Ep. #321 - Understanding the Planes of Movement

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With your host:
Susi Hately

From Pain to Possibility with Susi Hately

Introduction 00:00:01 You're listening to From Pain to Possibility with Susi Hately. You will hear Susi's best ideas on how to reduce or even eradicate your pain, and learn how to listen to your body when it whispers so you don't have to hear it scream. And now here's your host, Susi Hately.

Susi 00:00:25 Welcome and welcome back. I'm so glad that you're here, because today we're getting into a concept that I have basically taught from, right from the get go. It's a key, fundamental reason why people get better when they work with me, and it's why my trainees get the results they do with their students. And it's about the planes of movement. The planes of movement are a core biomechanical principle, and they are fundamental if you want to help someone reduce and eliminate physical pain, and here's why: everybody compensates. And we'll talk more about compensation in the episode, but everybody compensates. People with pain compensate, people without pain compensate. But what thing I notice all the time is, is when I can help someone reduce their compensation and they have pain, their pain will reduce or eliminate in the first session and the follow up sessions.

Susi 00:01:10 And for me to be able to see the compensation requires me to utilize the planes of movement. So this is what we're getting into today. Now if, as you're listening to this, this really resonates with you, what I recommend you do is go to I Love Kinesiology and it's the newest program that I'm running. You can read about it at functionalsynergy.com/ilk, and we dig into the planes of movement in a very fundamental, foundational way in that program through a multi-module process. So take a look at that as you resonate with this episode. So let's dig into it. Whether you're a movement teacher, a yoga therapist, a physio, or a curious body nerd who felt like there's something just not adding up in the movements that you're teaching. This episode is for you because today we're going to explore one of the simplest, most overlooked, and most powerful frameworks for seeing movement more clearly.

Susi 00:02:18 Not cueing it, not fixing it. Seeing it. And we're talking about the planes of movement. Now, I know that might sound not very groundbreaking. Most of us were introduced to the sagittal, frontal and transverse plane somewhere in our anatomy training. Maybe they were mentioned in passing. Maybe you had to memorize them. Maybe you haven't really thought about them ever since. But here's what I want to suggest. If you've ever looked at a student and thought, why are they gripping their glutes here? Why can't I even twist even though I'm strong? Why does the shoulder keep flaring no matter what I cue? It might be because you're looking at the pose and not the plane. And once you know how to read planes, something shifts entirely. Let's bring it down to earth. Planes of movement are essentially the directions your body can move through space. They're not alignment rules. They're not dogma. They're not diagnostic categories. They're a map, a way to trace what the body is trying to do and how it's adapting to get there. And adaptation is the key because the body is always adapting, always solving, always organizing around the best option it has in the moment.

Susi 00:03:24 And that's why we see things like shoulder tension when thoracic rotation isn't available; hip gripping when the frontal plane isn't supported; jaw clenching when the pelvis feels unstable. These aren't random and they're not flaws. They're brilliant, organizing solutions

from a system that's trying to stay functional. When you see someone in a pose, you're not just seeing joints and muscles, you're seeing the strategy their nervous system has built to keep them upright, mobile and safe. And planes help you decode that strategy. Let me give you a quick example. a yoga teacher I worked with kept experiencing tension in her neck and levator scapula, especially during twisting postures and side bends. She was strong, mobile and had tried all the usual fixes: strengthening, stretching, foam rolling, self rolling with a ball, all the things, but nothing stuck. When we looked more closely, we saw something else. She was collapsing slightly in her frontal plane during certain movements. Every time she twisted, she also leaned just a little. And because the frontal support wasn't there, her neck kicked in to stabilize.

Susi 00:04:36 The levator scapula wasn't tight. It was working overtime. See, that's what the planes begin to reveal. They show us the missing direction, the underused support, the overcompensated strategy. Not so we can correct it in the usual fixed way, but so we can offer a system a better option. Here's why this matters so much right now: more and more movement professionals are realizing that traditional cueing don't always work; that strength alone doesn't solve every pattern, stretching into stiffness can sometimes make it worse; that students are compensating all over the place, even when they look like they're doing the pose right. And the missing link? It's often that a whole plane of movement just isn't available or it's compensating. So what does the body do? If a certain plane of movement really hasn't been trained, or it's been shut down after an injury, or it's been skipped over due to nervous system bracing, what's actually happening is a rerouting; compensation, borrowing from a nearby system. And unless we can see that reroute, we'll keep trying to fix the symptom, never realizing that it's a pattern problem and not a posture problem.

Susi 00:05:53 But let's zoom out for a moment. Think about how most of us were trained to assess movement. Many folks were taught to look at joints, alignment, muscle activation and range mobility. But what a lot of people weren't taught, at least not deeply, was to see directionality, load transfer, the relationship between planes, the body's strategies for avoiding certain directions. And that's what this episode really is about. It's not about fixing or diagnosing. It's about seeing, noticing, listening and understanding that compensation is not dysfunction. It's communication. And here's the thing: you don't need to become a kinesiology or a bio mechanist to grasp this. You just need to be willing to observe differently. Slow down your scene and ask new questions. Because planes of movement give you a framework for doing just that. They give you language, access points and they help you interpret what's actually going on, rather than just reacting to what you see on the surface. They help you understand things like why your student's twist never quite lands. Why a side plank feels impossible for one person, but grounding for another.

Susi 00:07:00 Why rotation disappears the moment the breath becomes shallow? Why a pose that should be restorative ends up being exhausting for somebody. So if you've ever felt like something was missing from your cueing toolkit, like you're teaching strong flows but watching students compensate, like you're intuitively aware that something's off but you can't name it yet, this one's for you. Planes help you see what's often hiding in plain sight. They bring clarity to

movement that feels confusing. They bring context to nervous system patterns that seem random. They help you connect dots between pain, posture, progression, and possibility. And more than anything, they help you teach with precision and compassion. Not because you're commanding better alignment, but because you're collaborating with what the body already knows. In the rest of this episode, I'm going to break down what each of the three planes offer. How movement breaks down across planes. What you can start seeing in your students right away. How this connects to nervous system safety and compensation patterns. Why posture isn't something to correct, but something that emerges when the planes come online.

Susi 00:08:12 This is very much a practical episode, and I want you to walk away feeling empowered to teach differently. Whether you're working with a beginner, a longtime yoga student, someone recovering from injury, or yourself. So let's settle in, take a breath, and begin to see movement with a whole new set of eyes. Because planes are not abstract, they are hidden architecture of how we move, how we adapt, and how we heal. Let's get rolling. Let's take a look at the three planes in practice. So now that we're grounding ourselves in why planes matter. Let's talk about what they actually are and how they show up in real bodies. You've likely heard the term sagittal, frontal and transverse. Maybe you've memorized them in a course, but the moment you started working with real people, the terms felt sort of abstract. I want to change that. Let's make the plane something that you can feel in your own body and in the bodies you teach. Sagittal plane, for example, is the familiar default.

Susi 00:09:14 It's what divides the body into left and right halves. And when we think about it with movement, we are seeing flexion and extension. So forward and backward movements. So when we think about sitting, squatting, standing and the leg swing in walking, that's the sagittal plane. You can also think of downward dog, child's pose, cat cow, forward folds, backbends, almost every gym based strength move. It's where most yoga classes live. It's where most rehab protocols begin, and it's where the majority of cueing happens. And yet often the sagittal plane is overused and under integrated. A person can live in the sagittal plane and still be bracing, compensating, or leaking load. Just because someone can bend forward doesn't mean they're loading the pattern. Just because someone can squat deeply doesn't mean the pelvis and spine are collaborating. So yes, the sagittal plane is very important, but it's also where we tend to collapse, overcorrect and over effort when we've lost the other two planes. We default to it; not because it's right, but because it's familiar. The frontal plane is the missing middle.

Susi 00:10:29 The frontal plane divides the body into front and back. So when in movement, it governs side to side movement. Abduction, adduction. Think jumping jacks. Think lateral weight shift. Stability when standing on one leg. You can also think about side lunges, lateral reaches, side planks. The hips in triangle pose as we move into the movement. Now here's what's interesting: most people, especially those recovering from injury, pain or who sit a lot, have a frontal plane that's offline not because they're incapable, but because they've never been taught how to load or trust lateral movement. So instead, they compensate. They'll tip the trunk, overuse the QL, lock through the glute, or sidestep entirely and lean into sagittal strategies to get through it. Frontal plane strength is subtle. It's less about big range and more about fine

tuned lateral control. When it's present, you see ease in standing poses, and when it's missing, you see gripping, wobbling, or odd shifts of weight during otherwise simple movements.

Susi 00:11:35 It's not just strength, it's perception. The nervous system might not even recognize lateral movement as an option. And that's what we're restoring here. Not just tissue ability but system awareness. As we get into the transverse plane, this becomes really curious because so often it's the first to shut down. It's the one that governs rotation, spirals, oppositional movement, internal external rotation of limbs, ribcage-pelvis spirals, eye-to-shoulder-to-pelvis collaboration. So think of twists. Think of ankle-to-knee, a shoulder reaching across the body, walking with an arm swing. Transverse plane movement is the most nuanced and the most easily compromised. It's the first to shut down when the system doesn't feel safe. Why? Because I found that rotation really does require trust. In the sagittal and frontal planes, you can muscle through more easily. But transverse? That's coordination, integration, subtlety, load sharing. It's also deeply connected to core awareness, breath regulation, pelvic floor co-function, and emotional processing. Twists can often, for many people let me think that one out... 13... 54?

Susi 00:12:50 I've worked with dozens and dozens and dozens of clients who don't like twists. And every time we discover that something in their system pelvis, breath, nervous system, past injury has mapped out the transverse motion as being unsafe. And so they either avoid it or brace through it, or substitute with spinal flexion. So to bring the transverse plane back online often requires a lot of slowing down, building load support elsewhere, and gently inviting the spirals back in. Now what's curious is you can move very, very slowly and very, very deliberately and very specifically. And as you do once it's back, it's remarkable how much more fluid movement feels and how people breathe better and stop fighting with their body so much, and realize that they have a collaboration available to them. See planes don't exist in isolation. One of the biggest insights that comes from plane-based awareness is that you rarely move in just one. Even with something that appears sagittal, like downward dog, you've got elements of frontal plane work and transverse plane coordination.

Susi 00:14:07 The question isn't so much what plane is this pose in, it's: what's the dominant plane? And when the person moves, what planes might be skipped? And what does this tell me about a person's pattern? It's another way of asking what's working in this movement right now and what's not? And what should be, that's missing? See, when someone compensates, it's often because one of their planes is offline, so the others have to pick up the slack. A missing frontal plane can sometimes show up as a twist that never quite lands. A missing transverse plane can sometimes turn up as lateral flexion into spinal collapse. Sagittal plane dominance can make every pose feel like a fight, even when it looks clean. So what I'm hoping that's really coming across here is we're not trying to "fix" the planes. The planes provide the entryway into curiosity of being able to see the movement. And as you see the movement, both at a granular level and a more zoomed out level, you start to see in what I like to call 3D.

Susi 00:15:18 Now, when we apply a cue or an input or a stimulus or a suggestion, it's coming from a retraining space, an opportunity to provide more support, because when someone

compensates and deviates out of... or a plane becomes offline, it's not because something is broken. It's a strategy. It's highly creative. So our job as yoga teachers, yoga therapists, or therapeutic yoga teachers, because we get the opportunity to help someone channel that creativity so they can have better movement patterns. But get that this is not about fixing, because when somebody inadvertently, subconsciously chose what they chose in terms of a compensation, they were choosing from the very, very, very best of their resources. That's creative. That's awesome. And all we need to do is help retrain that. And if you're hearing me and saying, oh, here, she says, all you need to do it really is that. And that's what I train my trainees to do. That's how I help my clients. That's why I get the results I do.

Susi 00:16:31 So let's consider some of the cueing that's often used out there. Oftentimes we'll hear people say, you know, engage your core. That is like a "engagement," action-oriented movement. But, like, what does that even mean? And how do we even know that someone's doing it? Whereas what I find can work really well is for me to look at how the ribs and pelvis are connecting. And if it's in a twist, how are they rotating relative to one or the other? That will give me much more understanding about how that core is starting to connect, because the core, as I've talked about in another episode, is not a muscle; it's a system. It's not one individual muscle. Same idea with the idea of like, sinking deeper into the pose. Like again, what does that actually mean? Does sinking deeper mean collapsing? And is collapsing a compensation? So what's actually happening in the movement? What direction of movement is the direction that is unavailable here? And can we play there? So your languageing, your cueing, moves away from correcting to being curious.

Susi 00:17:52 So you're not cueing alignment per se, although that might show up. You're guiding directionality. You're changing everything about this because now we're engaging our enteroceptive and proprioceptive capabilities. So as we move into the next section, we're going to dig into what happens when a plane isn't accessible and how a nervous system compensates to keep us functioning. We'll look at strength versus safety, protective strategies, what to observe when a person moves around a plane, and how to help bring a plane back online without forcing or fixing. Because planes don't just help you understand movement, they help you understand behavior, perception, patterning, and possibility. So let's dig in. So let's talk about what happens when a plane of movement is not accessible. This is where we leave theory behind and step into real teaching moments, because this is where breakdowns and breakthroughs happen. So let's start with the key distinction. A movement isn't just unavailable because it's weak. It's often unavailable because it doesn't feel safe. And the word safe is so important here, especially if you're working with people in pain or post injury.

Susi 00:19:04 People who've been taught to override, ignore, and push through. Because it's not about strength. We tend to assume that if they can't move into the pose, it must be because they're tight or weak. But let's pause there. A client can be strong, yet avoid rotation; can be mobile, but grip their jaw every time they side bend; they can be doing everything right and still feel unstable. Why? Because movement isn't just mechanical. It's relational. It's contextual. It's systemic. When someone avoids a plane, whether consciously or unconsciously, it often means the system doesn't trust that movement direction. The nervous system is incredibly smart, and it

prioritizes safety over performance every time. So when a plane is missing. What you're seeing isn't dysfunction, it's a protective strategy. So let's look at three common reasons why a plane might be unavailable. And this is practical. Number one, it's unfamiliar. A person has never been taught to move that way. Frontal and transverse planes are often undertrained.

Susi 00:20:08 If all your movement history is really sagittal think running, forward folds, squats you have no reason to really connect with the other two. It's common to be fit but stuck. They have strength, but not multidirectional coordination. Two: it's been shut down for safety. This is where the nervous system has created a bracing or a guarding pattern often after surgery, injury, birth, chronic pain, emotional trauma. For example, a client might be avoiding rotation because of a past back injury, even if it's healed. The system still remembers the risk and avoids the plane entirely. Or a person who's had abdominal surgery might unconsciously brace against lateral movement. Frontal plane? That could be off. Three: It's been bypassed through compensation. The body may have solved the pattern using other planes so consistently that the original plane goes offline. You'll see this in a side bend that actually flexes forward, or a twist that uses a rib shift instead of true rotation. A lateral movement that's actually a trunk lean. Over time, the movement looks efficient, but it's bypassing the actual plane. Let me give a real example.

Susi 00:21:16 A client came to me frustrated because no matter how much she trained her core, she couldn't twist without pain. Her first instinct was more strength work, more mobility drills. But when we slowed it down, I saw it clearly. She was initiating every twist with spinal flexion, no true rotation. And every time she tried to go deeper, she collapsed into her lower back and tensed her jaw. Why? Because her transverse plane was guarded. Her system didn't trust it, so it substituted sagittal flexion her default strategy. Once we introduce breath and some pelvic stabilization, some lateral movement, something shifted. She stopped trying to twist harder, and she began to twist smarter. We weren't fixing her spine. We were re-patterning load, restoring direction, changing up coordination. And that was really the difference. So what might you see when a plane is unavailable? So let's talk about your "teachers eye." What shows up when someone's plane is not quite involved or connected or coordinated? And these are just some examples, by no means is this exhaustive.

Susi 00:22:25 So when the sagittal plane is not quite working as well, what we will see is a shallow squat with a forward trunk lean or hip flexion that's blocked by rib or spinal position. We'll see arms going overhead with a rib flare or a pelvic tilting, or a tucking or even like swaying the whole body in order to get that arm overhead. In frontal plane issues we'll often see a QL overuse or a pelvic drop with a single leg stance, lateral movement turning into a side body collapse. With transverse plane issues, we'll see rib shearing instead of rotation, pelvis and thorax moving as a block, twists feeling forced, overriding with the arms, breath restriction or skipped entirely. Now here's the key. Your job isn't to call these out as wrong, because they aren't. Your job is to be curious and to recognize them so you can support the body back into clarity. So how about restoring a missing plane? This is where I dig into biomechanical granularity. The first piece is to help create better relational connection.

Susi 00:23:44 This is why I start with small movement. Very basic: leg bone in the pelvis, pelvis relative to the rib cage, arm bone in the shoulder socket, blades on the rib cage. Segmental movements done small so we can start to improve relational connection, start to see what relational connection is there or not there. And when doing these biomechanical granular movements will often see the compensatory strategy show up. We'll see where the limitations are or the disconnections are in whatever plane. With that I move slowly, bit by bit, piece by piece, all within a range that doesn't increase pain. And that is foundational and fundamental to the work that I do. When it becomes time to add load, I add load slowly and with support. Think of it being like a nervous system gentle nudge, not a push. Lots of props, walls, breath and simple, simple movement cues that help foster enteroception and proprioception all the way along. Breath is a big piece of it. I don't typically begin with like, let's change the breath.

Susi 00:25:05 I just want to see that they are. And if they aren't breathing really well, where is it getting blocked? Because that can sometimes open up our eyesight to where some of these limitations exist. Not to change them, but to become curious. Sometimes we can explore lateral breath as being an invitation to access the frontal plane. Sometimes the posterior breath can help access the sagittal patterning, and spiral breath can begin to waken the transverse system without demanding a lot of action. However, I don't start there. We've developed a lot of trust between the parts; more segmental coordination, bringing together neighboring joints *before* we start adding in some of these pieces around the breath. Because the breath is fundamental to safety, and I don't want to start changing it before someone is ready. Which really leads to this last one, which is really allowing the system to choose. So instead of directing a movement or correcting a movement, utilizing enteroceptive somatic sensory languaging like "what happens if...?" or "can you feel...?" or "what do you notice...?" Allowing for the curiosity to be there, not euphemistically but truly.

Susi 00:26:28 Because if you are demonstrating curiosity from a true, true space, your help modeling that curiosity that they can have for themselves. That curiosity builds trust between you and your client and between the client and themselves. Trust builds access and from access comes strength. This piece around strength following access is something that I think is important to close this section. Strength, I don't feel, is what we need to build first. It's what's built upon once the system really trusts that direction, the infrastructure is there. Once planes come back online, when there's coordination, that's more present. Once that nervous system says this is okay, then strength naturally arises, which opens the door to refinement and deepening the movement. And if you skip that and go straight to strengthening, you'll often reinforce the compensation. You'll often reinforce the coordination that is present, or lack of, between the planes. It's a big reason why people plateau, why they regress, why pain comes and goes. Because the planes were never fully restored. Planes give you clarity to see what's missing and how to help it return.

Susi 00:27:49 They help you see movement differently, help you cue more effectively and your students will feel the difference very, very quickly. Not just in their process, in their bodies, but in the trust of their process. So here we are. We've explored what the planes are. We've explored how compensation isn't dysfunction per se, but it's a directional reroute. There's an opportunity

to shift your lens from correcting to restoring. And perhaps you felt there's a difference to teaching with clarity instead of control. So let's take this one step further. How to integrate what we've covered so far? Because it's one thing to understand that a plane might be offline, or there might be a lack of coordination between planes. It's a whole other thing to be asking why is it missing? And is this a strength issue or a safety issue? And how do I know when it's ready to return? And this is where nervous system literacy really, really comes in. Every moment we make is filtered through one question from the nervous system: is this safe enough to attempt? Not cognitively, but somatically.

Susi 00:28:58 It's happening in real time beneath awareness, which means a missing plane isn't just a coordination issue, it's a perception issue. Let's take transverse plane movement. Rotation, for example. If someone's system associates spiraling or twisting with instability, due to an old injury, surgery or pattern, it will clamp down. No matter how much strength they build, the plane won't come online until the nervous system gives permission. That's why we don't force planes to come back into existence. We create conditions where the system can reintroduce them themselves. So how do you know when things are ready? You see subtle signs like the breath moving more freely in the direction that was once restricted. The movement no longer requires bracing or holding. The student doesn't overshoot or brace or push into the plane, they simply move there. The quality shifts from hesitation to participation. This is the body saying okay, I trust. And from that trust we can build strength, load, and layer on complexity, but only after it returns. So what does strength actually look like? Strength isn't just about muscle recruitment.

Susi 00:30:07 It's not just about effort. True strength is directional clarity. It's the ability to move through a plane without compensation, collapse, or over control. It's when a person can side bend without gripping, twist without bracing, extend without losing their breath. That strength born from coherence, from relationship between ribs and pelvis, foot and shoulder, breath and load. And it's why I teach that strength is often something that emerges, not something you grind for. Because when a plane is accessible and trusted, the body will want to move there. And that's where strength really, really lives. Let's recap what we've gone through in this episode: Planes of movement are a map, not a rulebook. They show you what's available and what's being rerouted. Compensation is absolutely not failure. It's the body solving a problem. You're not correcting, you're collaborating. Each plane gives you different insights. Sagittal might show control, frontal might show stabilization, transverse might show integration. And when a plane is sort of offline or not connected or coordinated with the others, it's often about safety first.

Susi 00:31:16 The system needs to trust direction before it can strengthen it. Teaching through planes really and truly brings results. Less guessing, fewer injuries, more confident students, and more ease in your own body. So this is a quiet invitation for you. If you're feeling something stir, something like oh yes, this is what I've been looking for. I felt this, but I didn't really have the language. Then I want you to know this is exactly what we explore in I Love Kinesiology. Not as a theory but as applied clarity. We look at how to spot compensations early and what to do when a plane is offline. How to rebuild trust before adding load and how to teach from a nervous

system *permission* base and not pressure. And we do it all through movement, not rigid alignment or textbook jargon. So if you're ready to teach with more confidence and accuracy and more trust in your own ability to see, I'd love to have you there. And you can learn more over at functionalsynergy.com/ilk.

Susi 00:32:17 At the end of the day, planes of movement aren't about labeling people's postures. They're about liberating what's been held. About offering new directions to bodies that forgot they had options. Because that's what this really is all about: not correction, not a fix. An invitation to spiral again, to breathe again, to trust again. And that was what makes this work so powerful. Thank you for listening. Thank you for being here. Thank you for seeing more deeply. Thank you for doing the work that makes real change possible. We'll see you next week. Hey, if you have been inspired by this episode and you want to dig in to understand the planes more clearly and more effectively, then come check out I Love Kinesiology over at functionalsynergy.com/ilk. I'd love to see you inside.