Biomechanics for Birth Professionals

Presented By: Dr. Amanda Halstead
Chiropractor, Mom and Birth Enthusiast
“Birth Matters. It matters because it is the way we all begin our lives outside our source, our mothers’ bodies. It’s the means through which we enter and feel our first impression of the wider world. . .

Women’s perceptions about their bodies and their babies’ capabilities will be deeply influenced by the care they receive around the time of birth.”

—Ina May Gaskin, Birth Matters
YOU are important

* Research tells us that the birth environment can support or hinder birth. A calm environment will decrease the stress hormones which slow labor.

* Normal physiologic birth is beneficial. Nurses, midwives, physicians and doulas can work together to support women and facilitate normal physiologic birth.
Role of the Birth worker

* You need tools to take care of you because your role is so important
* Difficult to be present when you are feeling “off”
Feelings at work

* What are some ways you feel; physically and emotionally, at work?
Link between our feelings and our body

* Certain emotions take on particular postures

* Angry Posture: 2016 study determined that women who are angry actually take on a different posture

Spinal Alignment

* 26 bones in the spine
* 3 primary curves
* Protect and encase the spinal cord
Body Function

* What is the most important organ in your body?

* What system controls every bodily function?
Study determined that sustained forward head posture is associated with poor memory.

What are some positions you regularly find yourself in at work?
Normal Spinal Biomechanics

- Neck
- Mid-back
- Low Back
- Pelvis
Work of William Marras of the Spine Research Institute
2017 study used models to learn more about the biomechanics of the low back. Found that even with disc loading and muscle activation, the facet joint takes a load. – Aticus (2017) *Journal of Biomechanics*.

* Tells us the joints in the low back are prone to injury! What can we do to protect them?
“People who suffer with pain recruit muscles in the ‘wrong’ order compared with people who have no pain.”

“Deep abdominal muscles are part of your core stabilizing muscles, they need to be ‘turned on’ before you lift you move your limbs.”

-Dr. Heidi Haavik The Reality Check
2015 study looked at a group of nurses with a history of low back pain and found that on average, functional performance was impaired. - Ferguson (2015) *J Occup Rehabil.*

* Tells us that even though these nurses weren’t in pain, they weren’t functioning properly

* No pain does NOT mean good function!
Biomechanics and Injury Prevention

* 2016 had patients with low back pain exercise! Overall patients had a decrease in perceived pain intensity and disability


* Normal Motion = Normal Function
2017 study used a biomechanics model to determine push/pull limits and found limits to be 30% lower than previously established. -Weston (2017) Ergonomics.

Workplace needs to continually reassess!

In another study they looked at how pushing a wheelchair effects the low back and shoulders. The conclusion was that manually pushing and turning a wheelchair is risky to the spine and shoulders and even limits are not enough to protect the body. -Weston (2017) Ergonomics.
How can you maintain proper alignment while supporting a laboring woman?
Self Care Ideas

* 2016 Study evaluated complementary health approaches for pain management. Pain is most often what brings people to complementary healthcare providers. Overall there were positive results and no adverse reactions.

Self Care Ideas

∗ On your own: Rest, Refuel, Hydrate, Stretch, Exercise, Yoga, Meditation, Grounding, Breath work

∗ With the help of professionals: Chiropractic, Acupuncture, Massage, Energy Work
THANK YOU