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Infants born between 34 and 36 weeks gestation, referred to as “late preterm,” have a higher incidence of morbidity and mortality when compared with term infants (37-42 weeks). Among preterm births (<37 completed weeks), late preterm infants are both the largest proportion (71.3%)¹ and the fastest growing subgroup.² Further investigation is needed on optimal obstetric and neonatal management for these infants and on possible measures to prevent preterm births.

Late Preterm – Definition and Trends

The preterm birth rate in the United States has risen more than 30 percent over the past two decades, from 9.4% of live births in 1981 to 12.3% in 2003.¹ In general, better birth outcomes are associated with longer gestation up to term delivery. Multiples may have shorter gestations. Commonly cited classifications of specific gestational age categories¹ include:

- **Preterm:** <37 completed weeks, including both moderately preterm and very preterm births
 - **Very preterm:** <32 completed weeks
 - **Moderately preterm:** 32 to 36 weeks
- **Term:** 37 to 42 weeks
- **Post-term:** >42 completed weeks

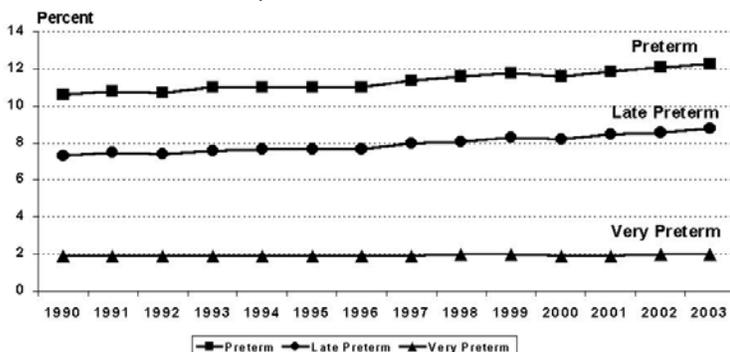
In addition, the following category has received attention:

- **Late preterm:** 34 to 36 weeks*³

* Note: Some studies have defined late preterm birth as 35-36 weeks.

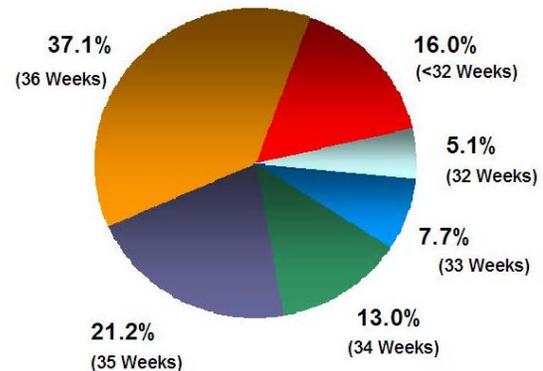
Much emphasis in the medical literature has been placed on the more vulnerable, very preterm births. In 2003, nearly 80,000 births were very preterm in the U.S. and since 1990 the rate of very preterm birth has remained unchanged at 2% of live births (Figure 1). Late preterm (sometimes referred to as “near-term”) infants comprise approximately 71% (Figure 2) of all preterm births in the U.S.⁴ and account for the majority of the increase in preterm birth rates over the past two decades.²

Figure 1 - Total, Very and Late Preterm Birth Rates United States, 1990–2003



Between 1990 and 2003, the late preterm birth rate increased more than 20 percent in the United States, from 7.3% to 8.8% of live births.⁵ The growing trend in late preterm births has focused needed research on understanding the risks and outcomes for this group of preterm infants.

Figure 2 – Distribution of Preterm Births, All Live Births, United States, 2003



Known Adverse Outcomes Associated with Late Preterm Birth

Late preterm infants are typically healthier than very preterm infants, but have elevated risks for potentially serious health problems when compared to term infants. The lungs and brain are among the last systems to fully mature during gestation, and complications can arise due to the immaturity. Complications among neonates delivered late preterm include temperature instability, feeding difficulties, breathing problems like respiratory distress syndrome (RDS) and transient tachypnea of the newborn (TTN) and jaundice.^{6,7}

The infant mortality rate among late preterm infants (7.7 per 1,000 live births) is three times higher than the rate among term infants (2.5 per 1,000 live births).⁸ Much of these higher rates are due to complications necessitating early delivery, including some birth defects, rather than due to early delivery itself. Late preterm infants incur greater costs and longer lengths of stay in neonatal intensive care units (NICU) and experience higher rates of re-hospitalization after neonatal discharge.^{6,7}

Perinatal Data Center Research

A recent analysis of singleton births conducted by the March of Dimes Perinatal Data Center revealed that between 1992 and 2002, there was a nearly 26% decrease in the proportion of births occurring after 39 weeks and a nearly 20% increase in births delivered between

34–39 weeks.² Within the study population, the rate of late preterm singleton births increased nearly 12%: from 6.9% in 1992 to 7.7% in 2002 (see the PeriStats Web site for U.S. and state-specific late preterm birth rates for total, singleton and multiple births and other perinatal outcomes: www.marchofdimes.com/peristats). In addition, there was a shift in the most common length of singleton pregnancy from 40 to 39 weeks.

Results from the March of Dimes analysis showed that increasing rates of cesarean section deliveries and induced births have contributed to, but do not completely explain the shift, nor did changes in demographic patterns such as advanced maternal age and changes in the distribution of births by race/ethnicity in the U.S.

Late Preterm - Weighing the Risks and Benefits

Many late preterm births are medically indicated due to detected maternal and/or fetal conditions and reflect the growing cohort of high-risk pregnancies. Some of these indications for early delivery include: maternal conditions such as placental abruption, placenta previa and bleeding; infections; poorly controlled hypertension or diabetes; preeclampsia; premature rupture of the membranes; intrauterine growth restriction; and complications of multifetal pregnancy.^{9,10}

Clinicians must always weigh the risks for the mother and the fetus of continuing a medically complicated pregnancy with the potential risks associated with preterm birth. In many instances, the decision to deliver early is clearly supported by maternal and fetal factors, but given the array of factors that must be weighed in contemporary obstetrical practice, there is growing concern that some late preterm births may occur when the delivery is not exclusively medically indicated. Although the exact percentage is not known, some late preterm deliveries reflect non-medical concerns including logistical reasons such as distance from the hospital, scheduling considerations, and patient preferences. These elective early births may benefit from being allowed to continue to term.

My 9 months!

Women and their health care providers face a growing array of options and choices, including induction of labor and primary elective cesarean section for no clear medical or obstetrical reason (often referred to as “maternal choice”¹¹). When weighing the risks and benefits of various options, it is important that:

1. Optimal outcomes for the mother and baby(ies) be the major consideration in decisions for time of delivery. For most low-risk, uncomplicated, singleton pregnancies, optimal outcomes are usually achieved if the pregnancy continues to full term.
2. Non-medically indicated interventions to deliver early are carefully reviewed. Elective induction should follow ACOG guidelines which calls for confirmation

of 39 weeks gestation for singleton births under most circumstances.¹²

3. Options be discussed to help women find the best way to get their full 9 months, unless there are obstetrical, medical or extenuating conditions that warrant early delivery.

Research and Resources

In July 2005, the United States National Institute for Child Health and Human Development convened a multi-disciplinary team of experts to summarize the current state of knowledge on late preterm birth.⁶ The findings from the meeting will be published in a special, two-part supplement of the journal *Seminars in Perinatology* (Part 1 was published in March 2006¹³). A review article summarizing the meeting will appear in another peer-reviewed journal. Additionally, the Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN) has made a multi-year commitment to educate health care providers and consumers about the unique needs of late preterm infants. To facilitate this initiative, AWHONN has developed a consumer and health care provider Near-Term Infant Initiative Resource Center available at www.awhonn.org/awhonn/?pg=872-18070.

To keep apprised of future information on late preterm birth, search for this topic on the March of Dimes Web site (www.marchofdimes.com)

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