# Defining Sensation

## Edited Video Transcript

**Registration—Do You Feel It?**

Okay, so same challenge that we've started with all of our classes so far—you walk into a client's room, “I'm having trouble putting on my jacket.” All right, let's think about this. Let's understand the *why* underlying you doing your active range of motion assessment. They're fine, all right. You have them do a quick strength measurement—they're fine. Motor control—they're fine. You're observing them. All of a sudden, you ask them to put on the jacket. They go to their closet. Hold on, hold on, hold on; you know she just bumped your hand. What do you notice? “You're bleeding. Right now, what I think we might have is a sensation deficit, all right? Let's investigate.”

So, we we've done our screening. Now we can do a more formal assessment. Once we start looking at our senses, there's really two modes we can look at: there's a level of *registration* and [level] of *perception*. They're different. Registration is, does your brain register a sensation? [Perception is how the brain makes sense of a registered sensation.

**The Brain Resets Our Threshold to Register Sensation**

As an example, we can do a graph where we have some intensity of sensation, and we have time. So, for the first class, y'all were cooking bacon. Initially, one molecule of bacon smell entered this room, and no one noticed it. But then over time, more bacon molecules creeped in, and we passed a threshold of registration—“Hey I smell bacon.” You kept cooking bacon, and over time, [the smell sensation] kind of plateaued off. So, once we got to that point, I could smell it below that…point. I had no idea, turns out, all our sensation is like this.

Whoever brought [this example] up in class: it's like when a bug lands on you, you don't even notice until you look down at that bug. When it initially landed on you, [that] was below the threshold [of registration], then it walked and brushed a hair. That jumps above your threshold, so that's at its most simple. But life is never simple. Your threshold actually changes. Over time, I no longer notice that bacon because my threshold actually went up to there…my brain said, “Oh, smell of bacon is not important; therefore, I'm not going to worry about it.” You actually reset your brain's threshold to measure. That's the reason why when you go into someone's house and notice the smell, and then twenty minutes later, you don't notice it anymore. It's actually why you don't notice your own house's smell because you've reset your threshold for that.

Now on the opposite side—no one's paying attention. You're not paying attention to your clothes at all right now, okay? Think about your left sock. Think about your left sock. Think about your left sock. Think about your left sock. Your left stock is kind of bunched right now. It’s kind of right there—it's constricting your calf. It's constricting your calf. Feel that left sock under your foot. Do you feel your left sock all of a sudden? What I did is I dropped your threshold [of registration] down to there… for that left sock. I know, uh-huh, and weirdly enough, sometimes stuff like that can get to you, okay? But if you're distracted, it is less of a problem. That said, sometimes these things will still be above our threshold. Yes, there's actually a more complex model that you'll go into in pediatrics when we start looking at sensory processing. But it is the same type of system. It's, your threshold is really that low, so it's not hard for a sensation to come up into that conscious attention and bring you out of focus, okay?

So, what can you do? Yes, you do what do you do naturally to set up a good environment for you to focus because you do focus well. My dad was in the room, and the therapist noticed the attention deficit hyperactivity disorder first (ADHD) first. She's like, “Okay Lee, I want you to tell Jill all about your job.” And my dad's an engineering teacher at the Redwood Campus, and he just starts talking. I've heard all this, you know; I just zoned out. And then a vacuum went past the room that I was in, and my mind instantly went to that vacuum, and I didn't hear anything that my dad said. And my therapist, who also has ADHD, said, “Did you hear the vacuum?” “Yeah.” “Did you hear anything your dad said.” I said, “No, what vacuum?” “You didn't even?” “Yeah, no.”

Yeah, it's actually not that weird. But if you just go back to this principle, what you do is you naturally stretch your structure environment to be here… And by using that elastic band, you're actually kind of scooching your threshold up just a little bit, is my guess. You're actually providing yourself with meaningful information that you can control. Right to bring that up, yeah, that's not at all weird. And like I said, you actually know yourself better than you think you do, okay?

**Perception—Can You Make Sense of What You Feel?**

So, this is one piece of this this. It is just a threshold, okay? And that registration is simply, “Do you feel it?” But there's another layer here—*perception*. Perception is making sense of what you've got. For example, what does that say? Yeah okay, if you watch me do it, it was actually easier because my words are kind of close together. But what your brain's able to do is to connect these dots. Your brain's able to fill that in*. Registration is [determining] I can see that* dot? I can make such a faint dot on here that it's really hard to see, okay? And if some of you with glasses—take your glasses off—you can't register that point whatsoever, uh-huh, it's gone. I'm the same way without my glasses, okay. But *perception is making sense of our sensation*, so not just registering it—but by making sense of our world. It turns out we can have deficits at either level. And remember what I talked about—if you've ever burned your finger, and you can't feel something there for a couple days, you’ve damaged the nerve endings so that light touch isn't enough to send a signal up to your brain to register where you can have a deficit of processing, or you're unable to make sense of your world. We're going to look at assessments first for somatic—somatosensory sensation that cover both of these.