



Guide to the Pregnancy and Babies  
Resource Centre on AboutKidsHealth

# INTRODUCTION

The following pages were prepared to assist community health representatives (CHR) with accessing information about 'Pregnancy & Babies' that is available at The Hospital for Sick Children's (SickKids) website, [www.AboutKidsHealth.ca](http://www.AboutKidsHealth.ca). The evidence-based health information was created in collaboration with expert health professionals at SickKids. AboutKidsHealth is the world's leading non-profit information source for children's health. Its purpose is to improve the health and well-being of children in Canada and around the world by making child health care information available around the globe in multiple languages via the Internet.

The information gathered at AboutKidsHealth is structured in resource centres, online interactive textbooks. Many of the resource centres are hundreds of pages in length, and therefore not easily accessible without a thorough review. Furthermore, moving around in the resources centre can be challenging without a fast internet connection speed.

## INDEX

### The goals of the index area:

- To enable readers of a print copy to view the sequence of the information without requiring them to search online. Once a subheading of interest is found, the reader can direct their online search to the specific online page.
- To enable readers, while they are online at [www.aboutkidshealth.ca/inuithealthmatters](http://www.aboutkidshealth.ca/inuithealthmatters) to access the information directly by clicking the link of interest.

## SUMMARY PAGES

Often, material relevant to a specific topic is spread across a number of areas in a resource centre. To assist health care providers access all the relevant information about a particular topic, for example respiratory distress syndrome, the topic is summarized onto a one-page document (a PDF) and includes any relevant links to additional information. Information may be printed and given to a patient after it has been explained by the care provider.

Active links to the summary pages are embedded in the online content from our Inuit Health Matters homepage [www.aboutkidshealth.ca/inuithealthmatters](http://www.aboutkidshealth.ca/inuithealthmatters)

# DETAILED INDEX: PREGNANCY & BABIES

<https://www.aboutkidshealth.ca/pregnancybabies>

## PREPARING FOR PREGNANCY

### Reproduction

- ▶ Reproduction

### Health care before pregnancy

- ▶ Health care before pregnancy
- ▶ Nutrition before pregnancy
- ▶ Exercise before pregnancy

### Getting pregnant

- ▶ Getting pregnant
- ▶ Fertility charting

## PREGNACY

### The pregnant mother

- ▶ The pregnant mother
- ▶ Confirming your pregnancy
- ▶ The first month
- ▶ The second month
- ▶ The third month
- ▶ The fourth month
- ▶ The fifth month
- ▶ The sixth month
- ▶ The seventh month
- ▶ The eighth month
- ▶ The ninth month
- ▶ The expecting father

### Fetal development

- ▶ Fetal development
- ▶ The first trimester: month one
- ▶ The first trimester: month two
- ▶ The first trimester: month three
- ▶ The second trimester
- ▶ The third trimester

### Health care in pregnancy

- ▶ Health care in pregnancy
- ▶ Choosing a healthcare provider
- ▶ Health care visits
- ▶ Nutrition
- ▶ Exercise
- ▶ Kick counts
- ▶ Things to avoid during pregnancy
- ▶ Prenatal testing
- ▶ Genetic counselling

### Pregnancy complications

- ▶ Pregnancy complications
- ▶ Nausea and vomiting
- ▶ Miscarriage
- ▶ Ectopic pregnancy
- ▶ Rhesus haemolytic disease
- ▶ Pregnancy induced hypertension
- ▶ Viral infections in pregnancy
- ▶ Bacterial infections in pregnancy
- ▶ Other infections in pregnancy
- ▶ Complications of the placenta
- ▶ Complications of the umbilical cord and fetal membranes
- ▶ Overdue pregnancy
- ▶ Twins and multiple babies

### Maternal conditions and pregnancy

- ▶ Maternal conditions and pregnancy
- ▶ Asthma
- ▶ Cancer
- ▶ Diabetes
- ▶ Eating disorders
- ▶ Epilepsy
- ▶ Heart disease
- ▶ Phenylketonuria
- ▶ Sickle cell anemia
- ▶ Systemic lupus erythematosus
- ▶ Thalassemia
- ▶ Thyroid problems

### **Problems with the baby: Birth defects**

- ▶ Problems with the baby: Birth defects
- ▶ Things to avoid during pregnancy:
  - Teratogens
- ▶ Neural tube defects
- ▶ Heart problems
- ▶ Digestive system problems
- ▶ Lung problems
- ▶ Kidney and bladder problems
- ▶ Genital problems
- ▶ Skeletal disorders
- ▶ Eye problems
- ▶ Ear problems
- ▶ Cleft lip and cleft palate
- ▶ Fetal alcohol spectrum disorder
- ▶ Neonatal abstinence syndrome

### **Pregnancy loss**

- ▶ Miscarriage
- ▶ Ectopic pregnancy
- ▶ Stillbirth
- ▶ Therapeutic abortion
- ▶ Grief and loss

### **Resources**

- ▶ Cord blood banking
- ▶ Decision-making in pregnancy
- ▶ Informed choice and informed consent
- ▶ Pregnancy in teenagers
- ▶ Pregnancy resources
- ▶ Research and clinical trials

## **GIVING BIRTH**

### **Planning for childbirth**

- ▶ Your health care team
- ▶ Your birth plan
- ▶ Home birth
- ▶ Hospital birth

- ▶ The expecting father: How to help in childbirth

### **Labour and delivery**

- ▶ Signs of labour
- ▶ Labour and delivery
- ▶ Stages of labour and delivery
- ▶ Labour induction
- ▶ Pain management in labour and delivery
- ▶ Fetal monitoring
- ▶ Forceps delivery and vacuum extraction
- ▶ Episiotomy
- ▶ Vaginal birth after caesarean section

### **Caesarean section**

- ▶ Caesarean section
- ▶ Recovery after caesarean section
- ▶ Vaginal birth after caesarean section

### **Concerns during labour**

- ▶ Concerns during labour
- ▶ Premature labour and premature birth
- ▶ Delivery of twins and multiple babies
- ▶ Breech and other unusual deliveries

### **Newborn babies at birth**

- ▶ Newborn babies at birth

### **The postpartum period**

- ▶ The postpartum period
- ▶ Childbirth recovery and postpartum care
- ▶ Recovery after caesarean section
- ▶ Breast changes after childbirth
- ▶ Postpartum: Physical concerns
- ▶ Baby blues and postpartum depression



## NEWBORN BABIES

### Your newborn baby's body

- ▶ Baby's first breath
- ▶ What your newborn baby looks like
- ▶ Importance of skin-to-skin contact
- ▶ Movements and reflexes
- ▶ The five senses

### Routine health care for newborn babies

- ▶ Health care at birth
- ▶ Apgar score
- ▶ Physical examination
- ▶ Newborn screening tests
- ▶ Follow-up care

### Routine care at home

- ▶ Holding and dressing your baby
- ▶ Diapers
- ▶ Skin care, nail care and dental care for babies
- ▶ Bath time for newborn babies

### Newborn baby safety

- ▶ Newborn baby safety
- ▶ Nursery equipment safety for newborn babies
- ▶ Car seat safety for newborn babies

### Feeding and nutrition of newborn babies

- ▶ Feeding and nutrition of newborn babies
- ▶ Breastfeeding
- ▶ Breast changes and conditions
- ▶ Medications and alcohol in breastfeeding
- ▶ Expressing milk occasionally for your healthy baby
- ▶ Formula feeding

### Newborn baby behaviour

- ▶ Newborn baby behaviour
- ▶ States of alertness in newborns
- ▶ Sleep time for newborns
- ▶ Crying
- ▶ Crying: What you can do
- ▶ Colic

### Adjusting to your newborn baby

- ▶ Adjusting to your newborn baby
- ▶ Baby blues and postpartum depression
- ▶ Relationship stress after having a baby
- ▶ Fatherhood: Having a new baby

### Health issues in your newborn baby

- ▶ Health issues in your newborn baby
- ▶ Behaviour changes in babies
- ▶ Skin conditions and birthmarks in newborns
- ▶ Eye concerns in newborn babies
- ▶ Spitting up and vomiting
- ▶ Constipation and diarrhea in newborns
- ▶ Infection in newborn babies
- ▶ Sudden infant death syndrome
- ▶ Circumcision in newborns
- ▶ Fever

### Caring for the very ill newborn baby

- ▶ Caring for the very ill newborn baby
- ▶ Levels of newborn care
- ▶ The health-care team for very ill newborn babies
- ▶ Premature babies: An overview
- ▶ Breathing problems in newborns
- ▶ Chromosomal problems in newborn babies
- ▶ Heart conditions in newborn babies
- ▶ Digestive problems in newborns
- ▶ Skeletal disorders
- ▶ Eye or ear problems in newborn babies

- ▶ Genetically determined disorders in newborns
- ▶ How to cope when your baby is very ill
- ▶ Palliative care for newborn babies
- ▶ Grief and loss after losing a baby
- ▶ Cleft lip and cleft palate in babies

### **When babies feel pain**

- ▶ When babies feel pain
- ▶ Assessing pain in babies
- ▶ Relieving pain in babies
- ▶ Advocating for pain relief

## **BABIES: THE FIRST YEAR**

### **Development of babies**

- ▶ Growth in the first year
- ▶ Motor development: The first six months
- ▶ Motor development: The next six months
- ▶ Vision in the first year
- ▶ Hearing and communication in the first year
- ▶ Social and emotional development in babies
- ▶ Learning to think: Cognitive development in babies
- ▶ Learning to think: The first six months
- ▶ Learning to think: The next six months

### **Routine health care for your baby**

- ▶ The primary health-care team
- ▶ Routine health care for your baby
- ▶ Immunization schedule
- ▶ Holding and dressing your baby
- ▶ Diapers
- ▶ Skin care, nail care and dental care for babies
- ▶ Bath time for babies

### **Baby safety**

- ▶ Newborn baby safety
- ▶ Nursery equipment safety for babies
- ▶ Car seat safety for babies and children

### **Feeding and nutrition of babies**

- ▶ Feeding and nutrition of babies
- ▶ Breastfeeding
- ▶ Medications and alcohol in breastfeeding
- ▶ Expressing milk occasionally for your healthy baby
- ▶ Formula feeding
- ▶ Introducing solids
- ▶ Nutrition as your baby gets older

### **Baby behaviour**

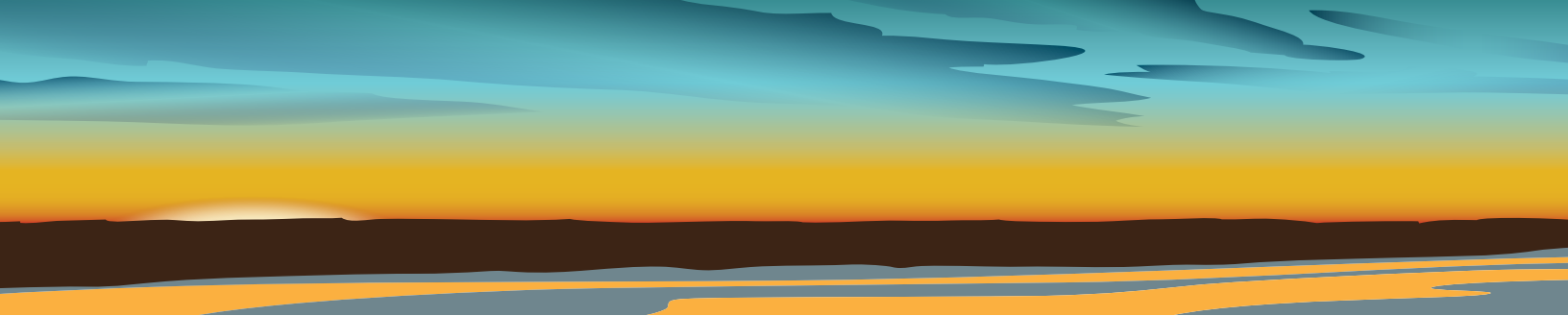
- ▶ Crying
- ▶ Crying: What you can do
- ▶ Colic
- ▶ Temperament
- ▶ More about temperament
- ▶ Temperament: What you can do

### **Attachment**

- ▶ Attachment
- ▶ Development of attachment
- ▶ Your effect on your child's attachment
- ▶ Attachment: What you can do

### **Health issues in your baby**

- ▶ Behaviour changes in babies
- ▶ Fever
- ▶ Febrile seizures
- ▶ Respiratory problems
- ▶ Ear infection
- ▶ Sore throat
- ▶ Gastrointestinal infections



- ▶ Urinary tract infection
- ▶ Skin conditions
- ▶ Eye conditions
- ▶ Mumps
- ▶ Meningitis
- ▶ Pinworm infestations
- ▶ Failure to thrive
- ▶ Sudden infant death syndrome

**Resources**

- ▶ Infant mental health promotion

# THE EXPECTING FATHER

[www.aboutkidshealth.ca/ExpectingFather](http://www.aboutkidshealth.ca/ExpectingFather)

Fathers are often the neglected partners in reproduction. People tend to forget that fathers also have valid feelings, hopes, and fears about pregnancy, childbirth, and their new babies. Until recently, the amount of information available for fathers has been quite sparse.

## Concerns during pregnancy?

All fathers worry about their partner's health and the development of their baby during pregnancy. Fathers naturally want to protect their loved ones from harm. If you are an expectant father, you can rest assured that most women have perfectly normal pregnancies and deliveries. Also, the vast majority of babies are born healthy and without complications. Pregnancy and childbirth are natural life events that do not pose a physical threat to your partner, especially if she is receiving proper medical care.

There are things you can do to help your partner have a safe and comfortable pregnancy. Make sure she receives the best medical care possible. Attending medical appointments with your partner will demystify the pregnancy. Hearing your baby's heartbeat for the first time or seeing the baby swim around on an ultrasound will make the pregnancy "real" for you. Your partner will also appreciate if you go with her when she needs to have medical tests done, especially if your baby's health is compromised in any way.

Encourage your partner to eat a proper diet, get enough exercise, and stay away from alcohol and cigarettes. The best way to do this is to eat the same diet, exercise along with her, and stop drinking and smoking yourself. Try not to think of these changes as a huge sacrifice, but rather as a way to experience the pregnancy with your partner. Another thing you can do to help is to make your partner's life as stress-free as possible. Take on

some extra chores so that she can rest. Be there for her when she needs your emotional support.

## Dealing with mood swings

Expecting fathers sometimes find their partners' mood swings to be especially hard to understand. Mood swings may be caused in part by the extra hormones that arise during pregnancy, especially in the first trimester. The emotional changes and demands of taking on the roles of pregnancy and impending parenthood can also contribute to mood swings. It is possible that you may also feel moody at times for the same reasons and need someone to talk to. Try not to become angry or frustrated with your partner if she has a sudden burst of emotion. Instead, be understanding and reassuring, and offer her a shoulder to cry on if she needs it. Listen to her feelings and worries. Be aware of, and seek help for, any signs of depression, both in your partner and in yourself:

- feeling out of control
- unpredictable tearfulness and spontaneous crying
- feelings of sadness, melancholy, weary anger, or general despair
- sleep disturbances
- a total loss of sexual energy

## Worries about sex

Expectant fathers are often concerned about having sex with their partner while she is pregnant. As long as she is healthy and feeling good, sex is not a problem during pregnancy. Women usually feel under the weather during the first trimester, so they might not be too interested in sex. However, their symptoms usually calm down in the second trimester and they may feel more erotic than usual because of their increased vaginal secretions. Don't worry: having sex won't hurt your baby.



# MISCARRIAGE

[www.aboutkidshealth.ca/MiscarriageIHM](http://www.aboutkidshealth.ca/MiscarriageIHM)

## What is a miscarriage?

The terms spontaneous abortion and miscarriage both mean the loss of a baby within the first 20 weeks of pregnancy. However, most doctors use these terms to describe pregnancy loss in the first trimester, as this is the time when the risk for miscarriage is highest. The risk of having a miscarriage increases with age and is higher with twins or multiples.

## Symptoms of miscarriage

Any vaginal bleeding during the first half of pregnancy is assumed to be a threatened miscarriage. The bleeding may be light. It may range from a brownish discharge to bright red bleeding. If you are actually having a miscarriage, you will have uterine cramping or low backache. Your bleeding and cramping will become progressively worse. You may feel severe pain and soak several pads in an hour. You might pass large blood clots or grayish or pink material. If you have any of these symptoms, seek emergency medical attention right away. In rare cases, some women have a missed abortion, where the embryo dies but remains in the uterus of pregnancy usually disappear and there will be a brownish discharge. If this happens to you, it is important to visit your doctor and discuss your treatment.

## Diagnosis and management of miscarriage

If you start to bleed during pregnancy, you may be given an ultrasound to see if the unborn baby is developing. This can be done as early as six weeks of pregnancy. The good news is that if, at eight weeks, the ultrasound shows a healthy baby with a heartbeat, his chances of surviving are very high. By weeks 14 to 16, if the ultrasound shows that the baby is healthy, there is a 99% chance that he

will survive. Blood tests that measure a hormone called human chorionic gonadotropin (hCG) can also be used to detect miscarriage. There is no specific treatment for threatened miscarriage. If you have mild bleeding and cramping and your cervix is closed, you will be cautiously monitored using ultrasound and possibly blood tests for hCG.

## Causes of miscarriage

By far the most common reason for miscarriage is a problem with the development of the unborn baby. Miscarriage could be nature's way of ending a pregnancy when the child would be unable to survive. Problems that can lead to miscarriage in the first trimester include:

- abnormal sperm or egg cells
- problems with implantation of the fertilized egg cell into the uterus
- chromosomal abnormalities or other birth defects
- defects in the placenta
- injuries to the unborn baby

## What to do after a miscarriage

After having a miscarriage, you will need to heal, both physically and emotionally. Try to rest and take it easy for a while. Losing a baby is one of the most traumatic events you may ever experience. Remember that the miscarriage is not your fault. Allow yourself to grieve, and share your feelings with your partner and your health care provider. Seek out resources in your community, or elsewhere, and join a support group if you can.

# PREGNANCY-INDUCED HYPERTENSION (PIH)

[www.aboutkidshealth.ca/Hypertension](http://www.aboutkidshealth.ca/Hypertension)

## What is PIH?

Pregnancy-induced hypertension (PIH) is high blood pressure during pregnancy. When PIH happens, it is usually during the last three months of pregnancy. The symptoms usually go away following birth. PIH happens more often in first pregnancies, and the reasons for this are unknown. PIH may be mild or quite severe. Most women do not feel ill with mild PIH; this is one of the reasons why regular prenatal checkups are essential.

There are three major signs of PIH: high blood pressure; protein in the urine; and retaining fluid. Other signs that may occur are headaches, blurred vision, nausea, abdominal pain, jumpy reflexes, and decreased amounts of urine.

## How will PIH affect my baby?

When a pregnant mother has trouble breathing, The amount of blood supply to the placenta is reduced with PIH. As a result, your baby may be smaller than what would have been normal for you. If the PIH is not controlled, it can be harmful to the baby. The best way for you to be aware of your baby's condition is by doing your fetal movement counts ("kick counts"). Your doctor may have you come to the hospital for a nonstress test with an electronic fetal monitor and an ultrasound. These tests give your doctor information on how well your baby is growing and if he is receiving enough nourishment from your placenta.

## Treatment of PIH

The only cure for PIH is delivering your baby. If your baby is not due yet, your doctor may choose to treat you with bedrest, a healthy diet, and medications to lower your blood pressure. If your PIH continues to worsen despite treatment, your baby may need to be delivered before your due date.

Many women with PIH feel quite well so it can be hard to accept the need for bedrest. When your

blood pressure is increased, it causes less blood to circulate throughout your body, including the uterus and placenta. When you are in a standing position, the heavy uterus puts pressure on the veins in your groin, causing blood to pool in your legs. This decreases the blood supply to the uterus and kidneys. Bedrest, especially lying on your left side, increases blood supply to the uterus and kidneys. Improved blood flow to the uterus benefits the baby. Improved blood flow to the kidneys flushes out toxic waste products and some of the extra body fluid which may build up and cause swelling.

## Prevention of PIH

There are many theories about the causes of PIH. You can lessen your risk of developing PIH by not smoking, by avoiding alcohol or any other potentially toxic substances, and by eating a nutritious diet. Avoid too much weight gain or attempts at weight loss. Attend prenatal visits regularly. You do not develop PIH from eating salt or drinking too much water. Both salt and water are necessary for proper function of the kidneys and other body systems and should be taken in normal amounts. If you do develop PIH, the best way to protect your baby and to prevent the problem from becoming worse is to follow your doctor's advice. You may feel perfectly well and think their concern is excessive. It is not.

## More information:

Kick Counts

[www.aboutkidshealth.ca/KickCounts](http://www.aboutkidshealth.ca/KickCounts)

# ASTHMA AND PREGNANCY

[www.aboutkidshealth.ca/PregnancyAsthma](http://www.aboutkidshealth.ca/PregnancyAsthma)

## What is Asthma?

Asthma is a condition that affects your lungs. The most common signs of problems with asthma include: feeling short of breath, tightness in the chest, coughing, and wheezing. These symptoms may be mild, moderate, or severe. Asthma is one of the most common serious medical conditions that can complicate pregnancy, affecting about 4% to 8% of all pregnant women. Some women find that their asthma improves during pregnancy; some find that it stays about the same; and some find that it gets worse, especially after the fourth month. In the third trimester, the enlarged uterus may crowd the lungs and lead to more frequent asthma flare-ups.

## How might asthma affect my baby?

When a pregnant mother has trouble breathing, her unborn baby has problems receiving all the oxygen he needs. Severe asthma can increase the risk of premature birth, low birth weight, and death of the baby in the second half of pregnancy or shortly after birth. The risks of these complications can be reduced if asthma is well controlled.

## Is there a treatment?

The good news is that, if asthma is well controlled during pregnancy, there is an excellent chance of having a problem-free pregnancy and a healthy baby. It is safer to take asthma medications than to risk having asthma attacks. A stepwise approach to the treatment of asthma is recommended in pregnancy, where the medication is stepped up in intensity if needed, and stepped down if possible. This requires careful monitoring by your obstetrician, preferably in collaboration with the physician who usually manages your asthma.

## Tips for keeping asthma under control

If you are prone to asthma attacks, it is important to treat them immediately, with a plan that has been determined between you and your doctor. Here are

a few tips to keep your asthma under control:

- If you smoke, try very hard to quit!
- Identify and remove the environmental triggers that lead to your asthma attacks. These could include pollen, dust, mould, tobacco smoke, cleaning products, and perfumes. Animal dander is another possible trigger, so you may need to board Fluffy with a friend while you are pregnant.
- If you were taking allergy shots before you became pregnant, check with your doctor to make sure that you can continue taking them during pregnancy.
- If you have exercise-induced asthma, check with your doctor to see if you should take a preventive medication before exercising.
- Avoid colds, flu, and other respiratory infections. Your doctor may prescribe medication to prevent an asthma attack at the onset of a cold. You may also want to consider getting a flu shot.
- Determine a medication plan with your doctor; some asthma medications are used for preventive purposes and others may be needed in case of an asthma attack. When you feel an asthma attack coming on, use the medication immediately, so that your unborn baby is not deprived of oxygen. If the medication does not work, go to the emergency department of your closest hospital immediately.
- Make sure that the medications you take are approved by your doctor for use during your pregnancy.

## More information:

Asthma Learning Hub (for children)

[www.aboutkidshealth.ca/asthma](http://www.aboutkidshealth.ca/asthma)

# DIABETES AND PREGNANCY

[www.aboutkidshealth.ca/PregnancyDiabetes](http://www.aboutkidshealth.ca/PregnancyDiabetes)

## What is diabetes?

Diabetes is a chronic metabolic disorder where the pancreas does not secrete enough insulin or the body does not use insulin properly. Diabetes is a common disease and its incidence is increasing. The main symptoms of diabetes include excessive thirst and urination, weight loss, and the presence of too much sugar in the urine and blood.

There are three types of diabetes: Type 1 diabetes begins at a young age and requires treatment with insulin injections; type 2 diabetes may be caused by obesity. It may be treated with dietary changes, medications, and sometimes insulin injections; and gestational diabetes is type 2 diabetes that arises during pregnancy. It is treated with dietary changes and sometimes insulin.

## How can diabetes affect my baby?

Pregnancy in women with diabetes is considered high-risk. If diabetes is not properly controlled during pregnancy, there is an increased chance of miscarriage, birth defects in the baby, and high blood pressure in the mother. However, with good medical guidance and self-care during pregnancy, these complications can be greatly reduced. If you have diabetes and you take excellent care of your body before and during pregnancy, you have a good chance of having a healthy baby. Whenever possible, women with type 2 diabetes should strive to get their diabetes under control before they become pregnant. Some oral medications for diabetes cause birth defects, and therefore all such medications should be discontinued before and during pregnancy. An insulin regimen is established instead. Folic acid is given at a dose of 1 mg per day before and during pregnancy, to help prevent birth defects. Any existing complications such as eye problems or kidney

disorders should be evaluated. During pregnancy, meticulous blood sugar control is very important. Blood sugar needs to be regularly monitored by the pregnant woman at different times each day. Blood sugar that is too high can increase the risk of birth defects. High blood sugar can also lead to a very large baby and complications during childbirth. Blood sugar that is too low can be bad for the baby and may lead to seizures in the mother.

Women with diabetes should seek nutritional counselling from a registered dietitian. This is to ensure there is adequate nutritional intake and appropriate weight gain. The diet is usually high in complex carbohydrates such as beans or whole grain bread, moderate in protein, low in cholesterol and fat, and free from sugary sweets. Dietary fibre is important. To maintain normal blood sugar levels, a certain amount of carbohydrates should be eaten in the morning and in the form of snacks. Eating regularly is essential and skipping meals is dangerous. If morning sickness is a problem, it may be easier to eat six to eight small, regularly spaced, and carefully planned meals instead of three large ones. If nausea and vomiting pose a problem, your doctor may need to adjust your insulin dose.

During pregnancy, appropriate exercise such as brisk walking or swimming is also encouraged, unless there is a physical reason why a woman should not exercise.

## More information:

Diabetes Learning Hub (for children)

[www.aboutkidshealth.ca/diabetes](http://www.aboutkidshealth.ca/diabetes)

# FETAL ALCOHOL SPECTRUM DISORDER (FASD)

[www.aboutkidshealth.ca/FASDIHM](http://www.aboutkidshealth.ca/FASDIHM)

## What is FASD?

Alcohol crosses the placental barrier readily and can easily enter into the unborn baby's blood circulation. Babies who are exposed to alcohol during the early months of pregnancy may be at risk for a condition known as fetal alcohol spectrum disorder (FASD).

## How does FASD affect my baby?

Physical problems associated with FASD include the following:

- low birth weight
- face and mouth deformities
- flat shape of the face
- delayed growth
- bone, joint, or muscle problems
- hearing or vision problems
- genital, heart, or kidney problems

A baby might not have these abnormalities from birth. In fact, problems with facial development usually begin to show between eight months and eight years of age. There may be more cognitive or behavioural problems, such as:

- mental retardation (IQ below 70); however, most children with FASD have IQs in the normal range
- slow learning, short attention span, hyperactivity, or memory problems
- learning disabilities, especially with reading, comprehension, and abstract math
- delays or lack of abilities in speech and language; for example, the child may have receptive language disorder, interrupt, or talkout of context
- lack of executive function skills, including difficulties with organization, planning, and reasoning

- inability to manage money, for example, by saving and budgeting
- inability to understand cause and effect
- sensory integration problems: sensitivity to touch or needing more touch than other children, hating bright lights or noise, noticing smells more than others
- irritability, aggressive behaviour, mental illness such as depression, anger control problems

## Treatment for FASD

FASD is not easily treated. However, an early diagnosis can lead to early intervention such as the following:

- Physical and occupational therapy can help.
- Psycho-educational testing can help determine specific difficulties which can help the child attain services in school that will help with the difficulties.
- Social workers can help the family cope and deal with family issues.

## More information:

Fetal Development

[www.aboutkidshealth.ca/FetalDev](http://www.aboutkidshealth.ca/FetalDev)

# SLEEP TIME

[www.aboutkidshealth.ca/NewbornSleepIHM](http://www.aboutkidshealth.ca/NewbornSleepIHM)

Newborn babies do a lot of sleeping. In fact, although you may not get much sleep during this time, your newborn baby spends about 18 hours of each day doing just this. However, a newborn baby's sleeping pattern is different from that of adults. Newborn babies spend only 20% of their sleeping time in a deep, sound sleep. The rest of the time they drift in and out of sleep, which means that by the time you put your newborn baby down and try to take a nap, he will be awake and crying again. Here are a few tips for making sleep time easier:

- Keep things cozy: Many newborn babies do not like the large, vast space of a crib. Try using a cradle or bassinet for those early weeks, to make your newborn baby feel cozier. Just make sure that the mattress is firm and there are no pillows or loose blankets that could smother your baby. You might also want to try swaddling your baby by wrapping him snugly.
- Control the temperature: Newborn babies do not like a room that is too warm or too cold. Also, overheating is dangerous for your newborn baby.
- Keep him moving: Movement tends to soothe newborn babies and help them to sleep. Try rocking, patting, or swaying him to music.
- Try some background noise: Background noise can be quite comforting to newborn babies. Soft music or white noise from a fan can be very soothing.
- Don't deny the daytime naps: You may be tempted to keep your newborn baby awake during the day, even when he wants to sleep, so that he will sleep "better" at night. This approach will not work, because it will make your newborn baby overtired. An overtired baby has more problems sleeping than a well rested one. Still, if your newborn baby is missing up his days and nights, you can try

limiting the length of his naps and keeping him active when he is awake.

- When your newborn baby wakes at night for a feeding, try feeding him in a darkened room, and throughout the feeding, burping, and diaper changing, keep your talking and stimulation to a minimum. When your baby wakes for a day feeding, increase the light, conversation, and stimulation. This will help your newborn baby learn that nighttime is a sleepy time and daytime is fun time.

## **Sudden infant death syndrome (SIDS)**

Sudden infant death syndrome (SIDS) is the sudden and unexpected death of a baby less than one year old, which remains unexplained after a thorough investigation and autopsy.

Babies who succumb to SIDS do so in their sleep.

To help prevent SIDS, the Canadian Paediatric Society has made the following recommendations:

- Put your baby to sleep on his back, not his side or tummy.
  - Avoid soft mattresses, bedding, and pillows.
  - Do not smoke during pregnancy, and do not expose your baby to second-hand smoke after he is born.
  - Avoid overheating your baby.
  - Keep your baby in your room, but not in the same bed. The safest place for a baby to sleep is alone in a crib.
  - Do not allow your baby to sleep in a stroller, swing, bouncer, or car seat for extended periods of time.

## **Related articles:**

Sudden infant death syndrome

[www.aboutkidshealth.ca/SIDSIHM](http://www.aboutkidshealth.ca/SIDSIHM)

# RELATIONSHIP STRESS AFTER HAVING A BABY

[www.aboutkidshealth.ca/Relationships](http://www.aboutkidshealth.ca/Relationships)

Having a baby is a stressful experience that challenges even the best of relationships. First-time parents face role changes, lifestyle adjustments, and financial difficulties. Experienced parents have additional demands from their previous children. Mothers and fathers respond and adjust to their newborn baby in different ways. Misunderstandings and conflicts can affect the relationship as a result. Role changes, lifestyle adjustments, and financial difficulties can all add to the problems.

## What new mothers go through

New mothers are often overwhelmed by their changing role in life. Whereas before they were individuals surrounded by friends and possibly a challenging career, now their needs are secondary to the newborn baby. They may feel less important now that their days are filled with diaper changes, feedings, and chores galore.

Fathers can help by trying to understand how busy their partner's day really is.

## What new fathers go through

New fathers sometimes feel left out and isolated. They may even see the new baby as a sort of competition for your attention. As a result, they may withdraw and become depressed. You can help by including your partner in the care of your newborn baby. Take advantage of his offers to spend one-on-one time with your baby. Your partner may do things differently from you, but try to look past that. He needs to do things in his own way, and he will be just fine.

## Seeking help for depression

Relationship difficulties complicated by postpartum depression can be a nightmare. Changing roles, social isolation, and financial difficulties can all contribute to depression. Both

mothers and fathers can experience depression after having a baby. Seek medical help if you, or your partner, are experiencing any of the signs of depression:

- unpredictable, uncontrolled tearfulness and spontaneous crying spells that occur without cause
- feelings of sadness, melancholy, weary anger, guilt, apathy, or general despair
- an overwhelming sense of worthlessness
- forgetfulness, difficulty making decisions, or inability to concentrate
- sleep disturbances, such as sleeping excessively and still feeling tired, or having chronic insomnia at night with exhaustion during the day
- a change in eating habits, such as lack of appetite, aversion to the sight and smell of food, or excessive appetite
- a total loss of sexual energy
- withdrawal from your newborn baby, partner, friends, and family
- sometimes: suicidal feelings; or a feeling that you might harm yourself or your newborn baby.

## Related articles:

Baby blues and postpartum depression

[www.aboutkidshealth.ca/PostpartumDepression](http://www.aboutkidshealth.ca/PostpartumDepression)

# FEVER IN BABIES

## What is fever?

Fever is usually a sign that your baby's body is fighting an infection. Bacteria and viruses usually thrive at a temperature near our normal body temperature. When we have a fever, our body temperature is elevated, which makes it harder for bacteria and viruses to survive. Fever also activates the immune system and sets the infection-fighting white blood cells into action. It is important to realize that while fever is serious in newborn babies, it is not necessarily a bad thing if the baby is over three months of age. Fever is the body's way of fighting infection, so it is actually a good thing. Scientists believe that, in response to invaders such as viruses and bacteria, the body's white blood cells produce a chemical that tells the brain to turn up the body temperature. A higher body temperature enables the immune system to fight infections more efficiently. Fever may also help to enhance the production of antiviral substances in the body. Usually, fever is associated with common illnesses such as colds, sore throat, or ear infections. Occasionally, fever can be a sign of something more serious.

## How to take your baby's temperature

There are two ways to take your baby's temperature: rectally or under his armpit. The most accurate of these methods is the rectal way; however, many parents do not find this approach very appealing. Here are a few tips for measuring your baby's temperature under the armpit:

- Place the bulb of the thermometer in your baby's armpit, and hold his arm down alongside his body. Make sure the bulb is completely covered in the armpit.
- Wait for the thermometer to take the reading.
- The normal range for a temperature taken under the armpit is 36.7°C to 37.5°C (98.0°F to 99.5°F).

Oral thermometers are not recommended until about four years of age. Ear thermometers should

not be used in newborn babies and young infants because they tend to give inaccurate readings in the very young. Ear thermometers can be used in children over two years old. Fever strips, which are placed on the child's forehead, are also not recommended due to inaccuracy.

## Treatment for fever

Treatment of fever in young infants: In babies three months of age or under, fever can be a cause for concern. If you notice a temperature that is even just slightly above the normal range – 38°C (101°F) taken rectally or 37.3°C (99.1°F) taken under the armpit – bring your newborn baby to the doctor as soon as possible.

Treatment of fever in older infants: Most fevers are caused by viruses and will get better without treatment. Because of this, many doctors do not recommend reducing a fever in infants over six months of age unless the fever is over 38.5°C (101.5°F). However, if the infant is having aches and pains from the fever, acetaminophen can be used to make him feel more comfortable.

If a fever is found to be caused by a bacterial infection, the infection should be treated with antibiotics. Antibiotics work to destroy the bacteria. In the process, they lower the fever. Sometimes antibiotics and acetaminophen are used simultaneously to treat the fever. Fevers that shoot up past 41.5°C (106.7°F) are rare and should be treated immediately.



# SPITTING UP & VOMITING

[www.aboutkidshealth.ca/VomitingIHM](http://www.aboutkidshealth.ca/VomitingIHM)

## Spitting up

Many newborn babies and young infants are prone to spitting up some of their breast milk or formula during or shortly after a feeding. Some newborn babies spit-up only occasionally, and others spit-up with every feeding. Spit-up effortlessly rolls out of the baby's mouth, sometimes with a burp. Spitting up occurs when the ring of muscle at the top end of the stomach does not close properly. Spitting up decreases as the baby gets older, and it generally goes away before the baby reaches one year of age. You can reduce the amount that your baby spits up by trying the following:

- Feed your baby before she becomes frantically hungry.
- If you are bottle feeding, feed her smaller amounts, as overfeeding can make spitting up worse. Your baby does not have to finish a bottle.
- If you are bottle feeding, make sure the nipple is neither too large nor too small. A nipple that is too large will cause the milk to flow too fast; a nipple that is too small will cause your baby to swallow a lot of air.
- Keep feeding times quiet and calm, and try to minimize distractions.
- Avoid tight diapers because they put pressure on the abdomen. Don't put pressure on your baby's tummy.
- Burp your baby a couple of times during feedings, to get rid of some of the air in her tummy. Don't interrupt her feeding, but instead burp her when she takes a break.
- Hold your baby upright after each feeding.

Usually spitting up is harmless; however, it can pose a problem if it leads to poor weight gain, choking, or acid damage to the esophagus.

If your baby experiences any of the following symptoms when she spits up, bring her to the doctor: streaks of blood in the spit-up; spit-up that causes your baby to choke or gag; spit-up that causes

your baby to turn blue; problems gaining weight; or vomiting or projectile vomiting.

## Vomiting and projectile vomiting

Vomiting is more forceful than spitting up. It involves more than just a couple of tablespoons of stomach contents. Vomiting can be a sign of a viral infection in the stomach, a reaction to something the baby ate, or another gastrointestinal problem.

Initial treatment for vomiting involves feeding your baby in smaller amounts. If you are breast-feeding, reduce the amount of time that your baby spends at the breast at each feeding. You may need to feed your baby more frequently to make up for the smaller feedings.

You may need to temporarily replace breast milk or formula with an electrolyte solution such as Pedialyte. If this is the case, offer your baby the clear fluid for eight hours after the vomiting has stopped. Feed your baby small amounts at frequent intervals: about 5 mL (one teaspoon) every five minutes to start. After four hours without vomiting, double the amount each hour. If your baby vomits at this point, let her stomach rest for one hour and then start the feedings again with smaller amounts.

If there is a viral infection, vomiting is often accompanied by diarrhea. If there is green bile in the vomit, it could be a sign of a blockage in the intestine, which requires immediate attention and possibly emergency surgery. Contact your health care professional immediately if:

- the vomiting appears to be excessive
- there is green bile or blood in the vomit
- the vomiting is accompanied by diarrhea

Also call the doctor if your newborn baby shows signs of dehydration such as dry mouth, less than six wet diapers per day, sunken eyes, a sunken fontanelle, or dry skin.

# INFECTION IN NEWBORN BABIES

[www.aboutkidshealth.ca/NewbornInfectionIHM](http://www.aboutkidshealth.ca/NewbornInfectionIHM)

Newborn babies have weak immune systems. This is one reason why breastfeeding is so important: it provides the newborn baby with antibodies to help fight infection. As a result, breastfed infants have fewer infections than babies who are bottle fed.

## Causes of infection

Most infections in newborn babies are caused by bacteria, and some by viruses. A mother's birth canal contains bacteria, especially if she has an active infection. During childbirth, the baby can swallow or breathe in the fluid in the birth canal, and bacteria or viruses can get into his lungs and blood. The baby can become sick during childbirth or within the first few days after birth. As the bacteria or viruses multiply, the newborn baby can become ill very quickly. The sooner the infection is discovered and treated, the better the outcomes will be for the newborn baby. There are a number of bacteria and viruses that can be transmitted from mother to newborn baby during pregnancy or childbirth. Occasionally, a newborn baby catches an infection after birth from someone who has a cold or flu.

## Symptoms of infection

The symptoms of a beginning infection are listed below. It may be difficult at first to determine if the newborn baby has an infection, because healthy newborn babies can also have some of these symptoms when there is no infection. In a newborn baby with an infection, these symptoms will continue and the baby needs to be checked by a doctor:

- irregular temperature below 36.6 degrees C (97.9 degrees F) or above 38.0 degrees C (100.4 degrees F), taken rectally
- poor feeding and difficulty waking to feed
- excessive sleepiness
- irritability
- rapid breathing at a rate over 60 breaths per minute
- change in behaviour

As the infection gets worse, the newborn baby may develop additional symptoms:

- difficulty breathing
- bluish tinge around mouth
- pale or grayish skin
- high body temperature (above 38.0 degrees C or 100.4 degrees F, taken rectally)
- low body temperature (under 36.6 degrees C or 97.9 degrees F, taken rectally)

## Treatment of infection

If your newborn baby has an infection, she may be taken to the special care nursery of the hospital, where she will be placed on a warming bed or in an incubator to regulate her body temperature. She may be attached to a cardiorespiratory monitor to measure her heart rate and breathing. She may also need a monitor called a pulse oximeter to determine if there are appropriate levels of oxygen in her body. If a bacterial infection is suspected, your newborn baby will be given antibiotics. As infections in the newborn baby can be very serious and require quick and effective antibiotic treatment, the antibiotics are given as an intravenous (IV) infusion. Viral infections do not respond to antibiotics. Therefore, if it turns out that your newborn baby has a viral infection, she will usually need to fight the infection without medication. Supportive care, described below, will be given:

- She may need IV fluids to prevent dehydration, or if she is too sleepy to eat.
- She may also need a tube inserted into her nose or mouth to drip milk directly into her stomach.
- She may need extra oxygen during this time, especially if she has pneumonia.

# DIAPER RASH

[www.aboutkidshealth.ca/DiaperRashIHM](http://www.aboutkidshealth.ca/DiaperRashIHM)

## What is diaper rash?

Diaper rash is a skin irritation that affects babies or toddlers in the diaper area. Most often, it is due to contact between urine and stool with your baby's sensitive skin. Most babies will have at least one diaper rash before being toilet trained.

## How does diaper rash affect my baby?

A baby with diaper rash may show these signs or symptoms:

- red skin
- irritated or painful skin
- spots or blisters in the diaper area
- pink patches on the skin
- more severe forms of the rash have bright red patches and may have open sores (these are often very painful).

## Causes of diaper rash

The most common cause of diaper rash is contact with urine and stool. This is called "irritant diaper dermatitis." It often occurs when the baby has diarrhea. It most commonly affects the buttocks and thighs. Snug-fitting, plastic pants or diapers that prevent wetness from drying can make the rash worse.

Diaper rash can also be caused by yeast infection (Candida). This fungal infection thrives in warm, moist areas such as skin creases. Yeast diaper dermatitis looks red and often has small red spots around the edges. It is usually not painful. It can be caused or becomes worse when the baby is on antibiotics.

Other rashes can occur in the diaper area. These include eczema, bacterial, viral and allergic rashes. They may also be seen on other parts of the body as well.

## Treatment for diaper rash

Leave the diaper off. Expose your baby's skin to warm, dry air as much as you can. When changing the diaper, wash your baby's bottom with mild soap and warm water, rinse, and pat dry. It may be less painful for your baby if you wash the area in a warm bath. Avoid wipes with alcohol; this may cause more pain. Use an unscented barrier ointment, such as petroleum jelly (Vaseline) or zinc oxide to protect the area after each diaper change. Do not share creams with other children. Do not contaminate the cream. Wash your hands before putting them into the jar.

Candida (yeast) diaper dermatitis should be treated with a topical antifungal cream such as mycostatin or clotrimazole. Make an appointment with your child's doctor if the rash does not get better within a few days or if the baby seems unwell or has a fever.

## Prevention of diaper rash

The best way to prevent diaper rash is to change your baby's diaper often. If your baby has diarrhea, change the diaper even more often. Applying a thin layer of unscented barrier cream can also protect the skin. It is not known whether cloth or disposable diapers are better in preventing diaper rashes.



# CONTRIBUTORS

## **Main contributors:**

Amanda J. Sheppard, PhD, Applied Scientist, AboutKidsHealth, The Hospital for Sick Children  
Ross Hetherington, PhD, CPsych, Director, AboutKidsHealth, The Hospital for Sick Children  
Assistant Professor, Departments of Paediatrics and Public Health Sciences, University of Toronto

## **Inuit Health Matters Advisory Board (named alphabetically):**

Annie Buchan, Clerk/interpreter, Government of Nunavut Pallulaaq Ford, Clinical Nurse Educator  
Sheila Pokiak Lumsden, Executive Director, Qullit Nunavut Status of Women Council  
Geraldine Osborne, MD, Chief Medical Officer of Health, Government of Nunavut

## **Design contributors:**

Jelena Reljic, MA, Design Professional, ePublishing Business Development  
Jennifer Polk, HBSc, MScBMC, Art Director, AboutKidsHealth, The Hospital for Sick Children

## **Funding contributors:**

Public Health Agency of Canada  
AboutKidsHealth, The Hospital for Sick Children