# Orthotics for Orthopedic Issues

## Edited Video Transcript

So now with splinting, we have a number of different types of splints that we can think about for arthritis and orthopedic [clients]. One type is our general protective splint, and this is a very slippery thumb-spica splint, custom-made, actually. You'll be making these later this semester. What is a thumb spica? Look at it. Why would someone wear this for their thumb? It's our most common side of the thumb to have osteoarthritis [metacarpal joint] (MCP) joint. You're right—this one actually does cover our MCP, but really, it's focused on the [thumb’s carpometacarpal] (CMC) joint. So we would use this for activities that cause pain.

For Activities that Cause Pain: The Spica Splint

So let's say it's painful when gardening, when she's making that kind of tight, just holding implements. Now, this is going to keep her thumb stable, so her thumb doesn't move. But like I talked about in class, the problem is if she wore this all the time, her thumb would never move. That would cause those muscles of the thumb to get weaker—give less support to the joint of her thumb. So I’m only going to recommend this when she is doing activities of pain.

“We're going to sit down; we're going to have an interview, okay? What are the top three activities that cause pain? Wear the splint for only those activities, and we can reevaluate those, but it's not an all-day everyday thing.” Then, there would be a Velcro just to hold it around. I just think it's gotten pulled off. Is that the one that that lady was wearing in the video? It was actually really similar. That was a slimmer streamlined version of figure eight, but it's the exact same type of thing, just stabilizes at the CMC [joint], all right?

Next, we have different types of splints. In fact, you're going to say, “Are you only ever going to suggest splints?” It is just like your rule of thumb—only during activities. We're going to pause. So we have these types of more protective pain-related splints. These…, I’m only going to suggest for that activity of pain. Then, we have these… other types of splints.

### For Surgeon-Ordered Splints: The Shoulder-Abduction Sling

We have some that are required by a surgeon. We follow their precautions with those. For example, we have our shoulder-abduction sling for somebody post-rotator cuff surgery. Somebody post-rotator cuff surgery, during the immobility phase, they'll be wearing this sling 24/7—sleeping in it. Is this a general protective splint as well? I would argue this is not, okay. I’m never going to prescribe this, but this is from the surgeon, and you wear that 24/7. This is the surgeon's requirements—24/7. Following rotator-cuff surgery, surgeons may require other procedures that require less. So what this is: “You can't do that? You're not getting bearing on that arm?” “That is true. I can't.” “Right.” So she can't lift that arm at all. “So by doing this…we're going to have to do this entirely passively. I’m going to come up, position that sling, uh sorry. You're good?” [Applause] So, tighter secures the upper arm. “There, that goes around here.” Is this something that we will need to know? How to put it on? Yes, and guess what, they're all different. Great, just watch videos. No, you could basically grab the splint before you put it on the client. You figure it out, and yeah, figure it out, okay. You have a colleague come over and sit for a second: “Let me try this one out on you because this one's wacky. Okay, mess with it.”

In general, it looks something like this. So once you put this [sling] on, you've got stabilization between this… kind of like a backpack. We have our abduction pillow. That's going to keep her arm out a little bit, and that's going to be your healing position. So she's going to wear this [during the] immobilization phase. And then we move on to the mobilization phase. Our goal is weaning because this is supporting the weight of her arm, right. She can completely relax into that sling. Okay might be a dumb question, but do you start weaning off of the splint during the immobilization stage or the first of the mobilization phase? Now, the next piece that you're going to think about is training family or training the person to put it on independently, right, because you're not going to go home with them. So you would need to put this back on like say after they change their clothes, yeah, after a shower, which is why you don't have to know how to do it exactly. And you're going to be the one training the family on how the family puts it on after that shower. So yes, the surgeon's the one that recommends this. This is how they would put that on independently. Figure it out. I’m going to have you work on it independently, all right?

### For Precautions: The Back Surgery Brace—Thoracic Lumbar Sacral Orthosis (TLSO)

Next, “Jess, if you were to lie down in the bed, all right?” So, Jess had back surgery. “What are your, back precautions?” “No bending, no lifting, no twisting.” Sometimes a client will also have to wear a brace. You protect their back to limit motion. Again, this is required by a surgeon or doctors prescribing this. And then as therapy, you need to know how to put it on because we've got to be able to put it on and take it off. But we're going to have to train family on how to do this. So usually, this is the normal way. You'll see this order: “The person has to wear this while upright.” Meaning if they're going to get up and out of bed, they've got to wear it, okay? So this has two parts. It has the front; it has the back. The back is usually much taller than the front. This has the thoracic stabilizer in the front, so the way you put this on is when the person is lying down. So, “First, I’m going to have you roll that way, keeping back precautions. Oh, okay, and on to your back. I come around to the other side. I’m going to help you roll this way. Get it nice and centered and even, okay? Then, roll onto your back, okay? Grab this. And if you roll that way again…that strap got itself hidden back onto your back. Roll that way just a little bit. That's good. All right, then you can go up and sit to the edge of the bed.” “I can't.” All right, so they'd be wearing this through their surgical precautions six to eight weeks in general, okay?

So now back precautions. No bending. “So, bend should just bend forward.” It's not going to let her do that. “Now twist.” It's really not going to let her. To get much of that…it's also going to kind of take some of that pressure off the spine. It helps support and stabilize. I’m going to have you practice with your partner donning each of these splints.