

## NEWBORN PROCEDURES

### VITAMIN K PROPHYLAXIS

#### Overview:

Vitamin K is needed for the production of blood clotting factors. Clotting factors help us stop bleeding. It is produced by bacteria in the gut. However, babies are born without any bacteria in their guts and so it takes some time after birth to have bacteria grow in the intestines and start producing vitamin K.

#### Hemorrhagic Disease of the Newborn:

This is a condition that is caused by a lack of vitamin K dependent clotting factors. The incidence is approximately 1:10,000 babies. Babies who are born really early, have been oxygen-deprived, or have liver damage are at higher risk. A complicated or instrumental delivery also increases the risk. The baby may bleed from various sites including the umbilical stump, nose, skin, scalp, and internally. Internal bleeding can cause brain damage. In about one third of cases, bleeding occurs without prior warning or risk factor.

#### Prevention:

An injection of 1mg of vitamin K after the birth prevents nearly 100% of the cases of hemorrhagic disease of the newborn, reducing the incidence from 10 in 100,000 to 0.25 in 100,000 babies. This injection is offered and given into the baby's leg.

#### Risks:

The injection causes the baby a small amount of discomfort, and usually, though not always, makes the baby cry. If possible, we will give the vitamin K injection while the baby is at the breast. Vitamin K injection has no long-term effects on the baby.

### EYE PROPHYLAXIS

A baby can get an eye infection from gonorrhea or chlamydia if the birthing person has an untreated vaginal infection at the time of birth. If left untreated in the baby, it can lead to blindness. A person may not know they have this infection because they may not have any symptoms. Your midwife will offer you a test for chlamydia and gonorrhea in pregnancy. It is currently public health law in Ontario that all babies receive a preventative treatment with an antibiotic eye ointment called erythromycin. It does not irritate the baby but it can cloud their vision until it is dissolved. Your midwife will discuss with you the most current research and recommendations.

### RED EYE REFLEX

This is a very simple exam done within the first few days of life, and again at the six-week visit. The midwife looks into the baby's eyes with a special light (ophthalmoscope) and sees the retina of the eye. If it appears white, this could indicate the presence of congenital cataract which must be treated to prevent blindness.

### VITAMIN D SUPPLEMENTATION

The Canadian Pediatric Society recommends that all breastfed, healthy term infants in Canada receive a daily vitamin D supplement of 10 ug (400 IU). Supplementation should begin at birth and continue until the infant's diet includes at least 10 ug (400 IU) per day of vitamin D from other dietary sources or until the breastfed infant reaches one year of age.

Vitamin D is a fat-soluble hormone that is produced in our skin on exposure to ultraviolet (UV) light from the sun. UV light is blocked by glass, clothing or sunscreen. To make vitamin D, the skin must be exposed directly to sunshine, specifically UV-B (which is the sunlight that causes sunburns). Pregnant and breastfeeding mothers and children should spend time, when possible, in sunlight, keeping in mind that excessive sun exposure and sunburn can lead to skin cancer. People with darker skin will need more sun. People who do not get enough sun exposure can get vitamin D from fish, egg yolks, fortified milk, and supplements. Oral drops are available for babies.

## **NEWBORN SCREENING**

The province of Ontario offers screening tests for over 28 rare disorders to all newborns in the first few days of life. Screening involves pricking the baby's heel and catching the blood on a special paper. If the baby is in hospital for the first 24 hours, the hospital will do this test. Otherwise, the midwife will do the test at a home visit within the first two days of life, or you will return to the hospital to have the blood test done along with the bilirubin test (see next section). More than 99% of babies will receive a "screen negative" result. This means there is a very low risk that your baby has one of these disorders. On very rare occasions, the newborn screening test may miss a baby with one of these disorders. The Newborn Screening Lab may require another sample if there wasn't enough blood or there was a problem with the first sample. In this case, the midwife will be notified and will arrange to take another blood sample as soon as possible. If your baby screens positive, this does not necessarily mean that your baby has a disorder, but must have follow-up testing. If a diagnosis of a disorder is made, the hospital will arrange for treatment and counselling and advice.

The screen looks for rare disorders that can cause health problems in babies and children including problems with red blood cells, metabolism, and some genetic conditions that may not be noticeable in the early months or years of life. For more information, visit the Newborn Screening Ontario site ([www.newbornscreening.on.ca](http://www.newbornscreening.on.ca)). Your baby will also have a test for congenital heart defect (not a blood test).

## **CRITICAL CONGENITAL HEART DISEASE (CCHD) SCREENING**

It is recommended that all babies in Ontario receive pulse oximetry screening for Critical Congenital Heart Disease (CCHD). Pulse oximetry is a way to see how much oxygen is moving in your baby. CCHD refers to conditions where a baby's heart or major blood vessels around the heart have not formed properly. They are called critical because they require surgery or intervention in the first year of life to ensure healthy outcomes for the baby. Pulse oximetry screening can help in the finding of these conditions before the baby becomes extremely sick. As is the case with all screening, finding the problem early results in better outcomes. This test will be offered either at home or in the hospital in the first 24-48 hours of life. It involves placing a small oximeter (a detector which reads how much oxygen is in the blood) on your baby's hand, wrist and foot. Babies who do not pass this test will be recommended to have further testing done in the hospital.

## **BLOOD SUGAR TESTING**

Low blood sugar at birth can have negative, long-term effects on newborns. If your baby's birth weight is higher or lower than average for the gestational age at which they are born, or your baby has risk factors for low blood sugar (eg. You have gestational diabetes), or if the baby shows symptoms of low blood sugar, it will be recommended to test the baby's blood sugars. A blood sample is taken by pricking the baby's heel. Treatment of low blood sugar is breastfeeding or formula supplementation if necessary. In some cases, a baby requires intravenous glucose. It may be necessary to re-check the blood sugar level several times. This testing could require a longer hospital stay.

## **NEWBORN HEARING TESTS**

Babies who have undetected hearing loss are at risk for impaired emotional, intellectual and language development. Babies born in the hospital and staying for longer than 12 hours may be tested in hospital. Babies born at home or discharged from hospital before this time may be tested at a community screening clinic.

## **JAUNDICE**

Many newborn babies develop jaundice during the first week of life. This is due to a normal process of breaking down extra red blood cells that are no longer needed, resulting in bilirubin levels rising. The baby's skin and whites of the eyes appear yellow. Early and frequent feeding may help the baby get rid of the excess bilirubin.

Based on a baby's appearance, the severity of a baby's jaundice is not always obvious. For this reason, it is recommended that all babies be screened to determine those at risk for developing jaundice that might need treatment. Babies born at Grand River Hospital will be offered an appointment at the bilirubin screening clinic. This appointment will be set up before you're discharged from the hospital and will take place between 24-48 hours of age. Bilirubin levels are checked by pricking the baby's heel for a blood sample. Repeating the bilirubin levels and/or medical treatment may be needed for some babies. If you deliver at home, your midwife will offer you alternative options for bilirubin screening including taking your baby to an outpatient lab in the community.