being here because this is in fact a form of self-study. Learning about our bio mechanical makeup. This is a form of self-study. But also within that self study we are called to action within ourselves. We are called to action in the relationships with the people around us that we love and even the people we disagree with and we are called to action in our communities. So I urge you within this webinar and outside of this webinar to continue to self-study and to continue to call yourself to action. In many different ways. And that action looks different for all of us. Sometimes it looks like self-care. Sometimes it looks like really putting your body out there and going to protests and donating and sometimes it looks like showing up with you and a book and learning about anatomy or whatever it is that intrigues you or whatever it is you are focusing on.

Another one of my teachers says that we can be a disciple by being disciplined in whatever it is we are focusing on. We are a disciple of whatever it is we are... Thank you for being here and I’m excited to get started. This workshop we are calling it applied anatomy for movement educators. Those of you joining who have specializations in anatomy or doctors, this is going to be a review for most educators so we are starting with essential anatomy and biomechanics and the way in which things move and this is going to be a foundational launchpad for many of you movement educators out there. So some of this may be new and a lot of it may be review and in any regard I hope you find it helpful.

So let’s get started. I will be offering a resource page at the end. Sharon is going to make sure we are answering questions as we go. If you have a question that ends up taking us a little bit off-topic or that I am not able to get to we will make sure that you can connect with me at the end of the webinar and we can connect one-on-one or we can connect on email.
I would like to start by just acknowledging some of the types of connective tissue in our bodies. Most of this webinar today, it's gonna be about half-and-half. Some lecture and some visual moving through movement and talking about cueing and some of the things that come up in relationship to the anatomy that we understand and sometimes the anatomy that we do not understand. So some of the types of connective tissue that are in our bodies and that are really pertinent to those of us who are movement educators are bones, muscles, cartilage, tendons, ligaments and facia. There are other types of tissues in our body with other types of viscosity and all of these types of connective tissue have different jobs. They serve to offer protection, structure, connection, binding, they offer transport from blood and nutrients to and from different places in our body and they can also help with immune function.

So the types of connective tissue we are focusing on today as movement educators, we are going to in this brief review is our bones, muscles, cartilage, ligaments and facia. Our bones create? This is where I pause and you answer the question aloud to yourself. You got it right. Bones up to create a structure. We have person bones over here. They temporarily have their leg displaced. It's nearby. Don't worry. Our bones give us structure. And bones get good blood supply. They are, it makes them easier to heal if there were an injury or something were to fracture or break in the bone.

Muscles, is another layer on top of the bones and that gives us movement. The things that connect the bones to bones and the muscles to bones are called our ligaments and tendons. So your ligaments connect bone to bone. As a reminder. Many of you know this I am sure. Tendons connect muscles to bones. And they give us stability. They offer these connections in the joints, tendons and ligaments are found in the joints and the joints are what allow us to have that movement. So if we just had bones or we just had muscles, we might have a structure or we might have the capacity for movement but we could not do it without them coming together. And creating a joint. The definition of a joint is the space between two bones.

In between that space or at the ends of the bones we have another type of connective tissue which is cartilage. Cartilage allows for a protection of the ends of bones. It offers a slide and glide effects. So we have a smooth movement at the joints. It also, like bones, I'm sorry, unlike bones, it does not have a great as a blood supply. So bones and muscles have a great blood supply when we are injured or when we are rehabilitating often those areas in our body can heal themselves much more efficiently than ligaments and tendons and cartilage.

Finally, the connective tissue that I'm going to mention just for our webinar today is facia. It's another type of binding connective tissue. It offers again a slide and glide with muscles. It's interwoven throughout our entire body. Alright. With those types of connective tissue we are gonna talk again about the musculoskeletal system today. The muscular skeletal system today referring to the bones, muscles, the ligaments, then ligaments and the connective tissues we just reviewed. We are going to integrate this idea of movement with the idea of the musculoskeletal system and movement we have to have a language. So we can talk about those things together.

So when we talk about movement in the body and the muscular skeletal system we have a starting position and this particular position is commonly used in the medical field and in movement. In yoga we call this mountain pose. In the medical world or the movement world we refer to this as a standard anatomical position.

General standing position where your legs are next to one another and they are not wider than your hips but underneath yours pelvis in your arms or by your side. So from this starting position standard anatomical position, we are going to talk about the planes of movement now. There are three planes of movement. The first plane is called the sagittal plane and it moves forward and back. So the movement that happens in the sagittal plane happens in front of your body or behind your body. Forward. And back. Sagittal plane movement and sagittal plane movement. And the second plane of movement that we are going to talk about is called the frontal or the coronal plane and that plane is where the body moves away from the midline and toward the midline. So the midline being the middle of your body. From top to bottom. If you are cut right in half. So away from the midline and toward the midline is the coronal or frontal plane. So again the sagittal plane, movement happens forward and backward. We refer to the front region of the body as the anterior side. So movement that was forward or anteriorly, or posteriorly, the back part of the body is the posterior aspect of the body. So sagittal movement or movement in the sagittal plane happens forward and back. And the coronal plane movement happens side to side. Away from the midline. And toward the midline. And when we refer to away from the midline, this is called moving laterally. Or moving toward the midline, medial. So medial, midline. Lateral, away from the midline. Alright.

The third plane of movement is called the transverse plane and it moves across. It moves across the body and the
the type of movement that happens here is rotational movement. So everything, when the body turns, the spine turns, the head turns, the arms turn, the forearms, the legs turn. These types of movement are all happening in the horizontal plane or the transverse plane of movement. It cuts our body from top to bottom. If you've ever seen one of the images which I am not going to show today but if you've ever seen the image that cuts the image of a body into three planes. You will see that those planes are cut through the midline, through the centre, and across. So we have again three planes of movement. Sharon I assume you are typing some of these down. It's also on the page that I'm sending later you will see that you have the sagittal plane that moves front and black we have the coronal plane, moves side to side, and the transverse plane which moves horizontally or across.

The three types, types of movement that happen in these three planes. Here's where I would love for you to get up from your computer, join me, you do not need much space. If you want to have your notebook to jot some of these things down. Again for some of you this is probably a review but I would love for you to do some of these movements in your body because there are so many different ways that we learn and feeling or callous tannic learning and the tactile movement, touching your own body can be away. Yes, Sharon. Sharon is gonna join me. You do not have to remember all of these things today. So if this is new for you, just feel and listen and let it move in one year and the other and it will roll around in your brain. And what sticks, sticks. And what does not you can follow up with an study later.

So what is the plane of movement that I refuted you that I just taught you a moment ago where the body moves forward or back? I'll wait. That's exactly right. The sagittal plane. There are two types of movement. Only two types of movement in the sagittal plane. And those types of movement are called flexion and extension. There are many different body parts that you flexion and extension. Let's start with our arms. Move your arms forward and moving her arms back. Moving her arms forward is called flexion and moving the back is called extension. The same thing with your legs. The lower part of your legs is called the leg in the upper part is called your thighs. If you just call the whole leg, your leg, that is fine. As a teacher and a movement educator but to be specific, while you are understanding anatomy it is great for you to learn that below the knee we refer to as the leg and above the knee we refer to as the thigh. So your thighs at your hips or your hip socket move in the sagittal plane and this is called flexion and extension of your thigh. At your hip.

The knee joint also does flexion and extension and most of you may know that the knee does not really on Ben forward but at the knee bends this way this is flexion and extension. The sagittal plane is if you were squeezed between two panes of glass on your right and left and you could only go one way, or the other way, you could only move your body forward. Or back. So there are two movements in the sagittal plane are flexion, muscles hinged forward. An extension. Let's do that flexion with our spine. Bring your chin towards your chest and start to roll and round your spine down. Bend your knees a little bit. To ease your lower back. And roll yourself back up. So the return of the centre is called extension. And as you go back the other way, if you are moving into a chest opener or a backbend, you are in the sagittal plane and this is extension. Round your spine, selection of the spine. And extend back to centre, move your chest, your head up and back extension. So those are some examples of some body parts and joints that move in the sagittal plane.

Coronal plane or side to side away from the body. Frontal plane. When you move your arms and your legs away from midline, this is called abduction. You can think about abduct, take away. Were taking our arms and legs away from the midline. And then abduction, bring your arms and legs back to centre. One of the reasons you will hear people articulate that spelling is because abduction and adduction sound similar and can be confusing. If you misspeak about those words. So abduction to take away in the coronal plane and adduction, bringing them to centre. And finally our transverse plane we have rotation. The head can rotate. The spine can rotate. At the neck. At the middle spine at the thoracic spine the lower back and rotate slightly. Your legs, your thighs can turn out. Your thighs can turn in. The upper arms can rotate at shoulder joint. Your elbow, not your elbow but your forearm rotate with one another. All of these things are happening in the transverse plane.

So we are going to do a quick check-in. Before we move on to joints and cues and some of the ways we can understand these body parts and movements a little bit more fully. I want to check in and see if there's any questions and we can do three or four minutes of questions. Before we move on.

SHARON CYRUS:
It looks like everybody was listening to what you're saying. A couple of shout-outs here and there. And then we had a
question about where you got your skeleton. And I think Patricia was able to address that. So I think you can move on. One question we have here, if there is axial movement of the spine?

HEATHER SEAGRAVES:
It looks like Patricia was going to answer that question live or maybe that means I'm gonna answer that question live.

PATRICIA ANDERSON:
It means you are going to answer it live.

HEATHER SEAGRAVES:
Maybe you can ask it in a different way. Axial refers to the spine. And appendicular... All three planes. So the movement of spine does go flexion and extension. It rotates. It's called lateral flexion to the right and to the left. And then rotation in the coronal plane. And rotation in the transverse plane. So I don't know if that is answering your question but you can type it again perhaps if I did not answer everything that you had.

OK. Tanya says, I'm gonna leave that there until Maryellen has – yes there will be. Maryellen if you want to clarify your question. Axial refers to your spine and axial movement refers to the movement that happens in your spine. OK. So axial movement refers to the movement in your spine and in terms of getting more specific into these movements were gonna talk a little bit more about the different joints and the movements that happen in those joints including your spine.

So axial which is a great segue into starting to talk about the different parts of the body and the types of joints. Axial refers to your spine. And appendages refers to your arms and legs.

We are going to talk about three of the six types of joints. There are six types of joints in your body. There is a printout. All the six types of joints are listed on there but we are only gonna focus on three for the time that we have left. So the three types of joints we are gonna focus on our hinge point, a modified hinge joint and a ball and socket joint. So hinge joint moves only in two ways. It's like a door. You can pick about a door moving open. Not a revolving door. Even though revolving door only moves two ways. But a door on a hinge, opens and closes. So a hinge joint moves in one plane, it moves in the sagittal plane. There are a couple types of joints, hinge joints that are common for you to understand the ankle joint and the elbow joint. Your elbow joint, here's an example, it bends and straightens. Right? So if I have this bone here, laying on my arm, I'd been my elbow and I straighten my elbow. This is the elbow joint. And it bends and straightens. The only way it would go beyond straight is if someone has what is called hyperextended elbow. The word hyper means more than. Typically straight is 180°. My bones don't go past 180° and I do not have a hyperextended elbow. But I can show you from the side what that might look like. So you can see from the side there is a line on my shirt. If this line were to go upward, if someone had their arm in front of you. I could fake it. I don't have a hyperextended elbow. This is a straight arm. Which would be an extension and if the elbow was bent this is called flexion. So the elbow really only bends and straightens. The only additional movement that might be at the elbow is if somebody has more than 180° of straight or extension and again we call that hyperextension. We'll talk about that more in a few minutes.

So a hinged joint is in one plane, the sagittal plane and it does two actions, flexion and extension. The modified hinge joints in your body is called your knee joint. I'm gonna ask you to turn on my second camera please. I would like you all to join me on, I think I can do that, on your floor, on your Mac, wherever you can connect with your own knee. If you cannot sit on the floor you can do it on the chair. The knee acts as primarily a hinge joint. You can see me in either video. I've gotta 2.0 so you can see a close-up of my knee and shin so I have my wide view so if you want to be there it is totally fine. What I'm gonna ask you to do is sit down and I am going to pull my pant leg up so you can see perhaps the movement of my shin. It might work better with my black pants. If you guys worth some of you might've been here for the taking your teaching online and one of the things I talked about was contrast of colours for visualization. But if you had a piece of tape, very fancy tape. You could call it anatomy tape for fun. It's really just painters tape. Art tape. If you had your knee, if you have your knee bent, and you were to imagine her view this piece of tape on my shin. The knee is what we call a modified hinge joint so it primarily bends and straightens the knee. But when the knee is bent, in this particular case, when my knee is moving into my chest, the knee also has a degree of rotation. So one way that you can view that is by sitting on the floor – I'm gonna take my foot out of you so you can – sometimes the foot makes it an optical illusion. Watch this tape. Those of you that are doing this with me plant your hands down on your thigh above your knee. Firmly like a vice grip. Gird the sides of your thigh. So the thigh does not move. And the foot likes to do all of the work because it has a lot of range of motion but see if you can focus on just the shin moving and look more at your own shin than at the screen for a
moment and then you could look at the screen and perhaps he the top of my shinbone or the top of your own shinbone, turning. With the knee bent.

When the leg is straight, you are not able to do that. You could wiggle your foot around. That's happening at the ankle or if it starts to move the whole leg is moving up top. The knee is called the modified hinge joint because it is mostly does the bend and straighten and I will put that on the black yoga pants to see if that's helpful. It also has some degree of rotation. It's not sticking. And you can see, if you're keeping the foot in line with the shin, there is not a ton of rotation.

And if you have questions about the modified hinge joint we are gonna keep talking about the knee in a few moments especially with cues that are common and come up in teaching. Patricia you can, should I turn that off?

OK. You can put that aside. Alright.

SHARON CYRUS:
We have one question for Maria. She wants to know, she sees moving from warrior one to warrior two quite often but it is terrible for the hip socket. How can you explain this to students in an easy but correct way?

HEATHER SEAGRAVES:
Is coming. When we get to the hips I will address it. Thank you Maria.

I want to move on to the ball and socket joint which is the hip and then we will go to the anatomy and specifically ones of warrior one and warrior two. I mention stepping forward from down dog to warrior two in my last webinar and why that might not be such a great offering for many people. So we are gonna get through the hip socket as a brief review and then we will move to some of those cues. Thank you so much for bringing that up and we will make sure that we get to that in particular.

So the hip socket and the ball and socket joint of the hip, this is the socket itself. This is your pelvis. And the socket of the hip is called your acetabulum. Your acetabulum means a little vinegar dish. And acetabulum, it also may be reminds you of your little sushi bowl that you get for your soy sauce and you can dip your sushi into, nobody is laughing except Sharon. So your acetabulum means little vinegar – so you can maybe make your soya dish when you go to get sushi that you put soy sauce in and this is the socket of the ball and socket joint of your hip. Your hip joint. And this is your femur bone. This is not your femur bone but this is one of the many bones I have here. Your femur bone has this round and to the bone called the head of the femur. And it articulates with or articulate means to talk with, to move with, to have a relationship with, so the hip socket is comprised of the head of the femur bone and the socket itself called the acetabulum. So this joint is a ball and socket joint. And it moves in all of the planes. So this particular joint can do all of those movements that we were reviewing and learning. Flexion of the thigh at the hip. Extension of the thigh at the hip. Abduction, adduction. Rotation that can happen. With the pelvis over the top of the size. And if the feet are down and if the leg is lifted of course you could internally or externally rotate the leg. So as Maria was saying in warrior 2 if we were to do this on the side of the mat we would step our feet wide and externally rotate the side at the hip and then turning the thigh into come back to centre so rotation. And there is one last movement that happens. Special to the ball and socket joints and it happens at the hip socket and your shoulder joints and that is called conduction. That is a circling of your thigh bones or arm bones at the shoulder or hip socket. So circumconduction of your thigh...

Then circumduction of your arms. For the softball players. We have to give it up for the softball players. So circle your arms. It moves through all of the planes. A combination of all of those movements. Abduction, adduction. And then circumduction. Circling at the arms and the thighs only happen at the hip sockets and arm sockets.

I would like to move on to some of the joints. I feel we can really learn a little bit more about to offer some of these things in a more effective way. Just from simply understanding the anatomy. So one of the first things that we are gonna look at is the foot and the ankle and I’m in a comeback over. I'll stay here. The foot and the ankle, the foot in general, this is called the superior view. I turn the foot so you can see the top of the foot. This would be a side view or lateral view. If you look on the side of the foot, this bottom bone or this big bone at the back and the side is called the calcaneus or heel. I am gonna come to the close-up view so we can do some of these things together. I want you to palpate or feel your own foot.

If you need to see my face you could look from the wide view. Otherwise I am on, my face is cut off so you can see
my feet. OK.

So this is a right foot and if you have socks on, then you can take your socks off so you can see your feet. This would be a lateral view of the foot. And if you can see the bones of this foot that I'm showing there. Beside right here, if you were to feel along the outer edge of the foot, from your pinky toe back towards your heel, you might notice that there's a little bit of space there where there's not actually much bone more tissue. And you keep feeling all the way back to your heel whereas on the inside the bone extends all the way from the big toe up through these tarsal's up to this talus here. So one of the common cues that I feel like we hear often in yoga classes and in movement classes especially in those warrior poses, I know you know what I'm about to say. Is to press into the outer edge of the foot.

One of the things that happens when we press into the outer edge of the foot, is that it tends to then over invert so this action of the foot is called inversion or supination. It tends to over invert the foot and put unnecessary pressure on the outside of the ankle. So we are humans. And because we are humans, we walk. If we are blessed to have 2 feet into thighs and two legs. And this part of our leg is called the outside of the leg so again I'm on the close-up video if you are looking for where might be the best place to look, the outside of your leg is called your perennials or your fibula Aris muscles. And this is often where ankles need more strengthening. So already, just because we are humans and the way the foot is designed, we have an inner art, or a medial art and it is bigger than the outside art. So just because of the way the foot is shaped, already some of us tend to move this way. Sometimes people have flatter feet and goes the other way. Or a high art that falls the other way. It can go very many different ways. But these muscles often need strengthening. So in yoga classes or movement classes when someone says, press into the outer edge of your foot, what are your students do? What of the students who are in your class do? Why are they there? Those are good questions to ask. Why are the students in your class, especially the students that come back class after class, they come to your class because they either like your style or they like you or maybe they don't like you but they like your style. Hopefully they like both. They trust you enough to come and to be in a space with you whether it is on zoom or whether it is in person. So often when we ask our students to do something in class or when you ask the student who are they are taking classes with you to do something, if they are making that connection, sometimes they will really do it to the point of overdoing it.

So present to the outer edge of the foot can potentially weaken these already weakened muscles. Sometimes what I would like to say is press into the outer heel and the big toe mount. So if we go back to our tape, it's almost like you have a seatbelt on your foot. Right? And your seatbelt has, you are pressing into the retractable portion which is your heel and you are buckling it in. So instead of pressing onto the whole outside edge of the foot, you are pressing into the big toe mount so you are waking up these muscles. So instead of just pushing into them. Then we are honouring the foot instead of exploiting our potential opportunities for growth or our weaknesses.

That's one of the common cues that I hear. And I've noticed with many teachers it slowly starting to fade out but it is one of those cues that we hear. Everybody says it. Saul just say press into the outer edge of the foot. But what we mean? We mean ground the heel. I'm gonna come back to the front. The heel is actually, it's the biggest part of the foot. And if we are looking at the outer edge of the foot, look at all this place where there's not even a bone. We are pressing into tissue. We are pressing into fat, skin. Where is if we press into the big toe when we press into the heel we have more substance and structure so the bone provides a structure to give us more stability there. I'm not gonna take questions right this second about – it looks like Sharon is raising her hand. Maybe I will take a question.

SHARON CYRUS:
I'm making some notes for you on the side. No worries.

HEATHER SEAGRAVES:
Great. So it is not – everybody that says press into the outer edge of your foot is wrong. It's perhaps another way to think about pressing into the foot so if we are looking for a grounding and we are looking for connection, where are we really looking to find that and how can we do that without exploiting or pushing into the places that are potentially already weak? How can we potentially give a grounding and a support which is what we are often looking for for people to move into the opposite direction while engaging the muscles that are going to help to create that stability in the peroneal's and the for Polaris muscles specifically on the outside of the ankle.

I'm gonna move to the knee. Because I really – we have 20 minutes and I want to get to the hips and the warrior 1 warrior and 2 Question Period.

With the needs there are three types of variations that I would like to talk about. These types of variations are both
structural and functional variations. So the structural variation of the leg, you often hear as knock kneed or bowlegged and I bly dislike these terms. And I urge you not to use them. Because, we can use the actual anatomical term and the offerings that are used for these terms that, how does that make you feel when you hear those words? Think about that. Personally I have knocked knees. If you happen to have legs that come together before your feet or feet that come together before your knees, if someone were to say to you knock kneed or bowlegged, think about, our language matters. Everything we say matters.

So as we are learning these things I would like for you to’s try to imprint in your mind what they are actually called. And how you can offer those terms, every person you teach does not have to understand or learn (unknown term) because I realize those are strange words. So when the thighs touch before the feet and the legs come in, this is commonly referred to as X shape. You can see my knees come in and my legs come out. I'm sort of making this a look a little bit more extreme than it is for me. And when the feet come together and the size do not, this is commonly referred to as an O shape. And this is (unknown term). I've got (unknown term). It's often referred to as (unknown term). So I encourage you to stand up and see what that is for you right now. One of the reasons that it is important to understand the different structural variation in the body is because, A it teaches you about your own body. It teaches you what you are looking at around you and it gives you an opportunity for more offering. So one of the common things we hear and especially yoga classes is, bring your feet together in front your mat. The what if someone’s thighs touch and their feet can’t come together? Again, that person want to do their best and want you to see them and they want to feel seen and heard through their movement. So there are doing their best and they're trying to get their feet together. And they're like, this is so uncomfortable. She says it every time. My knees are knocking together. I'm supposed to have my feet together. So here's the truth. That's not possible for every body. Instead of saying, bring your feet together, you might say, bring your legs underneath your pelvis. Or bring your legs underneath the midline. If you really want the thighs together or the feet together you can say bring your legs together. Bring your feet or your thighs together, whichever one happens first. So for me, having my feet a few inches apart, this is my (unknown term) if you asked me to touch my feet together one of my knees and I'm gonna come to the side view so you can see more closely, one of my knees would be in front of the other. Just from the shape of my thighs and how they are made together. And then, I'm gonna go back to the wide view, some people cannot bring their thighs together because their labs are shaped a certain way. So thinking of ways that you can offer this by either teaching the actual anatomical term. How brilliant. People are learning new things. And plus I'm try to get everyone to vote for a new Trivial Pursuit anatomical addition. So the more people that are interested in learning anatomy the more we can get the Trivial Pursuit. No? Nobody wants to play Trivial Pursuit anatomy version?

PATRICIA ANDERSON:
It really depends on the colour of the triangles as far as I’m concerned.

HEATHER SEAGRAVES:
I hear that. (Laughs) Teaching the anatomical but also referring to it as X shaped or O shaped and when we give this acceptable language through accessible offerings, giving cues that allow people to be in their body. One of the, I will say issues and problems with modern postural yoga that has, we need to address, it has been happening over the past many years is that it has become so this or this. And I think that we really are amidst a yoga revolution where we can honour the bodies that are in front of us. Yoga is meant to be for every body. That means we have to understand what is happening in the body and the differences in the body to be able to create these offerings. Bring your feet together is again, something you might consider throwing out the window. The question I always ask you to ask yourself and I asked me to ask myself is why? Why am I saying what I’m saying? What is the purpose for my offering? And who is it serving? What is it and why? And once you have the answer to your why, then how? How do I offer this in a way that meets the need for the people who are in front of me and meets the need and the integrity of you as a space holder.

Again, something you might, you might have people bring their legs towards the midline is simply say bring your legs towards the midline and bring your feet or thighs to touch whichever happens first. Or you can come up with a way. There are many ways. Those are a couple of examples. You can could come up with a way that works authentically for you.

The other aspect of the knee I would like to acknowledge or the legs is the hyperextension of the leg. Just like the elbow, the knee moves in the sagittal plains. They hinge joint bands and straightens. And it is also known as a modified hinge joint because it has that slight degree of rotation when the leg is bent.

And when the leg goes beyond straight, I have a very mild degree of hyperextension but when the leg goes beyond
straight, we call that hyperextension. I barely have any. This is straight for me. And this is hyperextended for me. You can take the anatomy tape or painters tape once again and show.

Here is my straight. Here is my past straight. Straight. Past hundred and 80°. This is a straight leg. This is a hyperextended meeting. Hyper means more than. Where the knee goes beyond straight. Hyperextension is considered both structural and functional. So structural meaning it is because of the structure of the knee joint itself that it can go past straight. But functional meaning we can offer some movements to create stability there and to take it out of that hyper or more than place.

And one of the things and I think this is relatively common for most yoga teachers and movement teachers but in the pose where the leg is straight and we are hinging over that leg, creating body weight or load or strain on the joint. One way to create more stability there is to press the shin or the weight in the foot in such a way that we are engaging in the hamstring not just pushing or exploiting into the back of that joint when it is hyperextended. That is valuable for everyone, not just hyperextended.

So moving up to the knee and the knee tracking and the knee stacking. We have 10 minutes remaining. Patricia, is there something else I should read besides that? I know we have 10 minutes paid I'm trying to get us all the way out.

PATRICIA ANDERSON:
I just want to make sure you are aware we have a lot of questions coming through. Other Mac we will not be able to get to all the questions unfortunately because this is more of an introduction and a review that if you will Patricia, make sure we have those and I will make sure any questions that do not get answers we will put them on our resource page.

So the knee tracking and re-fracking is something else you here and yoga with the knee moving in line with the second and third toe. And oh my gosh, never let your knee go past her ankle. What I would like you guys to do is stand up, put your pen on the floor or your pencil or whatever it is nearby. And then go over to it, bend down, look at what your knees are doing, oh my gosh, they are past her ankles, and then stand up and pick it up. So our knees move past our ankles all the time when you stand up, when you sit down, when you get into your car. One of the reasons it might be helpful to keep the knee over the ankle in flow yoga classes perhaps is because of continued load or pressure on the front of the knee but this is a complex joint to understand in this way. We need to shift weight in this way to create resilience in the knee but one way to help fire the hamstring and take pressure off of the kneecap is to stack the knee over the ankle and think about pulling or plugging the thigh into the hip.

So if you're teaching and see across the room someone is going just past their ankle, it is probably not a fire that you need to rush over and put out. But it is something you can watch and say, OK, does that person do that every time? Can I help them to potentially create more connectivity? And same thing with moving the knee in this coronal plane in and out because of its modification hinge and movement of the ankle and hip. We can see, does someone typically move their knee in arm with her knee out? And what are ways that we could potentially modify the stance or give them more access through cueing to keep the knee in the centre of the foot or maybe there foot moves a little out to the side and their second and third toe is actually their big toe. Though acknowledging that the knee does move in all the ways. And going back to that question of, why am I saying to stack the knee over the ankle? Why am I saying the knee must be exactly in line with the second and third toe? Who is in front of you? And what purpose and value is it serving that person is always a really great question to ask as well. Who, what, what and how.

I would like to get to the hips and I will briefly move through the spine. And we can make sure we get all of the questions at the end. So the hip socket, because of the way that it is fetid here. I want to get to Maria's question. It's often taught to move in warrior, and yoga, it's often taught to move from warrior 1 to warrior 2. In one thing I will say about this particular movement is that it is over offered and under explained. And I know that one of the reasons it is often taught is because of the smooth transition that people find it provides for (unknown term) or classes that move more through posed by posed by pose. But what happens when we are in this particular shape and then we just start to turn without changing anything that is going on with the foundation, as we put the back knee and the ankle in a place that could potentially be risky. And we are starting to shear the hip in the socket without creating more space. And you can see I'm not even going into a full warrior 2. This is my warrior 2 these peered on not warmed up. I don't necessarily have a need to be here but this is where a lot of people live in their warrior 2 especially when they are going into that post. So one of the reasons that it is not the best choice perhaps to offer from warrior 2 to warrior 1 or vice versa, is because of the load and the way that it pulls the energy and pulls the back leg and again the shearing or the force within the hip socket.
So for those teachers that I'm working with their saying you know what, I want to continue to offer this. I will suggest coming out of the pose. So lifting the frontal hip point. Bringing the pelvis more towards that (unknown term) so that you are almost coming out of the pose, changing the feet and then you can go back into warrior 2. But when you are here in the deep warrior 1 and you shear the pelvis across, it is not the best visualization because it makes me cringe a little bit but you can think about a mortar and pesto. That's essentially your hip and the head of your femur and your hip socket especially if you are loaded here. Loaded meeting weight-bearing. Or if you are using weight. So if we have not changed the feet we have not changed the pelvis, you are putting your hip socket and it is lined with that soft connective tissue which does not get good blood supply and does not heal as easily, you also have a labrum that lines the hip socket. That could potentially be irritated and causes a lot of pain when it is.

So for those of you that are interested in teaching warrior 1, again Why do you need to teach that. Can you teach something different that would avoid these issues. Change the base and then re-bend the knee so you are coming out of the pressure from warrior 12 warrior 2. Alright. I would like to talk about – the last thing I would like to talk about are the forms and I think we will have two minutes for questions and we could take the rest on the resource page. So the last thing I want to talk about witches, I think it's an important common and Patricia I'm gonna close this because I do not think we need it.

The one thing I want you guys to also understand that I think is a common cue, for yoga specifically in downward facing dog is this concept that the chest moves towards the thighs. So if you remember, at the beginning, we talked about the movement of the arms at the shoulder. This movement forward and up is called flexion. And 180° of flexion would be hands over her knees. Or hands in line with hips if you were looking at me from the side. And if I were to come into downward facing dog, we are also looking for that hundred and 80°. Honestly. Or less. And when you tell someone to move your chest toward the floor, or move your chest towards your thighs, you are again, taking that idea of exploiting the joints of your shoulders and explaining the joints of your back and moving it into your lower back and especially because of the orientation to gravity, we are then putting tons of pressure on the armpit chest and on the joint capsule of the shoulder.

Instead of looking for the hundred and 80°, we are trying to find the true depth in the armpit position when overhead it creates more strength. It creates more stability in the pose. And I know that there are probably many of you saying, I don't feel a stretch when I do that and that is OK. So I am going to leave that there. I love leaving little cliffhangers at the end. We only have two minutes and I want to talk but the shoulders and downward facing dog. But again, ask yourself, why? Why am I saying move your chest to the floor? Who can that QB accessible for? There is something to be said about the sensation of stretch in that extreme place for people who have that range of motion. But then again look at who is in front of you to see who actually has that range of motion and what could potentially be more valuable for that person? I'm not saying they never need to access that stretch.

There's lots of questions. Anatomical Trivial Pursuit. Do we get to save all these questions Patricia?

PATRICIA ANDERSON:
I can send them to you.

HEATHER SEAGRAVES:
Yeah. OK.

SHARON CYRUS:
And if they go to your website and take a look at some of your other resources there is an email there that they could reach you as well.

HEATHER SEAGRAVES:
Exactly. I'm looking through some of these in a lot of these are really great questions. (Laughs) The spelling will be on the first page. Some of these questions definitely would take us down a very long pathway of discussion and I love long pathways of discussion. So I invite you to reach out to me through my website. I am happy to do email conversations. Or we can set up a private session if there is something you are working on specifically.

Anything beyond that, please do let me know. Patricia and Sharon, thank you so much. Sharon, thank you for taking the notes for us. We will add any of those to our resource page. A lot of the questions I'm saying are on our resource
pages. All of that will be there and it will be up on the website if not by this afternoon definitely by tomorrow afternoon so keep your eyes peeled. So thank you again. You guys want to say anything else about how they can find the link and the resource page, Sharon?

SHARON CYRUS:
If you go to the YouYA.org website you will find all of the courses you have already administered and and you might be doing in the future as well. They can watch this and and see the notes from this as well. And they can contact you if they have more specific questions.

HEATHER SEAGRAVES:
And I'm teaching online every single day Monday through Friday. My schedule is on my website just click the link to join in if it is through a studio that I am teaching that you can purchase a class with that studio otherwise if you are practising with me here in my basement, I am doing donation based and suggested donation classes and I'm also doing some donation classes coming up to give back to the community so please join me. The information is on my website and if you cannot come for class you can always contact me for questions. Thank you again Sharon. Thank you again Patricia. And yoga alliance. And thank you for joining.

PATRICIA ANDERSON:
That was awesome. Thank you so much.