

## Patient Education

Deliveries are scheduled for non-medical reasons prior to 39 weeks gestation more frequently.<sup>7, 12</sup> Women request earlier deliveries without knowing the negative clinical implications. A survey of insured women who recently gave birth (Goldenberg 2009) found that 25.2% of women defined full-term as 39-40 weeks; however, 92.4% of women reported that giving birth before 39 weeks was safe.<sup>16</sup> This section outlines available resources, key patient talking points, common patient questions and websites to reference while educating women about the importance of reaching 39 or more weeks gestation.

## KEY PATIENT EDUCATION MESSAGES

Many women are unaware that critical fetal brain growth and development occurs during the last weeks of pregnancy:

- A baby's brain at 35 weeks weighs two-thirds of what it will weigh at 39-40 weeks.
- The volume of the brain's white matter increases five-fold during weeks 35-41.
- Lower-brain functions mature first; the cerebral cortex is last to develop. The cerebral cortex controls higher-order functions such as cognition, perception, reason and motor control
- Cerebral cortex volume at 34 weeks is 53% of the volume it is at 39-40 weeks.
- A baby's brain organizes during the late preterm period, including critical development of synapses, axon growth, dendrites, and neurotransmitters.
- Evidence of late preterm brain immaturity is seen in problems with breathing, apnea, heart rate, sleeping, and feeding.

## PATIENT EDUCATION RESOURCE MATERIALS



### **March of Dimes bilingual booklet “Why the Last Weeks of Pregnancy Count”**

This brochure explains the importance of avoiding scheduled induction or cesarean section for non-medical reasons before 39 weeks of pregnancy. It describes a baby's growth and development in the last few weeks of pregnancy and includes questions a woman can ask her provider about scheduled deliveries. The booklet is recommended for use with the Late Preterm Brain Development Card. Content is 11 pages in each language (English & Spanish). The booklet (#09-2428-09) is available by calling 1-800-367-6630 or online at [marchofdimes.com/catalog](http://marchofdimes.com/catalog). Information also is available at:

[http://marchofdimes.com/prematurity/index\\_women\\_48590.asp](http://marchofdimes.com/prematurity/index_women_48590.asp)

and in Spanish at: [http://nacersano.org/prematuro/9323\\_10953.asp](http://nacersano.org/prematuro/9323_10953.asp)

### **March of Dimes Late Preterm Brain Development Card**

This card is for health care providers to use during discussions with patients who are considering elective induction or cesarean section before 39 weeks for convenience. The card should not

simply be passed out to pregnant women. Providers need to discuss the information with their patients.

The card shows graphic representations of fetal brain growth and maturation in the last months of pregnancy. Bullet points summarize the increased risks for late preterm compared with term infants. The card clearly states that its purpose is strictly informational and is not intended to be used as medical advice. It is particularly useful for educating women with limited knowledge about pregnancy and fetal development, especially first time and adolescent moms.

The card (#37-2229-09) is available by calling 1-800-367-6630 or online at [marchofdimes.com/catalog](http://marchofdimes.com/catalog). Information is also available at: [http://marchofdimes.com/prematurity/index\\_women\\_48590.asp](http://marchofdimes.com/prematurity/index_women_48590.asp)

**If your pregnancy is healthy, it's best if your baby is born at 40 weeks.**

A baby's brain at 35 weeks weighs only two-thirds of what it will weigh at 40 weeks.

**35 weeks**      **40 weeks**

- In the last six weeks of pregnancy, your baby's brain adds connections needed for balance, coordination, learning and social functioning. During this time, the size of your baby's brain almost doubles.
- Babies born early have more learning and behavior problems in childhood than babies born at 40 weeks.
- Babies born early are more likely to have feeding problems because they can't coordinate sucking, swallowing and breathing as well as full-term babies.
- Babies born early are likely to have breathing problems, like apnea. Apnea is when a baby stops breathing.
- Babies born early are more likely to die of sudden infant death syndrome (SIDS). SIDS is when a baby dies suddenly and unexpectedly, often during sleep.

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To order our catalog or multiple copies of our materials, call 1-800-367-6630, #37-2229-07 Late Preterm Brain Development Card 1/08

March of Dimes materials are for information purposes only and are not to be used as medical advice. Always seek medical advice from your health care provider. Our materials reflect current scientific recommendations at time of publication. Check [marchofdimes.com](http://marchofdimes.com) for updated information. Modeled after a fetal brain card developed by the Healthy Babies Are Worth the Wait™ initiative.

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### Healthy Babies are Worth the Wait™ Toolkit for Community Partners

This kit is designed for use by clinical and public health providers and other community healthcare entities interested in taking action to prevent preterm birth by educating pregnant women and the general public. Additional materials to help ensure that moms-to-be have the care and information they need to maintain healthy, full-term pregnancies, in order to give their babies the best possible start in life, can also be found on the prematurity prevention website at:

<http://www.prematurityprevention.org/professionals.html>

## Thinking About Inducing Your Labor: A Guide for Pregnant Women

This online brochure from the National Agency for Healthcare Research and Quality provides patient information on elective inductions:

<http://www.effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productid=353>

Lamaze International has multiple resources for expectant parents.

One online resource is the Healthy and Safe Birth Practice #1 entitled Let Labor Begin on Its Own. This resource can be found on-line at:

<http://www.lamaze.org/ChildbirthEducators/ResourcesforEducators/CarePracticePapers/LaborBeginsOnItsOwn/tabid/487/Default.aspx>

## Elective Induction

This online information from IHC provides information for women on elective inductions:

<http://intermountainhealthcare.org/services/womennewborn/pregnancy/labordelivery/Pages/ElectiveInduction.aspx>

## PATIENT EDUCATION TALKING POINTS

**Labor is an important process for a baby's health. For example, labor signals the baby's lung cells to shift from being fluid producing cells to fluid absorbing cells.**

**It is best to stay pregnant until at least 39 weeks.**

If your pregnancy is healthy and you are considering scheduling your baby's birth, it is best to stay pregnant for at least 39 weeks. Babies born too early may have more health problems at birth and later in life than babies born full term. Being pregnant at least 39 weeks gives your baby's brain and body all the time they need to grow.

**Why do babies need time (at least 39 weeks)?**

- Important organ growth—including the brain, lungs and liver—occurs during the last weeks of pregnancy.
- Babies born at 39 weeks are less likely to have vision and hearing problems after birth than babies born earlier.
- Babies need 39 weeks to gain weight in the womb; babies born at healthy weights can stay warmer than babies who are born too small.
- Babies need 39 weeks to learn to suck and swallow well and stay awake long enough to eat; babies born early often cannot do these things.

**Why can scheduling an early birth be a problem?**

Experts are learning that scheduling an early birth for non-medical reasons can cause problems for mom and baby. For example:

- **Your due date may not be exactly right.** Sometimes it's hard to know just when you got pregnant. If you schedule to induce labor or have a cesarean section birth and your date is off by a week or two, your baby may be born too early.

- **Inducing labor may not work.** If your labor is induced, the medicine your doctor or midwife gives you may not start your labor. When this happens, you may need to have a cesarean section.
- **A cesarean section can cause problems for your baby.** Babies born by cesarean section may have more breathing and other medical problems than babies born by vaginal birth. (Most babies are born by vaginal birth. The mother's uterus contracts to help push the baby out through the vagina, also called the birth canal.)
- **Cesarean sections can cause problems during future pregnancies.** Once you have a cesarean section, you may be more likely to have a cesarean section in future pregnancies. The more cesarean sections you have, the more problems you and your baby may have, including problems with the placenta.
- **A cesarean section is major surgery for mom.** It takes longer for you to recover from a cesarean section than from a vaginal birth. You can expect to spend 2-4 days in the hospital after a cesarean section, but you need 4-6 weeks to fully recover after you go home. You may experience complications from the surgery, such as infections or bleeding. Recovery is more painful, and breastfeeding can be more difficult. It is important to stay in touch with your health care provider even after you go home.

**It is hard to plan for anything when it comes to children.**

- The reality is that from now on, you can anticipate changes in your child's life or development, but you can rarely plan on them or schedule when they will occur.
- Labor and delivery is just like crawling and walking. We know an approximate time frame, but not an exact date. So you can anticipate that labor will occur spontaneously sometime around 39 weeks, but you can't pin point the specific date and time.
- The people in your life who will support you and your baby should also know that flexibility is critical.
- Waiting can be hard, but waiting allows your baby's brain to grow and allows you time to rest before labor starts.

## COMMON PATIENT QUESTIONS

**What questions should I ask when my doctor/certified nurse midwife...**

- **Suggests delivery before 39 weeks?**
  - Is there a problem; what is the problem?
  - Can I wait until 39 weeks? If not, then why not?
- **Suggests induction?**
  - Why do you need to induce my labor?
  - How will my labor be induced? What are the risks of induction?
  - Will this increase my risk of a cesarean section?
- **Discusses cesarean section?**
  - Why do you need to deliver my baby by cesarean section?
  - What are the risks compared to a vaginal delivery?

## OTHER QUESTIONS

### **How is my due date determined?**

Your care provider probably gave you an estimated due date for your baby. This is the date that your baby is expected to be full-term (39-40 weeks) and ready to be born. Remember that due dates are estimates. Your body may go into labor on its own earlier or later than that date. Your due date is based on several factors:

- Information about your last menstrual period
- Results from various lab tests
- The size of your baby based on ultrasound results

### **What happens if my labor starts before 39 weeks?**

When labor starts naturally (on its own) it is called “spontaneous.” If spontaneous labor starts prior to 37 weeks gestation, doctors will usually try to stop the labor. They will usually try to stop labor before 37 weeks since the baby is premature; the baby needs more time in the womb or uterus. However, if spontaneous labor starts after 37 weeks gestation, it means that your baby is ready to be born. Thus, your doctor will not try to stop spontaneous labor after 37 weeks gestation. Keep in mind that the due date is only an estimate.

### **When is it okay to have a scheduled delivery?**

Your care provider uses guidelines from national experts to make a safe decision about whether or not a scheduled delivery is right for you and your baby. If you don't meet these guidelines, your provider may recommend waiting for spontaneous labor to help time your delivery. For example, deliveries are scheduled when the health of the mother, the baby, or both are at risk; these scheduled deliveries have a “medical indication” or reason. Some medical indications might be that the mother has high blood pressure or the baby is experiencing problems. Healthcare providers must weigh the risks and benefits of early scheduled delivery and make sure that the safety of the mother and baby are the priority.

### **What is “early term delivery”? Can early delivery—when it is so close to my due date—really hurt my baby?**

“Early term” is gestation between 37 0/7 and 38 6/7 weeks. Babies born during this time are usually healthy, but they are at higher risk for medical problems compared to babies who are full term (39-40 weeks gestation).

Because a baby's lungs and brain are still growing in late pregnancy, delivery at 36-38 weeks gestation puts the baby at higher risk for each of the following:

- **Admission to intensive care.** Babies born early term are 2 to 3 times more likely to be admitted to intensive care than babies born at 39 weeks. Admission to intensive care means your baby will be in the hospital for a longer period of time and may have problems with breastfeeding or bonding with you.
- **Trouble with breathing.** Babies born early term sometimes need help breathing and must be connected to a machine called a ventilator because their lungs are not fully developed.
- **Trouble staying warm.** Babies born early term often need to spend time in a warming area (incubator) to keep their body safely warm.

**What does “the cervix is not ready” mean?**

The cervix is a band of tissue at the base of the uterus. During vaginal birth, the baby moves through the cervix and then through the vagina (birth canal). When spontaneous labor occurs, the cervix softens, thins, and opens (dilates). Your care provider can tell whether the cervix is dilated enough for the baby to be born. If the cervix is not ready, it means that it is not softened, thinned or dilated.

**What happens if my water breaks before 39 weeks but labor is not starting?**

If your water breaks and you are more than 34 weeks, it usually is OK to deliver. In general, waiting may increase the risk of infection or other problems.

**Why do babies born by elective cesarean sections before 39 weeks have more complications than babies born by elective inductions before 39 weeks?**

During the last weeks of pregnancy, a baby’s lungs mature and prepare for breathing oxygen. During labor and vaginal birth, the process of preparing the lungs for breathing continues. When a baby is born by elective cesarean section, there is little or no labor. Cesarean section also lacks the physical compression or squeezing process of a vaginal birth, which helps clear the baby’s lungs of fluid so that they can breathe oxygen. Babies born by cesarean section are at a higher risk for breathing problems after birth than babies born by vaginal birth.