# **Prematurity**



# What is prematurity?

A baby born before 37 weeks of pregnancy is considered premature or born too early. Other terms used for prematurity are preterm and the nicknames "preemie" or "premie". About 1 in every 10 infants are born prematurely. Twins and other multiples are more likely to be premature than single birth babies.

Many premature babies weigh less than 5 pounds, 8 ounces (2,500 grams). This is considered low birth weight. Risks of prematurity are higher for younger, lighter babies. But even older, heavier preemies are still at risk.

## What causes prematurity?

Premature birth may have a number of causes. About 2 out of 3 premature births are because of issues that directly cause early labor and birth, such as those listed below. Other problems can make the mother or baby sick and need early delivery. Sometimes the exact cause for a premature birth is unknown. This can be true even though the mother may have "done everything right" during the pregnancy.

Four things that may cause premature labor are:

- · Being pregnant with more than 1 baby
- · Bleeding or other problems with the uterus
- Stress
- Infection in the uterus or elsewhere in the body

# Who is at risk for prematurity?

Many women have no known risk factors for premature birth. But several things can make premature birth more likely.

Women with these risk factors are more likely to deliver early:

- Having had a past preterm labor or birth
- Getting pregnant within a short time (less than a year) after having had a baby
- Being pregnant with more than 1 baby
- Having an abnormal cervix or uterus
- · Being young, such as a teenager, or older than 35
- Being African American
- Having health problems, such as high blood pressure, diabetes, heart disease, or kidney disease, or high levels of social and psychological stress
- Smoking
- Using illegal drugs, such as cocaine

In addition, women who develop any of the following problems during pregnancy are more likely to deliver early:

Infections

- · High blood pressure
- Diabetes
- Blood-clotting problems
- · Problems with the placenta
- · Vaginal bleeding

Certain developmental problems in unborn babies can also lead to premature birth.

# What are the symptoms of prematurity?

How a premature baby looks and acts depends on how prematurely they are born. The following are the most common symptoms of a premature baby:

- Small size. Premature babies often weigh less than 5 pounds, 8 ounces.
- Thin, shiny, pink, or red skin depending on how early the baby was born. You may be able to see veins through the skin.
- · Little body fat
- Little scalp hair. Babies may have lots of soft body hair (lanugo) depending on how early they were born
- Weak cry and trouble breathing due to underdeveloped lungs and weak muscles
- · Low muscle tone
- Male and female genitals are not yet fully developed

The symptoms of prematurity may seem like other health conditions. Make sure your child sees their healthcare provider for a diagnosis.

#### How is prematurity diagnosed?

A baby born before 37 weeks of pregnancy is considered premature or born too early. More specific definitions include:

- Early term infants. Babies born between 37 weeks and 38 weeks, 6 days. These babies are early, but not premature.
- Late preterm infants. Babies born between 34 weeks and 36 weeks, 6 days.
- Moderate preterm infants. Babies born between 32 weeks and 33 weeks, 6 days.
- · Very preterm infants. Babies born below 32 weeks.
- Extremely preterm infants. Babies born below 28 weeks.

## How is prematurity treated?

Treatment will depend on your child's symptoms, age, and general health. It will also depend on how severe the condition is. General treatment for prematurity involves supporting babies with intensive care until they have developed enough to breathe, eat, and stay warm by themselves. Usually this happens around the time of their due date.

Treatment may include:

 Corticosteroid medicine given to the mother before a premature birth to help the baby's lungs and other organs grow and mature

- Watching the baby's temperature, blood pressure, heart and breathing rates, and oxygen levels
- · Temperature-controlled bed or incubator
- Oxygen or pressure support given by mask, with prongs in the nose, or with a breathing machine called a ventilator
- · IV (intravenous) fluids, feedings, or medicines
- Special feedings with a feeding tube in the nose or mouth that delivers breastmilk or formula to the stomach
- X-rays or other imaging tests
- Skin-to-skin contact with the parents (kangaroo care)

## What are possible complications of prematurity?

Premature babies are cared for by a neonatologist. This is a pediatrician with extra training to care for critically ill newborns. Other specialists may also care for babies, depending on their health problems.

Premature babies are born before their bodies and organ systems have fully matured. These babies are smaller than they would have been if they were born at full term. They may need help breathing, eating, fighting infection, and staying warm. Extremely premature babies, those born before 28 weeks, are at the greatest risk for problems. Their organs and body systems are not ready for life on their own outside the mother's uterus. And they may be too immature to function well even with intensive care support.

Some of the problems premature babies may have include:

- Keeping their body temperature steady or staying warm
- · Breathing problems, including serious short- and long-term problems
- Blood pressure problems due to immaturity of various organ systems (especially low blood pressure in early hours and days)
- Blood problems. These include low red blood cell counts (anemia), yellow color to the skin from breaking down red blood cells (jaundice)
- · Kidney problems due to immaturity
- Digestive problems, including immature absorption and digestion. Most premature babies need intravenous (IV) nutrition for some time at birth. In some cases, there may be inflammation and death of parts of the intestine (necrotizing enterocolitis). Babies are often not able to feed by mouth until closer to their due date and will need tube feedings. The best feeding is mom's own milk. If this isn't possible, donor human milk from a milk bank is the safest alternative.
- · Nervous system problems, including bleeding in the brain or seizures
- Infections due to immature immune system and therefore not being able to fight off bacteria and viruses in the environment

Premature babies can have long-term health problems as well. Generally, the more premature the baby, the more serious and long-lasting the health problems may be.

#### Can prematurity be prevented?

More babies are surviving even though they are born early and are very small. But it is best to prevent preterm labor and other health issues if possible.

It's important to get good prenatal care while you are pregnant. Your healthcare provider can help find problems and suggest lifestyle changes to lower the risk for preterm labor and birth. Some ways to help prevent prematurity include:

• Stopping smoking if you smoke. Stop smoking before you are pregnant.

- Avoid alcohol and drugs
- Finding out if you are at risk for preterm labor
- · Learning the symptoms of preterm labor
- Getting treated for preterm labor
- Wait at least 18 months between pregnancies

Your healthcare provider may give you the hormone progesterone if you are at high risk for preterm birth. Progesterone can help if you have had a past preterm birth.

# How is prematurity managed?

Premature babies often need time to catch up in both development and growth. In the hospital, this catch-up time may mean learning to eat and sleep, as well as steadily gaining weight. Babies may stay in the hospital until around the time they reach the pregnancy due date. They may be cared for in a neonatal intensive care unit (NICU).

Talk with your baby's healthcare provider about when your baby will be able to go home. In general, babies can go home when they:

- · Have no serious health conditions
- · Can stay warm in an open crib without added heat
- · Take all feedings by mouth, maintaining their expected growth rate
- · Have no recent pauses in breathing (apnea) or low heart rate

Before discharge, premature babies need an eye exam and hearing test to check for problems linked to prematurity. You must be able to give care, including medicines and feedings, before your baby can go home. You will also need information about follow-up visits with the baby's healthcare provider and vaccines. Many hospitals have special follow-up healthcare programs for premature and low-birth-weight babies.

Even though they are otherwise ready to go home, some babies still have special needs. This includes things such as extra oxygen or tube feedings. You will learn how to take care of your baby if they need these things. Hospital staff can help set up special home care.

Ask your baby's healthcare provider about staying overnight with your baby at the hospital before your baby goes home. This can help you adjust to caring for your baby while providers are nearby for help and reassurance. You may also feel more confident taking your baby home when you know infant CPR and safety.

Premature babies are at increased risk for SIDS (sudden infant death syndrome). You should always put your baby down to sleep on their back.

#### Key points about prematurity

- Babies born before 37 weeks of pregnancy are considered premature or born too early.
- Many premature babies also weigh less than 5 pounds, 8 ounces (2,500 grams). They may be called low birth weight.
- Premature babies can have long-term health problems. In general, the more premature the baby, the
  more serious and long-lasting the health problems may be.
- Prenatal care is a key factor in preventing preterm births and low-birth-weight babies.
- Premature babies are at increased risk for SIDS (sudden infant death syndrome).

#### **Next steps**

Tips to help you get the most from a visit to your child's healthcare provider:

- Know the reason for the visit and what you want to happen.
- Before your visit, write down questions you want answered.
- At the visit, write down the name of a new diagnosis, and any new medicines, treatments, or tests. Also
  write down any new instructions your provider gives you for your child.
- Know why a new medicine or treatment is prescribed and how it will help your child. Also know what the side effects are.
- Ask if your child's condition can be treated in other ways.
- Know why a test or procedure is recommended and what the results could mean.
- Know what to expect if your child does not take the medicine or have the test or procedure.
- If your child has a follow-up appointment, write down the date, time, and purpose for that visit.
- Know how you can contact your child's provider after office hours. This is important if your child becomes ill and you have questions or need advice.

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