

## IHDI Facebook Live

Facebook Live Video: "Does babywearing hurt my child's hips?"

Recorded: July, 20<sup>th</sup>, 2018, 11:30am est.

Dr. Charles Price: Medical Director, International Hip Dysplasia Institute

Erin Mannen, Ph.D. University of Arkansas for Medical Sciences

**Dr. Chad Price:** Welcome to this special edition of Facebook Live. We're here at the International Baby-wearing Conference in Des Moines, Iowa. And I'm Dr. Chad Price, Charles Price. I'm an orthopedic surgeon who specializes in children's orthopedics, and I'm the director of the International Hip Dysplasia Institute. I'm here with Erin Mannen, who's a PhD and biomechanical engineer at the University of Arkansas. She works with the orthopedic department in Arkansas and has done some interesting research. So, we're going to talk about Baby-wearing and hip dysplasia. Baby-wearing is a little different from just baby transport. Baby-wearing is when you wear the baby on the mother or father's body for long periods of time, and that has social and emotional benefits for child development as well as physical development. We're going to talk more about the physical development side of things, but particularly regarding the hips. Now hip dysplasia is a big term that refers to improper formation of the hip joint. And the hip is a ball and socket joint, and the hip dysplasia can range anywhere from a loose hip that just wobbles in the joint all the way to a hip dislocation. So even a completely dislocated hip is called hip dysplasia and that is actually pretty common. Hip dysplasia you've probably heard about it in dogs, but it's the most common abnormality in newborn babies. About 1 in 6 babies has some hip instability. That's why we're interested in the hip position during Baby-wearing. Now, if it's not identified and treated in childhood then it can be a lifelong problem. And hip dysplasia is the most common cause of hip arthritis in women before the age of 50. And it accounts for about 10% of all total hip replacements in the United States. So, hip dysplasia is a big problem, and we can help prevent it particularly in the early stages, because the baby's hip is developing the fastest in the first 6 months of life. The hip is very shallow when babies are born and human babies are not born ready to walk, their hip joints are kind of floppy like the cartilage in your ears is floppy, and they can be loose but they harden up pretty quickly over the first 6 months and the first year of life. Positioning is really, really important in that period of time because the hips are developing. It's been shown that swaddling the babies with their legs tightly together can damage the hips. In cultures that use traditional swaddling with the legs tightly together, the rate of hip dislocation can be as much as 3 out of 10 babies. So, we know that tight swaddling is bad. In Japan, they had a program because a lot of the Japanese people were swaddling their kids really tight, and they had a very

high prevalence of hip dislocations. So, they had a national program to educate people about swaddling so the legs could spread and move, and they found that they decreased the risk of hip dysplasia. Now, that's carried one step farther in Baby-wearing because Baby-wearing gives the opportunity to put the hips in a really good position. And this is where Erin comes in, she's an expert in Baby-wearing and she's got a baby, she's going to demonstrate some things and so I'm going to turn it over to you for a minute, Erin. If you would explain about your work.

**Erin Mannen:** Yeah, absolutely. So, I'm an engineer, I study biomechanics of infants. I'm really interested in understanding how positioning of infants impacts musculoskeletal development, and one of those is with the hip. So we're looking at how proper positioning during Babying-wearing and other positions as well may impact the position or muscle activity as well and therefore the proper development of babies. That baby you hear crying is actually my baby and my husband. So, Drew and Lucy, and Lucy might want to be on me right now actually. And we were just kind of going to demonstrate what appropriate position for Baby-wearing might be. So, imagine having a carrier and you have your baby, you want your baby to face you. So, to be inward facing so they can benefit from all those wonderful social things that we know Baby-wearing promotes. And we want her legs to be supported by whatever carrier you're using kind of from knee to knee so her bottom's really kind of sitting in a nice position. We call that an M-position. We want her legs to go up and then go down. What that does, biomechanically, is it really allows the baby to use those muscles that they have in their legs to support proper hip positioning and placement. So, if you have a baby carrier, you want to be sure that your baby, their legs are properly supported, they're inward facing, and have that M-positioning to promote proper position and muscle activity.

**Dr. Chad Price:** Can you show that M-positioning again?

**Erin Mannen:** Sure, absolutely! So the legs would be supported by the carrier from kind of knee to knee. And so, you've kind of got a leg, leg, bottom and then kind legs go up, so the knees are flexed.

**Dr. Chad Price:** And the bottom is the bottom but it's important that the support comes from all the way to the thighs and the legs aren't dangling.

**Erin Mannen:** Exactly, definitely don't want those legs to be kind of held in this type of position. That puts undue stress on the hip joint and doesn't promote proper hip development. Isn't that right Lucy?

**Dr. Chad Price:** Well that's good, and your work has shown that the muscles are more active when the baby is gripping the mother. And that actually helps stimulate hip development, because when the muscles are active, it helps make the ball or the femoral head go into the socket, and that helps deepen the socket. Now that position, I want to show one other thing. I'm going to grab this baby. This is a baby in what we call a Pavlik Harness. This harness is how we treat hip dysplasia. And you can see that the treatment for hip dysplasia is almost the same as the Baby-wearing position, because it holds the child in this position. It holds the child in the in-position so if the hips are pointed at the socket. So, Baby-wearing has a lot of benefits, and babies are worn for hours at a time. How much do you wear your baby?

**Erin Mannen:** Well, between my husband and I especially when she was little, we wore her 5-6 hours a day when we're active and we're out and about, and want to have our baby with us, right next to us. It's what we've found to be the best thing.

**Dr. Chad Price:** Socially and emotionally, that's good for babies. But we also want to make sure it's done right. Sometimes when the babies are in a forward-facing position with a narrow strap, then the legs can dangle down, and that's not really a healthy position for hip development. So, make sure the thighs are supported all the way to the knees, and the bottom is lower than the knees. And preferably the baby is facing you, because every now and then the baby will grip the mother, and that helps the muscles.

**Erin Mannen:** Right and we see that the muscles are active during Baby-wearing, and we think that probably has to do with that kind of gripping instinct that babies have.

**Dr. Chad Price:** You also showed that that position is easier on the mother's back as well.

**Erin Mannen:** Right. So, we've also done some work on mother biomechanics, and we're finding that Baby-wearing is a positive thing compared to just carrying the baby in arms for the caregiver as well.

**Dr. Chad Price:** So, as I mentioned in the beginning, we're with the International Hip Dysplasia Institute, and our website is [www.hipdysplasia.org](http://www.hipdysplasia.org). We're a charitable organization that depends on philanthropy to promote healthy hip development. So, you can learn more at [www.hipdysplasia.org](http://www.hipdysplasia.org). One of the things we have is a hip healthy acknowledgement program where we acknowledge the carriers that support the hips in a good position. So, if you want to learn more and you want to find the carriers that have hip healthy acknowledgement, please visit our website and visit the International Hip Dysplasia Institute. So, I want to thank Erin. Do you have anything else to add?

**Erin Mannen:** No, I think we've covered it. Thank you.

**Dr. Chad Price:** Great, thanks. We hope you know more about Baby-wearing and more about hip dysplasia and how Baby-wearing can help hip dysplasia. Thanks a lot.