

Premature Infant

Definition

A premature infant is a baby born before 37 weeks gestation.

Alternative Names

Preterm infant; Preemie

Causes

At birth, a baby is classified as one of the following:

- Premature (less than 37 weeks gestation)
- Full term (37 to 42 weeks gestation)
- Post term (born after 42 weeks gestation)

If a woman goes into labor before 37 weeks, it is called preterm labor. Often, the cause of preterm labor is unknown. Multiple pregnancy (twins, triplets, etc.) makes up about 15% of all premature births.

The following health conditions and events in the mother may contribute to preterm labor:

- Diabetes
- Heart disease
- Infection
- Kidney disease
- Lack of prenatal care
- Poor nutrition
- Preeclampsia —the development of high blood pressure and protein in the urine after the 20th week of pregnancy
- Substance abuse
- Young age (a mother age younger than 18)

A woman who has had any of the following is at increase risk of preterm labor:

- Premature rupture of the membranes or placenta previa
- Previous preterm delivery
- Problems with the uterus or cervix
- Unexplained high alpha-fetoprotein level in the second trimester
- Untreated disease or infection (such as urinary tract infection or infection of the amniotic membranes)

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Symptoms

A premature infant has organs that are not fully developed. The infant needs special care in a nursery until the organ systems have developed enough to sustain life without medical support. This may take weeks to months.

A premature infant will have a low birth weight. Common symptoms in a premature infant include:

- Body hair
- Episodes of absent breathing
- Enlarged clitoris (female infant)
- Lung problems such as neonatal respiratory distress syndrome
- Poor feeding
- Small scrotum, smooth without ridges (male infant)
- Soft, flexible ear cartilage
- Thin, smooth, shiny skin
- Transparent skin (can see veins under skin)
- Usually inactive — however, may be unusually active immediately after birth
- Weak cry
- Wrinkled features

This list may not be all inclusive.

Exams and Tests

The infant may have a low body temperature and show signs of breathing problems.

Common tests performed on a premature infant include:

- Blood gas analysis
- Blood tests to check glucose, calcium, and bilirubin levels
- Chest x-ray

Treatment

When premature labor develops and cannot be stopped medically, the health care team will prepare for a high-risk birth. The mother may be moved to a center that specifically cares for premature infants, for example, a neonatal intensive care unit (NICU).

In some cases, medicines called steroids may be given to the mother in help the baby's lungs mature. When born, the baby is moved to a high-risk nursery. The infant is placed under a warmer or in an machine called an isolette, which controls the air temperature.

Since infants are usually unable to coordinate sucking and swallowing before 34 weeks gestation, your baby may have a feeding tube placed into the stomach. In very premature

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infants, nutrition may be given through a vein until the baby is stable enough to receive feedings by mouth. (See: Neonatal weight gain and nutrition)

If the infant has breathing problems, a tube may be placed into the windpipe (trachea). A machine called a respirator will help the baby breathe. Oxygen is given.

Nursery care is needed until the infant reaches a stable body weight and is able to feed by mouth and maintain body temperature. In very small infants, other problems may complicate treatment and a longer hospital stay may be needed.

Support Groups

There are multiple support groups for parents of premature babies. Ask the social worker in the neonatal intensive care unit.

Outlook (Prognosis)

Prematurity used to be a major cause of infant deaths. Improved medical and nursing techniques have increased the survival of premature infants. A greater chance of survival is associated with increasing length of the pregnancy. Of babies born at 28 weeks, approximately 90% survive.

Prematurity is not without long-term effects. Many premature infants have medical problems that continue into childhood or permanently. As a rule, the more premature an infant and the smaller the birth weight, the greater the risk of complications. It must be stressed, however, that it is impossible to predict the long-term outcome for an individual baby just on the basis of gestational age or birth weight.

Possible Complications

Possible complications include:

- Anemia
- Bleeding into the brain (intraventricular hemorrhage of the newborn)
- Bronchopulmonary dysplasia (BPD)
- Cognitive or motor disability or delay
- Delayed growth and development
- Infection or neonatal sepsis
- Heart disease
- Low blood sugar (hypoglycemia)
- Neonatal respiratory distress syndrome
- Newborn jaundice
- Retinopathy and vision loss or blindness
- Severe intestinal inflammation (necrotizing enterocolitis)

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When to Contact a Medical Professional

Call your health care provider if you are pregnant and believe you are going into labor prematurely.

If you are pregnant and not receiving prenatal care, call your health care provider or your state's department of health. Most state health departments have programs that provide prenatal care to mothers, whether or not they have insurance or are able to pay.

Prevention

One of the most important steps to preventing prematurity is to receive prenatal care as early as possible in the pregnancy, and to continue such care until the baby is born. Statistics clearly show that early and good prenatal care reduces your chance of premature birth.

Premature labor can sometimes be treated or delayed by a medication that blocks uterine contractions. Many times, however, attempts to delay premature labor are not successful.