

Overview of Pulse Oximetry Newborn Screening – For Parents

What is pulse oximetry newborn screening?

Pulse oximetry newborn screening (also called “**pulse ox**”) is a test that measures how much oxygen a baby has in his/her blood. Pulse oximetry is used as part of newborn screening to determine how healthy a baby’s heart & lungs are. Babies who have low oxygen levels (meaning there is not much oxygen in the baby’s blood) may have **critical congenital heart disease** (also called CCHD).

It is important for parents to know that pulse oximetry newborn screening cannot identify every child with CCHD. Most babies who pass the pulse oximetry screen will not have CCHD. However, it is important for parents to know the signs of CCHD (including a blue color to the skin/fingernails/lips, fast breathing & poor feeding or poor weight gain). If you notice any of these signs in your baby, please contact your baby’s doctor.

What is critical congenital heart disease (CCHD)?

Critical congenital heart disease (also called CCHD) occurs when a baby’s heart does not develop correctly. There are seven different heart defects that can be identified with pulse oximetry newborn screening. A baby with one of these heart defects usually has a low amount of oxygen in his/her blood. All of these heart defects require some type of treatment (often involving surgery) soon after birth. If a baby has CCHD & does not receive treatment shortly after birth, the baby has a higher chance of other problems, including death.

Why is pulse oximetry used to screen for CCHD?

Pulse oximetry is used to screen for CCHD because it is a fast, simple, accurate test that can be done shortly after a baby is born. Without pulse ox newborn screening, some babies with CCHD might leave the hospital/midwifery without being identified. Every baby receives a complete examination from a doctor before he/she leaves the hospital. However, some babies with CCHD are “missed” because the baby may not have the symptoms of CCHD (such as an abnormal heart rate or an extra sound in the baby’s heartbeat called a **murmur**) that can be detected during an exam.

How is pulse oximetry newborn screening done?

In Indiana, pulse oximetry newborn screening is done after a baby is at least 24 hours (or 1 day) old. The pulse ox screen is done by placing a probe (a small device with a red light that measures a person’s oxygen level) on the baby’s right hand & one of the baby’s feet.

Pulse oximetry newborn screening only takes a few minutes to perform. During his/her pulse ox screen, your baby should be warm & quiet. If a baby is crying, fussing, moving, or cold, the pulse ox screen may take longer. You can help your baby’s doctor/nurse/midwife by keeping your baby warm & quiet during the pulse ox test.

Does the pulse oximetry screen hurt my baby?

No. Pulse oximetry is fast & easy to perform and does not hurt your baby.

How will I find out the results of my baby’s pulse oximetry newborn screen?

Your baby’s doctor or nurse should tell you the results of your baby’s pulse oximetry newborn screen.

My baby did not pass his/her pulse oximetry screen. What does this mean?

Your baby’s pulse oximetry newborn screen showed that the level of oxygen in your baby’s blood was low or that there was a difference of more than 3 percent between the pulse ox results in your baby’s right hand & foot. *It is important for parents to know that there are several reasons why a baby can have low oxygen levels or a difference of more than 3 percent between his/her pulse ox results.* Some babies have respiratory (breathing) issues or infections.

Your baby’s doctor will perform a thorough physical examination to figure out why your baby did not pass his/her pulse ox newborn screen. Your baby may also receive an **echocardiogram** (an ultrasound of the heart) to look for CCHD.

Where can I get more information about pulse oximetry newborn screening?

- **ISDH Newborn Screening Program** – www.nbs.in.gov
- **Children’s National Medical Center** - <http://www.childrensnational.org/PulseOx/FAQ.aspx>