Safe, Healthy Birth: What Every Pregnant Woman Needs to Know

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ABSTRACT

In spite of technology and medical science's ability to manage complex health problems, the current maternity care environment has increased risks for healthy women and their babies. It comes as a surprise to most women that standard maternity care does not reflect best scientific evidence. In this column, evidence-based maternity care practices are discussed with an emphasis on the practices that increase safety for mother and baby, and what pregnant women need to know in order to have safe, healthy births is described.

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Keywords: evidence-based maternity care, childbirth education, safe birth, healthy birth, healthy birth practices, induction, cesarean, movement in labor, labor support, routine interventions, epidural, episiotomy, intravenous in labor, nutrition during labor, maternal-infant interaction, breastfeeding, birth positions, normal birth, electronic fetal monitoring, informed decision making, choice in childbirth

To download or order a copy of Evidence-Based Maternity Care: What It Is and What It Can Achieve *and to view additional resources on planning for pregnancy, labor and birth, and the postpartum period, visit the Childbirth Connection Web site (www.childbirthconnection.org).*

Hygiene, better overall health, and antibiotics were responsible for the dramatic drop in maternal morbidity and mortality in the 20th century (Rooks, 1997). In the last half of the 20th century, advances in medicine made birth safer for high-risk women and for women with pre-existing medical conditions or serious complications in their current pregnancy. There is no scientific evidence to support that moving birth to the hospital or primary maternity care provided by obstetricians has made birth safer for healthy women with no pre-existing medical conditions (Enkin et al., 2000). Increasing evidence shows that the routine use of technology during labor and birth and the use of other routine interventions without a clear medical indication have contributed to the dramatic rise in the cesarean rate and other maternal and newborn complications, including a rise in maternal mortality in the United States (Goer, Leslie, & Romano, 2007). Each intervention interferes in often powerful ways with the process of labor and birth and increases risks for mother and baby.

A recent report published by the Milbank Memorial Fund, *Evidence-Based Maternity Care: What It Is and What It Can Achieve* (Sakala & Corry, 2008), highlights two key things: We know what makes birth safe for mothers and babies, and standard maternity care does not reflect this knowledge. The result is that birth is less safe for mothers and babies than it should be, causing harm where it could be avoided.

WHAT EVERY PREGNANT WOMAN NEEDS TO KNOW

Every pregnant woman needs to know that birth is intended to happen simply and easily and that six key birth practices make birth safer for mothers

and babies. Every pregnant woman also needs to know that the standard maternity care is not evidence-based and, therefore, the health-care provider and place of birth will influence the care that she receives in powerful ways. Childbirth education can help women simplify pregnancy and birth and be a resource for understanding how decisions about maternity care influence the health and safety of mothers and babies.

Birth Is Intended to Happen Simply, Without Worry or Trouble

The physiologic process of birth is simply and carefully designed. Women's bodies are designed to grow, birth, and nourish babies. In the last weeks of pregnancy, a series of physiologic changes occur, mostly, as evidence suggests, orchestrated by the baby. The cervix softens and may begin to dilate and efface. The uterine muscle becomes increasingly responsive to oxytocin. At first, oxytocin levels rise gradually and, when labor starts, more quickly. The pain associated with strong uterine contractions (the result of higher levels of oxytocin) sends a signal to the brain that stimulates the ongoing release of the large amounts of oxytocin required for strong, effective contractions. Coping with the increasingly strong contractions (by movement, relaxation, and other comfort measures) insures the continued release of oxytocin.

Pain plays an important role in helping labor progress by insuring that increasing amounts of oxytocin are released. When oxytocin levels are high (and the contractions are painful), beta-endorphins (''nature's narcotic'') are released. Endorphins help women manage the pain of contractions by inducing an almost dream-like state and decreasing pain perception. In a very real sense, nature does not abandon women during labor.

Stress hormones, however, disrupt the process. Especially in early labor, stress and anxiety can stop labor; in active labor, stress can slow progress. Privacy and feeling safe and protected emotionally as well as physically help keep catecholamine levels low and labor progressing.

Women begin to have an instinctive urge to push as the baby moves down the birth canal. Following the urge, quite naturally, and changing positions in response to what the woman is feeling not only helps the baby descend and rotate but also protects the baby and the birth canal. When the baby is just ready to be born, if oxytocin and endorphin levels are high, a natural release of catecholamines gives women a surge of strength to push the baby out.

The baby is born with high levels of catecholamines and endorphins and is alert and calm. Placed skin-to-skin with his mother, the baby will find the breast and self attach. Even the small movements of the baby, when skin-to-skin with his mother, stimulate the release of maternal oxytocin. Oxytocin facilitates the separation and delivery of the placenta, decreasing the risk of maternal hemorrhage, and sets the stage for efficient milk let down and successful breastfeeding. Babies kept skin-to-skin stay warmer, are less likely to become hypoglycemic, cry less, have more stable heart rates, and breastfeed for a longer duration than babies who are separated from their mother (Moore, Anderson, & Bergman, 2007).

Every pregnant women needs to know that labor and birth are simply and beautifully designed. In order to keep labor and birth as safe as possible, and to minimize the risk of complications, it is essential to respect the simple, natural, physiologic process of labor and birth and not interfere in any way, unless there is a clear medical indication. There is an optimal way to give birth, and this is it.

Standard U.S. Maternity Care Is Not Evidence-Based

Standard maternity care in the United States is intervention intensive (Declercq, Sakala, Corry, & Applebaum, 2006), expects trouble (Strong, 2002), and does not promote, support, or protect physiologic birth (Sakala & Corry, 2008). Standard care in a hospital includes the routine use of intravenous lines, continuous electronic monitoring, epidurals, and restrictions on eating and drinking and movement (Declercq et al., 2006). Women give birth on their backs, and directed pushing is the norm (Declercq et al., 2006). None of these practices reflects the best available research (Coalition for Improving Maternity Services, 2007; Enkin et al., 2000). These interventions and restrictions make labor and birth more difficult for women by increasing stress, disrupting the hormonal orchestration of labor, and interfering with the natural, physiologic process of labor and birth. The result is unintended complications, including cesarean. The cesarean rate is now almost 32% in the United States and has been rising steadily. In some hospitals, the cesarean rate is over 50%. Most women do not know that cesarean surgery involves substantial short-term risks for the mother and baby and long-term risks for the mother (Childbirth Connection, 2006; Coalition for Improving Maternity Services, 2007).

Every pregnant woman needs to know that maternity care that "expects trouble" actually creates trouble. Interfering in the natural, physiologic process of birth without compelling medical indication increases risks and complications for mothers and babies. What is often best for hospitals and maternity staff is not what is best for women and their babies (Sakala & Corry, 2008).

EVIDENCE-BASED BIRTH PRACTICES MAKE BIRTH HEALTHIER AND SAFER FOR MOTHERS AND BABIES

To view and download each of the six Lamaze Healthy Birth Practice papers, visit the Lamaze Web site (www.lamaze.org).

The World Health Organization identifies four care practices that promote, support, and protect normal birth (Chalmers & Porter, 2001). Lamaze International identifies two additional practices. Together, these six practices are supported by research, including systematic reviews from The Cochrane Library and the Coalition for Improving Maternity Services (2007). Romano and Lothian (2008) provide a detailed overview of the research that supports these six care practices. Written for women and their families, the Lamaze Healthy Birth Practice papers describe the importance of each of the six practices for a healthy, safe birth and provide a synopsis of the evidence that supports each practice. Every pregnant woman needs to know that these six evidence-based birth practices make birth healthier and safer for mothers and babies.

Healthy Birth Practice #1: Let Labor Begin on Its Own (Amis, 2009)

In most cases, the best way to insure that the baby is ready to be born and the mother's body is ready to birth her baby is to let labor begin on its own. In the last weeks of pregnancy, the baby moves down into the pelvis, the cervix softens, and the uterine muscle becomes more receptive to oxytocin. The baby's lungs mature, and he puts on a protective layer of fat. Every day makes a difference in how mature the baby is and how well he is able to make the transition to life outside the womb (Kamath, Todd, Glazner, Lezotte, & Lynch, 2009).

Elective labor induction not only increases the use of analgesia and epidural anesthesia but also the incidence of nonreassuring fetal heart rate patterns, shoulder dystocia, instrument delivery, and cesarean surgery (Goer et al., 2007). It is not without risk for the baby either, increasing the need for neonatal resuscitation and increasing the likelihood of low birth weight and admission to the neonatal intensive care unit (Goer et al., 2007). Although women are told that if a baby is thought to be large it is safer to induce labor early, this is not true. Suspected macrosomia is not an indication for induction, and induction for suspected macrosomia does not reduce the incidence of shoulder dystocia and is associated with an increased risk of cesarean (Sanchez-Ramos, Bernstein, & Kaunitz, 2002).

Every pregnant woman needs to know that it is healthier and safer for both mother and baby to let labor begin on its own.

Healthy Birth Practice #2: Walk, Move Around, and Change Positions Throughout Labor (Shilling, 2009)

Moving in labor helps women cope with strong and painful contractions while gently moving the baby into the pelvis and through the birth canal. The pain of contractions can be a guide to the laboring woman as she moves in response to what she feels, trying to find comfort as the contractions become increasingly strong. Finding comfort in a variety of ways, including movement, helps labor progress. When women are able to cope with increasingly strong contractions, increasing amounts of oxytocin are released, and this keeps labor progressing. Movement in response to pain also protects the baby and the birth canal, especially during pushing. Research supports that walking, movement, and changing positions may shorten labor, are effective forms of pain relief, and are associated with fewer nonreassuring fetal heart rate patterns, fewer perineal injuries, and less blood loss. Walking during the first stage of labor decreases the likelihood of cesarean surgery and forceps and vacuum extraction deliveries (Storton, 2007).

Every pregnant woman needs to know that walking, movement, and changing positions during labor help labor progress, enhance comfort, and decrease the risk of complications.

Healthy Birth Practice #3: Bring a Loved One, Friend, or Doula for Continuous Support (Green & Hotelling, 2009)

In labor, women feel better when cared for and encouraged by people they know and trust. For most women, that means family or close friends. Family and friends support the laboring woman in simple

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but important ways: protecting her privacy, helping her get comfortable, creating a cocoon that helps her feel safe and protected. This is especially important in the unfamiliar and often overwhelming hospital environment.

In recent years, doulas have provided continuous emotional and physical support for laboring women and their families. Doulas have the advantage of knowing labor and birth well and knowing countless ways of helping women find comfort and feel protected and safe in labor. This experience is a big advantage, especially in restrictive hospital environments. Research findings demonstrate that labor support reduces the likelihood of requesting pain medication, reduces the likelihood of having severe postpartum pain, and increases the likelihood of having a spontaneous vaginal birth. Women who have continuous labor support are more satisfied with the birth experience, have fewer cesareans, and are less likely to use Pitocin during labor (Hodnett, Gates, Hofmeyr, & Sakala, 2007; Leslie & Storton, 2007).

Every pregnant woman needs to know that continuous emotional and physical support in labor makes birth safer and healthier for mother and baby.

Healthy Birth Practice #4: Avoid Interventions That Are Not Medically Necessary (Lothian, 2009)

In most hospitals, women routinely have an intravenous line, continuous electronic fetal monitoring, and an epidural. Most hospitals also restrict eating and drinking in labor. Each of these practices has the potential to interfere with the process of labor and birth and create complications.

Intravenous lines and electronic fetal monitoring restrict women's ability to walk, change positions, and find comfort as the contractions become increasingly painful. Food and fluids are typically restricted to prevent the extraordinarily rare occurrence of aspiration if general anesthesia is required. If women are able to eat and drink in labor, there is no need for intravenous lines. No research suggests that labor and birth are safer if food and fluids are restricted and intravenous lines are in place. In fact, increasing evidence indicates that the routine use of intravenous lines may contribute to fluid overload in labor (Goer et al., 2007).

The routine use of continuous electronic fetal monitoring compared with intermittent auscultation increases the likelihood of instrument vaginal delivery and cesarean surgery but does not reduce the incidence of cerebral palsy, stillbirth, low Apgar scores, newborn death rates, or admission to the neonatal intensive care unit. In essence, the routine use of electronic fetal monitoring increases the risk of the mother having a cesarean with no difference in outcome for the baby (Goer et al., 2007).

Epidurals interfere in the process of labor and birth in important ways. Because there is no pain, the brain does not get the message to keep releasing oxytocin. Consequently, contractions need to be stimulated with Pitocin. Pitocin does not pass the blood brain barrier; therefore, the body does not know to release endorphins. Women miss out on the valuable effects of endorphins during labor. Epidural use is associated with longer labors, increased likelihood of instrument delivery, more malpositioned babies, more tearing, and an increased risk of cesarean surgery, especially if the epidural is given early in labor (Goer et al., 2007; Lieberman & O'Donoghue, 2002).

Every pregnant woman needs to know that each of these interventions has unintended effects. When interventions are used routinely, they set the stage for a cascade of other interventions, the physiologic process of labor and birth is disrupted, and women and babies are exposed to unnecessary risks.

Healthy Birth Practice #5: Avoid Giving Birth on the Back, and Follow the Body's Urges to Push (DiFranco, Romano, & Keen, 2009)

Upright positions—including squatting, sitting, or lying on the side—make it easier for the baby to descend and move through the birth canal. Changing positions helps wiggle the baby through the pelvis by enlarging pelvic diameters. It is also more comfortable to give birth in positions other than on the back. The use of upright or side-lying positions during second-stage labor is associated with a shorter duration of second-stage labor, fewer forceps or vacuum births, fewer episiotomies, fewer abnormal fetal heart rate patterns, and less chance of having severe pain during pushing (Gupta, Hofmeyr, & Smyth, 2004).

Directed pushing is more stressful for the baby and is associated with increased risk of pelvic floor dysfunction (Schaffer et al., 2006). The alternative is to wait for and follow the instinctive urges to push that happen as the baby moves down the birth canal. Even with an epidural, it is safer to wait until the baby moves through the mother's pelvis on his own.

Every pregnant woman needs to know that it is safer and healthier for mother and baby when the laboring mother pushes in positions other than

on her back and follows her own urges to push rather than pushing in a directed way.

Healthy Birth Practice #6: Keep Mother and Baby Together – It's Best for Mother, Baby, and Breastfeeding (Crenshaw, 2009)

Physiologically, mothers and babies are meant to be together. Mothers are less likely to hemorrhage and are more satisfied. Babies stay warmer, their heart rates are more stable, and their respirations are more regular. They are less likely to become hypoglycemic or have breastfeeding difficulties (Moore et al., 2007). The benefits are so clear that it is considered a harmful practice to separate mothers and babies unless there is a serious medical indication (Enkin et al., 2000). All the routine care of the baby right after birth can be done with the baby placed skin-to-skin with his mother.

Every pregnant woman needs to know that keeping her baby with her is not just a nice option, but keeping her baby close makes the early hours and days after birth safer for mothers and babies.

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The Birth Survey *is structured around the Coalition for Improving Maternity Service's evidence-based 10 Steps to Mother-Friendly Care and other quality of care indicators. The purpose of* The Birth Survey *is to provide women with a venue to give feedback about their birth experiences with specific doctors, midwives, hospitals, and birth centers, and to make this feedback available on the survey's Web site as searchable reports. For more information about* The Birth Survey*, visit http://www.thebirthsurvey.com*

THE HEALTH-CARE PROVIDER AND PLACE OF BIRTH MAKE A DIFFERENCE

If the health-care provider and place of birth do not provide care that is evidence-based, healthy women are less likely to have optimal, safe, healthy births. Women need to be cared for in a place where they have privacy and feel protected and safe emotionally (not just medically). They need to be cared for by providers who respect the physiologic process of labor and birth and do not interfere unless there is a clear medical indication to do so. Women need to know that hospital and obstetrician care may not be the best way to achieve an optimal birth, and that planned out-of-hospital births (home or free-standing birthing center) are a safe option for healthy women (Enkin et al., 2000; Leslie & Romano, 2007).

The most important way to insure a healthy, safe birth is to choose a provider and place of birth that provide evidence-based maternity care and do not interfere in the natural, physiologic process of birth unless there is a compelling medical indication.

Childbirth education can help women navigate the maze of modern obstetrics.

Women also need to know that midwifery care is associated with longer prenatal visits, more education and prenatal counseling, and fewer hospital admissions. Women cared for by midwives are less likely to need pain medication, have more freedom of movement, and are more likely to eat and drink in labor. Women cared for by midwives are less likely to have routine interventions of any kind, have fewer complications, and are less likely to have a cesarean. In addition, there are fewer babies born preterm, with low birth weight, or with birth-related injuries when midwives provide primary care to pregnant women (Enkin et al., 2000; Leslie & Storton, 2007).

The Birth Survey is a grassroots activist project of the Coalition for Improving Maternity Services. In an attempt to increase transparency in maternity care, *The Birth Survey* provides a forum for sharing information about hospitals and care providers. It is an excellent resource for information about hospital and provider intervention rates as well as women's personal experiences with individual hospitals and providers. It is an important resource that every pregnant woman should know about and use when making decisions about place of birth and provider.

Every pregnant woman needs to know that the most important way to insure a healthy, safe birth is to choose a provider and place of birth that provide evidence-based maternity care and do not interfere in the natural, physiologic process of birth unless there is a compelling medical indication to do so.

CHILDBIRTH EDUCATION CAN HELP SIMPLIFY PREGNANCY, BIRTH, AND MATERNITY CARE DECISIONS

Childbirth education can simplify pregnancy and birth and help women navigate the maze of modern obstetrics in order to have a safe, healthy birth. Pregnancy is complex and fraught with potential for worry and confusion. It is easy to fall into the trap of thinking that things can go terribly wrong. Excellent childbirth education can help women learn how simple birth can and should be, how to stay confident in their ability to grow and birth their babies, and how to avoid "spoiling the pregnancy" with worry and fear.

Preparation for birth and mothering starts at the beginning of pregnancy (Lothian, 2008). It takes 9 months to grow a baby and to prepare emotionally and physically for birth and being a mother. Over the course of the pregnancy, women slowly attach

to their babies, getting to know them through kicks and periods of rest and through changes to their own bodies as the pregnancy progresses. The physical growth of the baby happens simply and easily from one day to the next throughout pregnancy, but the emotional and psychological changes of pregnancy can easily be disrupted. Standard prenatal care and medicalized labor and birth interfere in powerful ways with nature's plan, creating fear and uncertainty when nature intends confidence and competence to develop.

Childbirth education, right from the beginning of pregnancy, can help women choose health-care providers and places of birth that provide evidence-based maternity care, make thoughtful but sometimes difficult decisions about prenatal testing, and deal with fears for themselves and their babies. And, over the course of the pregnancy, childbirth education can help women develop plans for labor so that labor and birth can unfold optimally in the safest, healthiest way possible.

Childbirth education can help women connect with excellent resources and research to help them make decisions about their pregnancies and births that ultimately will make birth healthier and safer for them and their babies. Some of those resources include Lamaze's weekly pregnancy e-mails (*Lamaze. . .Building Confidence Week by Week*) and the six Lamaze Healthy Birth Practice papers. Other resources include information provided by the organizations Childbirth Connection, the Coalition for Improving Maternity Services, and Choices in Childbirth.

Childbirth education provides a forum for discussing options, helping women to choose wisely and communicate effectively with care providers and hospitals. Knowing where and when there are choices, and where and when there are no realistic choices, is vital information for women wanting to have safe, healthy births. Childbirth educators can help untangle the issues and help women get a full understanding of their rights, not just to informed consent but also to informed refusal.

Evidence-Based Maternity Care: What It Is and What It Can Achieve (Sakala & Corry, 2008) is a call to action. If evidence-based maternity care is to become a reality, every pregnant woman needs to know how to have a safe, healthy birth and make decisions that reflect this knowledge. Childbirth educators, nurses, midwives, obstetricians, and hospital administrators need to "rock the boat," to speak boldly and bluntly, to honestly tell pregnant women what they need to know in order to have safe, healthy births.

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Log on to Lamaze's Web site (www.lamaze.org) to sign up for the weekly pregnancy e-mails, Lamaze. . .Building Confidence Week by Week.

To learn more about making informed maternity care decisions, visit the following organizations' Web sites: Childbirth Connection (www.childbirthconnection.org), the Coalition for Improving Maternity Services (www.motherfriendly.org), Choices in Childbirth (www.choicesinchildbirth.org), and Lamaze International (www.lamaze.org).

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