Screening for Newborn Heart Problems

Interior Health
Every person matters

Patient Information • Kelowna General Hospital and Royal Inland Hospital

www.interiorhealth.ca

Why screen newborns for heart problems?

Congratulations on the birth of your new baby! One of the things that your baby will have before you are sent home is a screen for heart problems. This is done by measuring the oxygen levels in your baby's blood with a monitor called a pulse oximeter.

The type of heart problems your baby is being screened for are called Critical Congenital Heart Defect, a group of heart defects that babies are born with. Babies may look healthy in the first few days after birth even if they have life threatening heart problems. Screening helps your doctor or midwife identify and treat heart problems sooner so babies with Critical Congenital Heart Disease can be treated within the first year of life and have better outcomes. It is important to know that screening does not identify all types of heart problems a baby may be born with.

How do we screen for critical congenital heart problems?

A simple and painless monitor, called pulse oximetry, is used to measure how much oxygen is in your baby's blood. All babies will have pulse oximetry done after they are 24 hours old, or as close to discharge as possible if you are leaving the hospital before 24 hours. Getting a reading from a pulse oximeter takes less than 5 minutes to do. You may hold your baby during the test to help keep him or her warm and quiet. A nurse will place a "sensor" that looks like a band-aid™ on your baby's hand and then his or her foot. The sensor is connected by a cable to a monitor. The monitor measures the percentage of oxygen in your baby's blood.

What do the results mean for my baby?

The usual percentage of oxygen in the blood is 95% or more. A low level of oxygen in your baby's blood does not always mean that there is a heart problem. Babies whose heart and lungs are still adjusting after birth can also have lower oxygen levels in their blood. More testing is needed to determine if your baby has a Critical Congenital Heart Disease.

Pulse oximetry cannot find all the possible problems in a baby's heart. It is possible for a baby with a serious heart problem to have a normal pulse oximetry screen. All babies should have regular visits with a care provider.

What happens if the oxygen level in my baby's blood seems low?

A doctor or midwife will then look at your baby carefully for any signs that might help them understand why the oxygen level is lower. They may choose to ask a special doctor, such as a Pediatrician or a Pediatric Cardiologist, to help care for your baby. If your baby is born in a small hospital, you may need to travel to a hospital that can give your baby special heart testing and care.

Questions?

If you have any questions about pulse oximetry or heart problems in babies, please ask the doctor or midwife that is providing your care. You may also ask the doctor, midwife and/or nurse caring for your baby after he or she is born.

Healthlink BC				
Call 8-1-1	Nurse	24 hours a day	Daily	*Call 8-1-1 to speak with a nurse, ask a dietitian about nutrition, or a pharmacist about your medication.*
	Dietitian	9 am–5 pm	Mon–Fri	
	Pharmacist	5 pm–9 am	Daily	
www.healthlinkbc.ca	Hearing Impaired	Call 7-1-1		

Selkirk Medical Group

Information for Parents-to-be

Eye Care and Prevention of Ophthalmia Neonatorum

What causes newborn eye infection?

Gonorrhea and Chlamydia are both sexually transmitted infections (STIs), which if present in the mother's vagina at birth can pass to the newborn and infect the eyes. Although both STIs often tested in pregnancy, no test is 100% reliable and may be asymptomatic in the mother and baby. There is also a risk of acquiring the infection after the screening test is done in early pregnancy. When undiagnosed and untreated such eye infections can cause blindness or systemic symptoms.

How can newborn eye infection be prevented?

Erythromycin, 0.5% antibiotic ointment is administered to the baby's eyes within two hours of birth. The British Columbia Health Act of 1995 states that all babies must be treated as a preventative measure (prophylactically).

Photo credit: dhammza via Visual Hunt / CC BY-NC-ND

What are the benefits to the use of erythromycin eye ointment?

The use of topical antibiotic eye ointment greatly reduces the risk of bacteria colonizing the eye and causing an infection. Although the primary bacterial infection is related to Chlamydia and Gonorrhea, other bacterial infections can also be prevented.

What are the risks associated with the use of erythromycin eye ointment?

Administration of the ointment is painless; however the baby will experience blurred vision immediately after applying it. There is the theoretical risk of antibiotic resistance to some organisms in the eye, however this has not been described in the literature.

Key Points

- When there is an increased risk of infection through the mother, treatment should be administered immediately after birth
- Erythromycin eye ointment is normally administered during the newborn exam within the first hours postpartum
- The erythromycin eye ointment is considered to be painless. However it may blur the baby's vision temporarily and is therefore timed not to interrupt the close bonding time that occurs immediately after birth
- If parents decline to have the erythromycin eye ointment administered after considering the risks and benefits, an Informed Refusal should be signed
- It is important to watch the baby's eyes for redness, discharge and swelling

Photo credit: hernanpba via Visual hunt / CC BY-SA

Vitamin K for babies

Vitamin K Prophylaxis

A single supplementation of vitamin K is recommended for newborns to prevent Vitamin K Deficiency Bleeding (VKDB) also down as Hemorrhagic Disease of the Newborn.

Why is vitamin K important?

Vitamin K is a clotting factor in blood. In adults Vitamin K is primarily made from bacteria in the gut. However that process does not begin infants until after birth and normal levels of Vitamin K do not occur in babies until between 6 weeks and 6 months. Regardless of the level of Vitamin K in the maternal blood, the placenta transfers only small amounts to the baby. Neither human breastmilk nor colostrums are considered good sources of Vitamin K.

Vitamin K Deficiency Bleeding may occur in apparently healthy newborns. Bleeding may be internal or external and the disease may involve severe bleeding such as intracranial hemorrhage into the brain.

How common is Vitamin K deficiency bleeding?

It is difficult to determine the exact incidence of VKDB since vitamin K has been used as a preventative measure for fifty years. The BC Perinatal Health Program estimates the range of incidences from 0.1/1000 to 15/1000 depending on risk factors and feeding. Some pediatricians place the risk as high has 1/250 for exclusively breastfed infants.

How can Vitamin K deficiency bleeding be prevented?

A single injection of 1 mg of vitamin K intramuscularly (into the thigh muscle) of the newborn within the first few hours after birth will prevent most cases of VKDB. Good quality case control studies have shown no association between vitamin K and childhood leukaemia (as was suggested by a study in the 1990's).

A formulation of Vitamin K suitable for oral administration is not approved for use in Canada. If the oral route is chosen the infant should be given 1-2mg shortly after birth, and repeated at 1-2 weeks and at 4 weeks.

Key Points

- Vitamin K supplementation is normally administered to the newborn within the first hours postpartum
- If parents choose to give Vitamin K orally, they should be aware that the effectiveness of this route is not well known and likely is less effective than the injected vitamin K
- If parents decline to have the Vitamin K administered to the newborn after considering the risks and benefits, an Informed Refusal should be signed.
- It is important to watch the baby for poor growth/feeding, failure to thrive, and 'warning bleeds'

The Period of Purple Crying: A New Way to Understand Your Baby's Crying. The period of purple crying is used to describe the time in a baby's life when they cry more than any other time. http://purplecrying.info

Newborn Jaundice: http://www.caringforkids.cps.ca/handouts/jaundice_in_newborns

Hearing Screening Handout: The BC Early Hearing Program works towards achieving the best language outcomes for all young children in BC. http://www.phsa.ca/our-services/programs-services/bc-early-hearing-program

Why does my baby need Vitamin K? http://www.cdc.gov/ncbddd/blooddisorders/documents/vitamin-k.pdf

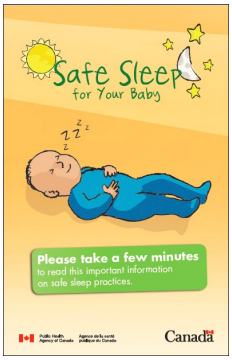
Newborn Screening Handout: Learn more about BC's Newborn Screening Program: http://www.perinatalservicesbc.ca/Documents/Screening/Newborn-Families/ParentInfoSheetEng.pdf

Healthy Families BC—Questions about parenting? https://www.healthyfamiliesbc.ca/parenting

~

Safe Sleeping

Safe Sleep for Your Baby: learn more about how to create a safe sleep environment for your baby- Public Health Agency of Canada http://www.phac-aspc.gc.ca/hp-ps/dca-dea/stages-etapes/childhood-enfance_0-2/sids/index-eng.php



http://www.phac-aspc.gc.ca/hp-ps/dca-dea/stages-etapes/childhood-enfance_0-2/sids/pdf/sleep-sommeil-eng.pdf

Photo credit: Mickyboyc via Visual Hunt / CC BY

Safe Sleep for Babies and *Healthy Sleep for Your Baby and Child*- Canadian Paediatric Society - This site includes the Safe Sleep for Your Baby video. http://www.caringforkids.cps.ca/handouts/safe_sleep_for_babies

Selkirk Medical Group

Information for Parents

Newborn Health - Vitamin D

Vitamin D for Babies

Why is vitamin D important?

Vitamin D is needed to build strong bones and teeth. It may also play a role in reducing the risk of many chronic diseases.

Does my baby need a vitamin D supplement? If so, how much?

All babies fed any amount of breastmilk need 400 international units (IU) of a liquid vitamin D supplement. Start giving it once a day as soon as possible following birth, or as directed by your doctor.

- If your baby is fed only breastmilk: give your baby 400IU of liquid vitamin D daily
- If your baby is fed both breastmilk and formula: give your baby 400 IU of liquid vitamin D daily.
- If your baby is fed only infant formula: your baby does not need a vitamin D supplement, unless your doctor recommends one. Infant formula contains vitamin D.

Choosing a vitamin D supplement:

- Vitamin D for babies and toddlers comes in a liquid form. Find it at your local pharmacy
- Choose a brand with 400 IU vitamin D3 (not vitamin D2 and not a mix of vitamins) unless your doctor recommends a certain type or dose.

I am taking a vitamin D supplement myself. Does my breastfed baby still need a vitamin D supplement?

Yes, your breastfed baby still needs 400 IU of liquid vitamin D given once daily. Getting enough vitamin D is still important for your own health. Adults need 600 IU of vitamin D daily.

What if I forget to give my baby the supplement?

Give your baby the supplement when you remember—but don't give more than one dose a day. Do not give extra to make up for missed days.

What if my baby keeps spitting up the liquid vitamin D?

It is very important that your baby receives the Vitamin D so you might try:

- Giving it at a different time of day and before feeding, not after.
- A different brand such as a product that gives 400IU in one drop instead of 1 ml

Why can't I rely on the sun to meet my child's vitamin D needs?

- In Canada, we can't make vitamin D from the sun during the months from October to March.
- In the summer, young children's skin needs to be protected from the sun, even on cloudy days. When our skin is well protected, it cannot make vitamin D from the sun.

This information is from Interior Health's Vitamin D for Babies and Toddlers handout. For more info see:
https://www.interiorhealth.ca/YourHealth/InfantsChildren/Documents/VitaminD.pdf