

Ep. #372 - What Hills Reveal About Your Movement  
(and why you can do hills and not hurt your knees,  
back...etc.)



Full Episode Transcript

With your host:

Susi Hatelly

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## Introduction (00:00.00)

You are listening to From Pain To Possibility with Susi Hatelly. You'll 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 Hatelly.

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Welcome, and welcome back. I'm so glad that you're here today because today I want to get into hills, hill climbing, and hill descending. And the reason I wanna dig into it is because lately I have been working with lots of people who are either post-knee surgery, dealing with hip issues, or navigating changes in how their body moves as they get older.

And one of the patterns that keeps showing up over and over again is how they go up and how they go down hills, and how they feel going up and down hills. Now, what's interesting is that a lot of people will start off by saying something like, "I can't do hills." Now, I wanna emphasize that my typical client, they aren't saying, "I won't do hills."

They want to do hills. They wanna be able to feel functional. It's that currently they think that they can't do it. They'll say that hills bother their knees, they feel unstable going downhill, or they just don't have the strength to go up or down an incline. And what I've been seeing, and what I want to unpack a bit in this episode, is that it's not actually the hill that's the problem.

Rather, the hill is revealing something. It's showing us something about how our body responds to load, because the load changes when you go from a flat to an incline and then a decline. The reality is that on flats we are able to compensate and we can get away with a lot. We can move around limitations, and we can borrow from other areas and still get the job done.

And then when we introduce a hill, whether it's going up or down, the demand changes. And when that demand changes, the body can't hide what's not working as well. So instead of thinking about hills as something to avoid or something to conquer, I like to reframe them. I wanna use them as a way to see more clearly and offer the opportunity for possibility, the possibility of understanding what's actually happening in your movement.

Because once you can see it, once you can feel it, now you have something you can work with, and that is where real change begins.

So let's dig into the common belief. What tends to happen when people run into this scenario of having trouble walking up or downhill is they immediately go to a strength issue. They'll say things like, "I need to get stronger. My legs aren't strong enough for hills." Or they'll avoid them altogether.

They'll change their walking route. They'll slow right down. They tense up. Sometimes they'll blame a specific structure like, "My knees can't handle it, my hip doesn't like it." And I totally get

why that happens because when the demand increases like it does on a hill, something starts to feel harder, less stable, and perhaps painful.

So the assumption often is, "I need more strength. Something is wrong with this joint or this muscle." And yet, what I've seen again and again and again is that most people actually already have the necessary strength. They don't quite know how to use it when the environment changes. So when the terrain shifts, when you go from flat ground to an incline or a decline, we have to respond differently.

And if our system, we don't have the neuromuscular control and coordination to be able to do that particular task of uphill or downhill, then oftentimes it defaults to bracing or compensating or borrowing from somewhere else. So it's the underlying patterning really that we're addressing or need to address.

So I'd like you to consider that instead of asking, "How do I get stronger for hills?" perhaps a more useful question could be, "What am I doing differently when I'm on the hill? What changes in how I move? What am I actually noticing? Knowing what I need to do with hill climbing or hill descending, am I actually doing it, yes or no?

And where am I bracing?" Because really, although there are a lot of questions there, that's where the insight lies because we can't change anything we're not aware of, and most issues that have persistency to them are persistent because of what we're unaware of. And as we become aware, we start to see what's actually going on.

So building upon that, what makes hills so useful, and I know on the flip side so frustrating for many people, is that they take away your ability to hide. On flat ground, as I mentioned, you can compensate very well. You can shift your weight in a certain way. You can move around a restriction. You can borrow from your back, ribs, shoulders.

You can lean over more on your hip. You can elevate a hip. You can... You find a way around your ability or inability to swing the leg in the hip socket. Remember, in order to have a great gait pattern, there are four key things to happen. Now, anyone who has done a PhD or an in-depth gait discovery will probably be rolling their eyes at me right now saying, "Susi, there's more than four," and I, I get it.

But it's, with the work I do, when I can help my clientele get these four, when my trainees can help their clients get these four things, we're well off to the races in terms of helping people improve gait, hill climbing, and hill descending, and that is you have to remember that the pelvis is the platform on which the leg bone swings.

So there needs to be great mechanical connection between the pelvis and that leg bone because if you can do all the footwork in the world, but if you don't have a great platform on which that leg bone swings, where your foot is placed is really dependent on that connection. And then there's the pelvis to rib cage connection, and there's rotation that happens between those parts.

If you're not having a smooth rotation between the ribs and the pelvis, then it's gonna be difficult for that pelvis to maintain a steady platform on which that leg bone swings, on which that foot plants, turns into a stance leg, the other leg then swings, and then that becomes a stance leg. When those things come together, we can enable ourselves to walk on flats, up a hill, and down a hill.

But when some of those dynamics are out of whack, yes, we can compensate on flats, but it becomes a lot more difficult to compensate going up or going down. So what do we now do? Instead of thinking that hills are something that are causing the issue for you, it's more accurate to think of them as revealing what's not happening.

They're giving you information. So the goal here is not to jump in and try and fix it, but rather to discover the information that the hill is giving you about your movement. So knowing that you need a stable platform, knowing that you need good leg swing, knowing that you need a good connection between your pelvis and your ribs and a good connection between your foot and your pelvis.

Let's explore.

When we are going uphill, the demand has a certain specificity to it, right? When you go from a flat to an incline, there really needs to be some usable hip extension. So it's not simply to have hip extension, but usable when you're going up an incline 'cause lots of people can do hip extension in a lot of different ways, but it's distinct when you add in an incline.

And there's also distinction between actually moving the hip into extension and creating a shape that looks like extension. Because some people, when they do hip extension, they're actually driving from their spine, and they're making their ribs poke forward, or they're doing more anterior tilt than they need to.

This can sometimes then show up as when they go up a hill, they do more of a forward lean. Now, a slight forward lean, of course, is completely appropriate. I'm talking about when the lean becomes the strategy because you don't actually have usable hip extension.

The other thing that's often seen is a rib cage that starts to brace, breath becoming more held. There's a sense of pushing or efforting, over-utilizing muscles like levator scapulae that's connecting shoulders to neck. What's happening here is that your system or your client's system is trying to create movement.

Even though they don't have the underlying coordinating patterns, it's trying to create movement in order to get from point A to point B. It's a highly creative strategy, but in the act of borrowing from the ribs or the back, trying to get momentum going and it getting them up the hill, it's just not super efficient.

They're not building better capacity in their system.

And when we repeat that consistently over and over again, we'll need to find other ways to compensate. So it makes sense that in the creative activity that we do to try to climb a hill when we don't have that usable hip extension, it makes sense that in our mind we think we can't do them. But really, the hill isn't the issue.

It's really just showing us where that usable hip extension isn't yet available. So if we look on the other side of this going downhill,

what we see is for a lot of people, this being more problematic, not because it requires more strength in the traditional sense, but rather it requires control, usable control. Because when you're going downhill, you are lowering yourself. You're decelerating your body weight with every step, and that requires a different sort of coordination.

So when there's your system that's not really quite knowing how to absorb that downhill load, instead of yielding into the movement, again, what comes up is some bracing. Steps might get shorter or a bit choppy. Maybe less flow between one step and the next. Quite often, a knee collapses inward as the foot lands, and even the foot can collapse.

And this is mostly because there's not that overall coordinating pattern, as I mentioned earlier, those components of gait. There isn't that coordinating pattern that can manage the load through the whole system as we descend.

The other piece I think is also really important, and I've been hearing this a lot, especially from my clientele who are post-knee surgery, and that is there can be a real fear response. People feel that they're unstable going downhill or they're worried about falling. And when that fear is present, there is a real threat.

And when there's a threat, our system automatically, in some ways, responds with bracing. Breath gets held, body stiffens, there's more gripping, and it totally makes sense, right? It's a normal response to threat, and that threat will also then be additive in reducing the ability to actually absorb and transfer load effectively.

So it makes sense then that if there's a fear response, that it starts to feel even more effortful and more unstable. So what I'm hoping as we go through this is to highlight ways that it will support you to help build out better capacity for going up and down. Because what I've noticed with my clients, I don't need to train someone out of being fearful.

I need to train them into feeling more capable and then feeling them feel more capacity. And when they have those two components, the fear naturally dissipates. It just naturally does. I don't need to coach them out of it. So let's talk a bit more about the piece around this not being a strength problem.

I really wanna emphasize that going up or down hills is not about whether you are strong or not. I've seen plenty of people who are strong but who still struggle with hills, and I've seen people who don't consider themselves strong at all who move up and down hills quite well. So strength on its own isn't the differentiator here.

The differentiator is whether you can use that strength, the strength that you have when the demand changes, when the angle changes, or when the load shifts. And this is really where the coordination piece comes in. It's where the relationship between your foot, your knee, your hip, your pelvis, how they all work together, and that really, really matters.

So yes, you can absolutely build strength. And there's nothing wrong. I mean, I'm a huge advocate for getting stronger. However, if that strength isn't on top of or coordinated with underlying better patterning, if it's not integrated in how you move, it likely won't show up when you need it. And it's also why people can feel strong in a gym setting or on flat ground, but it's that they feel like things fall apart when they go up or down the hill.

Because again, as I've mentioned, the context has changed. So an idea to consider is I get the impulse to say I need to get stronger, and that impulse is actually driving us towards something. But I simply want to help you pause on the idea of, is it really that you need to add more strength? And perhaps focus on the coordinating patterns for the movement you already have for the act of going up and down a hill.

Because when that improves, your strength becomes more usable. It becomes more available, and often you don't need to add more force, and as a result, things become easier. Said in another way, it's really less about building something new, but rather accessing more effectively what you already have.

So let's just play with this in a real-world application and just take the idea out of hills. When you look at the way people move day to day, there's another pattern that really shows up. It's not about what people are doing, but rather what people have stopped doing. And I think about my own situation as an example.

I was someone who used to run quite a bit, and a few years ago, I started to get on the bike. Not because I couldn't run anymore, but because I had this bucket list item of riding for multiple days in Italy. And then I had a taste of riding for multiple days in Italy, and I wanted to go back and ride again for multiple days in Italy.

As a result, I've been riding more than I'm running, a lot more, and my movement pattern of being forward on a bike is very different than being upright and running.

I'm not moving through the same ranges in the same way as I used to. And what I'm really clear about is I function really quite well. And while I've had various injuries over the period of time, at this time of recording, I'm, my body moves really, really well. I could go and run if I wanted to. I just have my calendar set out that I'm riding more.

But I'm also clear that there are movement patterns I'm not doing because of that conscious choice. And they're movement patterns I still need to help and hone because on one hand they'll improve my riding, but on the other hand, they'll allow me to be that much more functional.

But there's also another side to it. There's also people who stop doing something because they feel like they can't, because it hurts, because it feels unstable, because it doesn't feel good

anymore. And in the hill scenario, they just avoid them, and then they avoid lunging. They avoid or try to work around stepping down, taking an escalator or a elevator instead.

And over time, that movement becomes less and less available, not because the body can't do it, but because it hasn't been doing it. And this is where specifically training hills can actually become quite useful, not as something to push through, but as something to show you, to reveal what's working well and also what's missing, what hasn't been practiced, what you are maintaining and what you aren't maintaining.

It then moves you away from blaming the hill or blaming your knee or hip to, "Huh, this is curious. This is revealing something I'm not doing anymore or a range I've lost access to." But when you look at it from that way, it also starts to reveal some of the patterns that could be related to the pain you're experiencing.

And from there you can build gradually with awareness, gently in a way that your system can actually integrate. Because that's really what brings the change. Not forcing movement, but reintroducing it in a way that your body can actually understand and respond to. A way that feels safe, that feels connected, that feels very deliberate and on purpose for you and your personality and character.

So if you take all of this and bring it together, hills are not the issue. They're a mirror. They reflect back how your body is overall coordinating, what your motor control coordination, your neurodynamics are when the demand changes from flat to incline. They show you where you're able to move really well and where you're relying on compensation, bracing, or pushing through.

My offer to you then is instead of avoiding them or trying to conquer them, use them. Use them as feedback. Use them as a way to learn more about how you move. Because when you can recognize what your patterns are, when you become aware of what you weren't aware of before, you can now begin to shift. It's not about forcing.

It's about using the data, the evidence that something like hills can provide, working in a range where your system can actually coordinate well and building upon that. Here's what's interesting, that when you do that and your motor control and coordination improves, strength becomes more available just like that.

Your capacity can express itself. Movement becomes easier. There's less effort and often less pain. So the goal isn't to get better at hills by pushing harder, or the goal is not to avoid hills to make yourself feel better. The goal is to understand how your body responds to them and build the kind of motor control and coordination that lets you move through them and respond to them with much more ease and much more fluidity.

Because when that changes, it doesn't just show up in hills, it shows up everywhere in how you walk, in how you move through your day, in how your body feels overall. So the next time you're out for a walk and you come to a hill, instead of thinking, oh, here we go. Is there a way around this? Can I not do this?

How about just get curious. Notice what your body does as you respond to the incline because that's where the information is and that's what leads to real lasting change. So here's to From Pain To Possibility. Until next time, happy exploring.