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New Research Shows Why Every Week of Pregnancy Counts

By MELINDA BECK

This time of year, some hospitals see a small uptick in baby deliveries thanks to families eager to fit the blessed event in around holiday plans or in time to claim a tax deduction. Conventional wisdom has long held that inducing labor or having a Caesarean section a bit early posed little risk, since after 34 weeks gestation, all the baby has to do was grow.

But new research shows that those last weeks of pregnancy are more important than once thought for brain, lung and liver development. And there may be lasting consequences for babies born at 34 to 36 weeks, now called "late preterm."

A study in the American Journal of Obstetrics and Gynecology in October calculated that for each week a baby stayed in the womb between 32 and 39 weeks, there is a 23% decrease in problems such as respiratory distress, jaundice, seizures, temperature instability and brain hemorrhages.

A study of nearly 15,000 children in the Journal of Pediatrics in July found that those born between 32 and 36 weeks had lower reading and math scores in first grade than babies who went to full term. New research also suggests that late preterm infants are at higher risk for mild cognitive and behavioral problems and may have lower I.Q.s than those who go full term.

What's more, experts warn that a fetus's estimated age may be off by as much as two weeks either way, meaning that a baby thought to be 36 weeks along might be only 34.

The American College of Obstetricians and Gynecologists, the American Academy of Pediatrics and the March of Dimes are now urging obstetricians not to deliver babies before 39 weeks unless there is a medical reason to do so.

"It's very important for people to realize that every week counts," says Lucky E. Jain, a professor of pediatrics at Emory University School of Medicine.

It's unclear how many deliveries are performed early for nonmedical reasons. Preterm births (before 37 weeks) have risen 31% in the U.S. since 1981 -- to one in every eight births. The most serious problems are seen in the tiniest babies. But nearly 75% of preterm babies are born between 34 and 36 weeks, and much

of the increase has come in C-sections, which now account for a third of all U.S. births. An additional one-fifth of all births are via induced labor, up 125% since 1989.

Many of those elective deliveries are done for medical reasons such as fetal distress or pre-eclampsia, a sudden spike in the mother's blood pressure. Those that aren't can be hard to distinguish. "Obstetricians know the rules and they are very creative about some of their indications -- like 'impending pre-eclampsia,'" says Alan Fleischman, medical director for the March of Dimes.

Why do doctors agree to deliver a baby early when there's no medical reason? Some cite pressure from parents. "'I'm tired of being pregnant. My fingers are swollen. My mother-in-law is coming' -- we hear that all the time," says Laura E. Riley, medical director of labor and delivery at Massachusetts General Hospital. "But there are 25 other patients waiting, and saying 'no' can take 45 minutes, so sometimes we cave."

There's also a perception that delivering early by c-section is safer for the baby, even though it means major surgery for the mom. "The idea is that somehow, if you're in complete control of the delivery, then only good things will happen. But that's categorically wrong. The baby and the uterus know best," says F. Sessions Cole, director of newborn medicine at St. Louis Children's Hospital.

He explains that a complex series of events occurs in late pregnancy to prepare the baby to survive outside the womb: The fetus acquires fat needed to maintain body temperature; the liver matures enough to eliminate a toxin called bilirubin from the body; and the lungs get ready to exchange oxygen as soon as the umbilical cord is clamped. Disrupting any of those steps can result in brain damage and other problems. In addition, the squeezing of the uterus during labor stimulates the baby and the placenta to make steroid hormones that help this last phase of lung maturation -- and that's missed if the mother never goes into labor.

"We don't have a magic ball to predict which babies might have problems," says Dr. Cole. "But we can say that the more before 39 weeks a baby is delivered, the more likely that one or more complications will occur."

In cases where there are medical reasons to deliver a baby early, lung maturation can be determined with amniocentesis -- using a long needle to withdraw fluid from inside the uterus. But that can cause infection, bleeding or a leak or fetal distress, which could require an emergency c-section.

Trying to determine maturity by the size of the fetus can also be problematic. Babies of mothers with gestational diabetes are often very large for their age, but even less developed for their age than normal-size babies.

Growing beyond 42 weeks can also pose problems, since the placenta

deteriorates and can't sustain the growing baby.

Making families aware of the risks of delivering early makes a big difference. In Utah, where 27% of elective deliveries in 1999 took place before the 39th week, a major awareness campaign has reduced that to less than 5%. At two St. Louis hospitals that send premature babies to Dr. Cole's neonatal intensive-care unit, obstetricians now ask couples who want to schedule a delivery before 39 weeks to sign a consent form acknowledging the risks. At that point, many wait for nature to take its course, says Dr. Cole.

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