Care Practice #5: Spontaneous Pushing in Upright or Gravity-Neutral Positions

Joyce T. DiFranco, RN, BSN, LCCE, FACCE
Amy M. Romano, MSN, CNM
Ruth Keen, MPH, LCCE, FACCE

ABSTRACT

This updated edition of *Care Practice Paper #5* presents the evidence for the benefits of spontaneous pushing in upright or gravity-neutral positions during labor. Various pushing positions and techniques are described, and the advantages and disadvantages are reviewed. Women are encouraged to push when and how their bodies tell them to and to choose the positions for birth that are the most comfortable.

Journal of Perinatal Education, *16*(3), 35–38, doi: 10.1624/105812407X217138
Keywords: second-stage labor, directed pushing, spontaneous pushing, nonsupine positions, normal birth, childbirth education

Most recent update: May 2007

A pregnant woman in a Lamaze class asks about the way to push during birth: "The hospital where I plan to give birth has a birthing bed, but I still see lots of pictures that show women giving birth lying down with their legs up. Is there an advantage of one position over another? Also, I heard that holding your breath to push isn't safe for the baby, so how can I push my baby out safely?"

Art from many cultures throughout history shows that women have used both upright and gravity-neutral positions (such as side-lying or hands-and-knees) to give birth to their babies. Until doctors began using forceps in the 17th century, women were rarely shown giving birth in supine positions (lying on the back). With the support and encouragement of family members and community midwives, laboring women used objects such as posts and ropes to gain leverage during pushing. They often used birthing supports or stools to help them squat, crouch, or kneel (Gupta & Nikoderm, 2000). More recently, research has helped us understand how laboring women push when no one is coaching them to push a certain way. Women following their own urge to push usually will wait for each contraction to build and then push for about 5 seconds, take a few short breaths, then push again (Roberts & Hanson, 2007).

In contrast, a recent survey of women who gave birth in the U.S. in 2005 reported that 57% gave birth lying on their backs and an additional 35% gave birth propped up in a semisitting position (Declercq, Sakala, Corry, & Applebaum, 2006). Only 21% of women in the survey followed their

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THE SIX CARE PRACTICES THAT SUPPORT NORMAL BIRTH

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Key Points

- Upright and gravity-neutral positions are safe during pushing and are often more comfortable than lying on your back.
- Following your own urge to push is less stressful for your baby than directed pushing.
- Pushing when and how your natural urge tells you to gives you the best chance of preventing tears and muscle weakness in your pelvis after the birth.

own urge to push. The rest of the women reported that nurses or other providers coached them to push a certain way.

POSITIONS FOR PUSHING

Using a variety of positions during the second stage of labor (the bearing-down part of labor) helps you work with your baby as he/she turns and comes down through your pelvis. The positions that you choose often will increase your comfort and help your baby's progress. There is no one position that is best for every woman and every baby. Each position has possible advantages and disadvantages and can be helpful in different situations (Simkin & Ancheta, 2005; Simkin & O'Hara, 2002).

Upright Positions

Upright positions—such as standing, kneeling or squatting—take advantage of gravity to help your baby move down. Squatting increases the size of the pelvis, providing more room for the baby to move down (N. Johnson, V. Johnson, & Gupta, 1991; Simkin & Ancheta, 2005). However, it is also the most tiring position. If you squat during the second stage, you may want to rest between contractions in a gravity-neutral position (kneeling on all fours, side-lying, or semisitting).

Respected childbirth educator and author Penny Simkin recommends a "standing supported squat" or "dangle" position, especially for women with a long second stage (Simkin & Ancheta, 2005). In this position, the woman is supported under her arms, putting very little weight on her legs or feet. Her trunk becomes longer, providing more space for the baby to move. Simkin also points out that, in this position, the pelvis can move freely as the baby passes through it (Simkin & Ancheta, 2005).

Gravity-Neutral Positions

Gravity-neutral positions—such as hands-and-knees, side-lying, and semisitting—are relaxing and may be good if you are exhausted. A side-lying position may help to slow down a birth that is progressing too rapidly, and it is associated with a lower risk of tearing the perineum (the area between the vagina and the anus) (A. Shorten, Donsante, & B. Shorten, 2002). Research shows that the hands-and-knees position helps ease back pain in labor and can help turn a baby that is in a posterior position (when the back of the baby's head is toward the mother's spine) (Stremler et al., 2005). If your baby is posterior, labor can be very long and difficult until your baby rotates to an anterior position, with the back of the head toward your front.

SPONTANEOUS VERSUS DIRECTED PUSHING

Spontaneous pushing is a response to a natural urge to push that comes and goes several times during each contraction. Each of these bearing-down efforts usually lasts 5–7 seconds. However, when a woman is directed by her caregivers and those around her to hold her breath and push to a count of 10, repeating this 2–3 times during a contraction, she is using directed pushing.

Responding to the urge to push with short periods of breath holding in a calm, unrushed environment has many advantages. Your baby will get more oxygen through the placenta (Roberts & Hanson, 2007), you will be less likely to become physically exhausted, and there is less chance of trauma to the perineum or the muscles of the pelvic floor (Albers, Sedler, Bedrick, Teaf, & Peralta, 2006). If you are having a very difficult second stage, directed pushing might help. However, spontaneous pushing will usually be easiest and safest for both you and your baby.

WHAT RESEARCH TELLS US

According to the Cochrane Pregnancy and Childbirth Group, a respected international organization that defines best practices based on research, the use of any upright or side-lying position, compared with supine or lithotomy positions (lying on back, legs supported by stirrups), is associated with the following results:

- shorter second stage of labor;
- a small reduction in vacuum or forceps-assisted birth;
- fewer episiotomies;
- less chance that the woman will report severe pain;
- fewer abnormal fetal heart rate patterns;
- a small increase in second-degree lacerations (in the upright group only); and
- an increase in estimated blood loss, although there was no evidence of serious or long-term problems from the extra blood loss (Gupta, Hofmeyr, & Smyth, 2004).

In addition, lying on your back may cause lower blood pressure and less blood flow to your baby, due to the weight of the uterus on major blood vessels (Roberts & Hanson, 2007). In the lithotomy position, you are actually pushing against gravity.

Research does not support the routine use of directed pushing, and some researchers suggest it is harmful. Holding your breath for a long time naturally decreases the flow of oxygen to your baby. Research suggests that this is stressful and may even be harmful for your baby (Roberts & Hanson, 2007). Also, the excess force of directed pushing can be harmful to your perineum, resulting in more lacerations (tears) and weaker pelvic floor muscles several months after the birth (Schaffer et al., 2006). Weakness in the pelvic floor muscles is associated with incontinence (involuntary loss of urine or feces). Using spontaneous pushing and birthing the baby between contractions reduce the risk of tears (Albers et al., 2006).

One study showed that the average length of second-stage labor was 13 minutes shorter in women who used directed pushing (Bloom, Casey, Schaffer, McIntire, & Leveno, 2006). However, there is no medical benefit to a shorter second stage of labor as long as you and your baby are doing well (Janni et al., 2002). Because there are no important benefits to directed pushing and there is the possibility of harm when it is used, you should push how and when it feels right.

RECOMMENDATIONS FROM NURSES

The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) recommends that all pregnant women receive information about the benefits of upright positions for the second stage of labor (Mayberry et al., 2000). They also recommend that nurses discourage supine positions and, instead, encourage squatting, semisitting, standing, and upright-kneeling positions. In addition, AWHONN recommends that women not begin pushing until they feel the urge to do so and that, when they do push, they push according to what their body tells them. AWHONN also proposes that the nurse should encourage grunting, groaning, or exhaling during the push and breath-holding for less than 6 seconds as the laboring woman pushes in response to her contractions.

RECOMMENDATIONS FROM LAMAZE INTERNATIONAL

Lamaze International recommends that you choose upright, hands-and-knees, or side-lying positions for birth. You and your partner should learn and practice various positions for second-stage labor in your childbirth education classes. You should ask your caregivers which positions they encourage for birth and work with them to make sure you will have the full range of options. During labor, you should push when and how your body tells you to, and choose the positions for birth that are the most comfortable for you. You should be confident that, by responding to what you are feeling, you will make birth easier for yourself and your baby.

ACKNOWLEDGEMENTS

The six care practice papers were originally developed in 2003 by Lamaze® International and published in 2004 in *The Journal of Perinatal Education 13*(2) issue. The following members of the Lamaze International Education Council contributed to and reviewed the first edition of *Care Practice Paper #5*:

- Debby Amis, RN, BSN, CD (DONA), LCCE, FACCE
- Caroline Donahue, RN, MA, LCCE, FACCE
- Jeanne Green, MT, CD (DONA), LCCE, FACCE
- Judith Lothian, RN, PhD, LCCE, FACCE
- Michele Ondeck, RN, Med, IBCLC, LCCE, FACCE

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JOYCE DIFRANCO *is codirector of* Birth Pathways™, *a Lamaze-accredited childbirth educator training program in the Los Angeles area of California.* AMY ROMANO *is a certified nurse-midwife and author. She is also the Perinatal Research and Advocacy Coordinator for the Lamaze Institute for Normal Birth (www.lamaze.org).* RUTH KEEN *has been a certified childbirth educator for 25 years, teaching in hospitals, health maintenance organizations, and at home. She was also an obstetric nurse for many years and became a certified nurse-midwife in 1994. She practices in Salem, New Hampshire, and Methuen, Massachusetts.*