



# The Purpose and Power of Pain in Labor

By Judith A. Lothian

Originally published in the *2008 Guide to a Healthy Birth*

**The pain of labor and birth worries most women. No one enjoys pain, and most of us are willing to go to great lengths to avoid it. The pain involved in childbirth is no exception. What women don't usually know is that pain is central to nature's simple, elegant design for labor and birth. Pain is not simply an unfortunate side effect of labor but is an important part of the normal process of labor and birth.**

When I first started teaching childbirth education classes we routinely discussed pain in labor as the unpleasant side effect of a large baby moving out of the uterus, through the pelvis and down the birth canal. Only once was I questioned, by a father in my class, about whether pain just might have a purpose. I confidently told him no. I was wrong.

Our understanding of the role of pain in the normal physiology of birth came out of a deeper understanding of the hormonal orchestration of labor. Three hormones play vital roles in the initiation and progress of labor, and then facilitate recovery of the mother and ease the transition of the baby to life outside the uterus: catecholamines (stress hormones), oxytocin, and endorphins.

The hormonal orchestration of labor, especially in the early stages, is quite vulnerable and easily affected by what is happening around you. Animals search out quiet, private spaces in which to labor, and

if they sense danger of any kind, labor stops. We are not very different. Fear, anxiety, not feeling safe increase catecholamine levels and can shut down our labors.

As levels of oxytocin rise, the contractions become stronger and more painful. Women instinctively change position, and try to find comfort in a wide variety of ways in response to the pain of their contractions. Those high levels of oxytocin and the pain that accompanies them send a message to the brain, and more hormones, this time endorphins, are released. Endorphins decrease pain perception, moderate the level of oxytocin (giving the uterus, and you, little breaks) and help the laboring woman go into an almost dream-like state. Endorphins seem to make women become more intuitive, to go into themselves, and to get into a rhythm as they cope with one contraction after another. It's exactly what nature intended!

At the end of labor, it is not unusual to experience some anxiety with the strong, powerful final contractions. This sudden anxiety stimulates catecholamine release in mother and baby. This surge helps you become alert, more focused, and extremely strong as you push your baby out. At this stage, unlike in early labor, stress hormones actually help rather than impede the process of labor.

If mother has high levels of oxytocin, endorphins and catecholamines at birth baby is born with high levels of



# The Purpose and Power of Pain in Labor (Page 2 of 3)

By Judith A. Lothian

Originally published in the *2008 Guide to a Healthy Birth*

---

catecholamines too and is bright and alert. High levels of endorphins in your breastmilk will help ease baby's transition in the first hours and days after birth. Skin to skin on your abdomen, baby's head and hand movements will stimulate your body to continue to produce oxytocin, the hormone that now takes on a new role, facilitating milk let-down as well as preventing excessive maternal bleeding. High levels of all of these - catecholamines, endorphins, and oxytocin - contribute to the feelings of exhilaration, euphoria, and joy that women describe holding their babies right after birth.

So, what about pain? Right from the beginning of your labor, pain lets you know that this is not "just another day". Knowing you are in labor allows you to arrange for the help and support you will need. Like other mammals, we search for a safe, secure place in which to labor, a place where we have help and support. Without pain to signal the start of labor, there would be many more babies born in cars, shopping malls, and on the street, quite literally.

Like other pain in our lives, this pain actually protects us. If we touch a hot stove, we respond immediately by removing our hand. In labor, you feel the pain of a contraction, and you move, rub, perhaps moan in response to what you are feeling—not too different from the way you respond to pain in your everyday life. As you try to get comfortable, the movement, the touching, the moan also help the progress of labor. Your actions help ease the pain, a

bit, and you manage to get from one contraction to the next even stronger contraction.

Being able to handle increasing amounts of pain insures increasing levels of oxytocin, and increasingly strong, powerful and effective contractions, and ultimately the release of endorphins, "nature's narcotic". Interestingly, if the pain is removed, oxytocin levels fall, and there is no endorphin release.

At the same time your movement and position change, in response to the pain you feel, facilitate the baby's turning and moving down through the birth canal. Every time you move, the diameters of your pelvis change, the baby gets wiggle room, and is gently prodded into the pelvis and through the birth canal. During his journey through the birth canal the pain and pressure you feel, and your response to it, actually help protect your birth canal and the baby.

Think of how changing the way you walk in response to the pain of a blister protects your foot from further injury. If you have been given an epidural and do not feel the movement of the baby through the birth canal, and therefore are unable respond to the pressure, with oohs and aahs, by moving, by tightening and releasing vaginal muscles, the birth canal is more vulnerable to damage. Your movement, at just the right time, eases the pressure on the baby and slows his descent. You don't need to read a book to do this. Your body moves quite naturally (if your movement is not



# The Purpose and Power of Pain in Labor (Page 3 of 3)

By Judith A. Lothian

Originally published in the *2008 Guide to a Healthy Birth*

---

restricted) in response to what you feel.

What does all of this mean? The important reality is that pain is part of a natural, complex system that keeps the uterus contracting, keeps the baby moving down, and keeps your body and your baby protected. Remove the pain by interrupting its flow and progression any place along the way, and you remove the signals that are your guide as you move through labor.

Why feel pain in labor? The answer is quite simple: It is part of nature's plan for birth. Pain promotes the progress of labor, responding to pain protects the birth canal and the baby, and managing pain insures high levels of oxytocin and endorphins both important for a faster, easier birth, an alert baby, and successful breastfeeding!

---

To learn more, read *The Official Lamaze Guide: Giving Birth with Confidence* by Judith Lothian and Charlotte DeVries ([www.lamaze.org](http://www.lamaze.org)) from which this article is adapted.

Judith Lothian, PhD, RN, LCCE, is a maternal child nurse and childbirth educator. She is an associate professor at Seton Hall University, the Associate Editor of the *Journal of Perinatal Education* and a member of the Board of Directors of Lamaze International. She has five children and nine grandchildren.