

A close-up photograph of a woman with blonde hair kissing a baby on the forehead. The woman is on the left, leaning towards the baby on the right. The baby is wearing a pink patterned blanket. The image is overlaid with text and has a blue bar at the top and bottom.

*Sofikile ekhaya*

magicalmaternity

# ANTENATAL GUIDE

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# CONGRATULATIONS, YOU'RE PREGNANT!



Congratulations on this exciting time in your life!

The next few months will be one of the most magical times in your life, and we hope to make it even better with this antenatal guide.

It has been shown that mothers and fathers who participate in antenatal education classes or learning have a far better experience with pregnancy and delivery. With this guide, we hope to share information and knowledge to empower you, your partner, and your family through the joys of pregnancy.

Your body will undergo many changes to nurture your growing baby through development and birth. We have outlined information about to help you understand and be prepared for this.

# INTRODUCTION TO PREGNANCY

**It all began** with your egg and father's sperm merging, growing and multiplying to becoming an embryo. From this point until birth your baby is known as a foetus and is connected to you in your womb through the placenta. The placenta is important for nutrition and oxygen being delivered to the baby from the mother so a foetus cannot exist without a healthy placenta. The healthier you are, the healthier the placenta and your baby will be.

**When to expect your precious bundle** start counting your pregnancy from the first day of your last menstrual period (LMP) which is usually about 2 weeks before ovulation, and when your baby is conceived. The estimated due date is 280 days from the first day of your LMP which is approximately 40 weeks. However this is only an estimate as only 5% of babies are born on their due date.

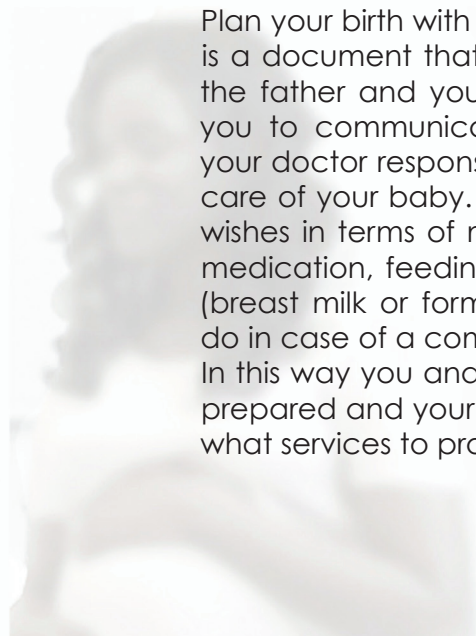


# Antenatal Care Before Labour and Delivery



Try to learn as much as possible during this time and make use of the antenatal classes, educational materials and the time with your doctor to learn as much as you can.

Plan your birth with your doctor. A birth plan is a document that is agreed upon by you, the father and your doctor and is to assist you to communicate your birth wishes to your doctor responsible for the delivery and care of your baby. This document lists your wishes in terms of method of delivery, pain medication, feeding choices for your baby (breast milk or formula) and even what to do in case of a complication or emergency. In this way you and your family will feel well prepared and your doctor will know exactly what services to provide.



# Weight and Body Mass Index

## WEIGHT GAIN DURING PREGNANCY

	Weight gain during 1st Trimester	Weekly Weight gain after 1st Trimester	Total Weight Gain During Pregnancy
Underweight (BMI < 18.5)	2.3kg	0.49 kg	12.5 – 18 kg
Normal weight (BMI 18.5 – 25)	1.6 kg	0.44 kg	11.5 kg – 16 kg
Overweight (BMI > 25)	0.9kg	0.30 kg	7 kg – 11.5 kg

For a normal weight mother expecting twins, the recommended weight gain is 0.65 kg per week after the first trimester, total 16 – 20 kg.

Although weight gain is variable, the average distribution of the weight is:

<b>Maternal fat: 2 to 4 kg</b>	<b>Amniotic fluid: 0.8 kg</b>
<b>Breasts: 0.45 kg</b>	<b>Uterus 0.9 kg</b>
<b>Placenta 0.675 kg</b>	<b>Blood volume increase: 1.5 kg</b>
<b>Baby: 3.5 kg</b>	<b>Extra fluid 1.4 kg</b>



# How to have a healthy pregnancy and healthy baby

**WEIGHT:** Being underweight with a Body Mass Index (BMI) less than 18.5 or overweight with a BMI greater than 30 before pregnancy can cause a higher risk for your baby, for example, being very underweight or too overweight.

**BLOOD PRESSURE:** High maternal blood pressure can compromise blood flow, nutrition and oxygen to your baby.

**BLOOD SUGAR:** High maternal blood sugar can cause complications for your baby.

**NUTRITION:** You must maintain a balanced healthy diet to pass on the best nutrition to your baby.

**VITAMINS:** Multivitamins, iron, folic acid and omega 3 fatty acids are good for your babies bones, muscle, blood, heart and brain.

**HYDRATION:** Adequate water during your pregnancy avoids blood pressure problems, weakness and illness as increased water helps your body remove excess toxins to keep your baby healthy.

**INFECTION:** Some infections can hurt your baby so identifying and treating infections are important.

**REST V STRESS:** Rest adequately to conserve energy for your baby. Finds ways to relieve stress to avoid complications like premature labour.

**TOXINS:** Alcohol, cigarettes, drugs, caffeine, x-rays and some medications are not good for your baby so check with your doctor before taking any.

**BLOOD GROUP:** Your blood group is important as some babies have a different blood group from their mother which may cause a serious illness. Your doctor will need to know your blood group to protect your baby from Rh Sensitivity or blood group incompatibility.



# Healthy Living at Home

## EATING

For a healthy lifestyle,  $\frac{1}{2}$  of daily servings of all food should be fruits and vegetables,  $\frac{1}{4}$  should be grains, and  $\frac{1}{4}$  should be proteins. Therefore, each breakfast, lunch and dinner plate should be prepared just like this plate in the diagram. This is the easiest way to ensure that proper calories, vitamins, nutrients are being consumed.

A more “colourful” plate guarantees a healthier the diet. Mix green, red, orange vegetables to ensure proper nutrition. Leafy greens (spinach, broccoli) provide folate (see below in Vitamins and Minerals. Orange and yellow fruits and vegetables provide vitamin A.

Examples:

**VEGETABLES:** salads, lettuce, carrots, squash, beet root, broccoli, cabbage, legumes

**FRUITS:** tomatoes, apples, oranges, peaches, prunes, bananas, plums.

**GRAINS or STARCHES:** whole wheat grains, bread, rice, pasta, barley, oats

**PROTEINS:** meat, chicken, seafood, eggs, nuts, beans, peas, dairy (cheese, milk, yogurt, cottage cheese), tofu/soy

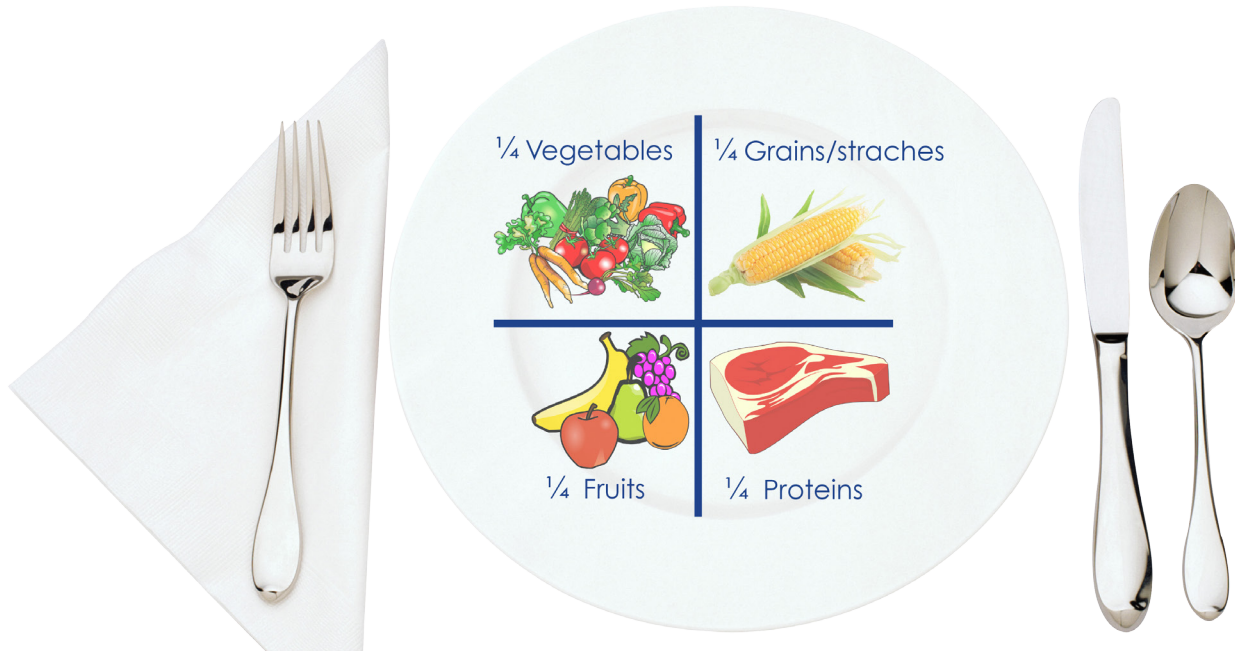
**Note** that recommended fish intake should be about 240g per week. Avoid fish high in mercury

**Be careful** with salt, as too much may raise blood pressure.

It is quite easy to see that it is actually very easy to enjoy very healthy eating choices! Do not skip meals. These choices will determine the health and development of the baby.

# Healthy Living at Home

This is an example of a balanced diet, how a nutritious plate should look. This is considered a NORMAL, HEALTHY way to eat for everyone, regardless of age or age.



# Healthy Living at Home

## VITAMINS AND MINERALS

It is recommended to take 1 multivitamin daily and be sure to get iron (ferrous) and folate supplements from your doctor. Iron is important for blood and folate helps prevent your baby from being at risk of problems with brain and nervous system.

## OMEGA 3 FATTY ACIDS

Omega 3 fatty acids are found in fish, vegetable oils, nuts, flax seeds, flaxseed oil and leafy vegetables. They protect your babies heart from atherosclerosis or blockage of heart vessels, lower blood pressure and heart rate, improve blood vessel function, lower triglycerides and ease inflammation. They are also good for visual and neurologic development of your baby and help brain, thinking, and even depression.

## PHYSICAL ACTIVITY

It is recommended that vigorous physical activity is for 30 to 60 minutes per day. This includes brisk walking, running, jogging, swimming, sports activities. Be careful not to do too much, but do try to exercise regularly.



# Healthy Living at Home

## DRINKING

Although people hear this every day, hydration is the most important part of staying healthy. A healthy adult or adolescent should be drinking at least 2 litres of water daily even at rest! That means that the amount of water goes UP for exercise and high temperatures. Other good liquids to drink are 100% natural fruit juices, soups, herbal decaffeinated teas, broths. Always know the ingredients and aim for the healthiest ones possible.

Daily recommendations:

**2 to 3 litres of clean drinking water**

**480 ml of dairy (milk, cheese yogurt)**

**240 to 480 ml of 100% fruit juice, herbal teas etc**

**Moderate amounts of caffeinated and fizz drinks**

## SLEEPING

Sleeping is underestimated in terms of role in health. Growth happens during sleep and healing from illness occurs at the same time. Hence proteins, calories, vitamins, and minerals are important for overall health and repair that occurs during sleep.

Sleeping also allows your brain the time to resolve pressing issues and to wake feeling re-energized. On average a baby requires about 13 to 17 hours of sleep a day, a child about 10 hours, adolescents about 8 to 9 hours and adults about 7 to 8 hours of sleep a day.

Everyone needs a good night sleep to be mentally and physically well.

# Healthy Living at Home

## SUBSTANCE ABUSE AND TOXINS

It is important to understand that anything you put into your body affects your baby's health and development. Many medications, toxins, drugs can affect the unborn child, sometimes in ways that cannot be fixed.

The following is a list of some substances with safety risk:

Smoking of any kind (tobacco, marijuana, cigars)

Alcohol

Drugs that cause addiction like marijuana, cannabis, cocaine, etc.

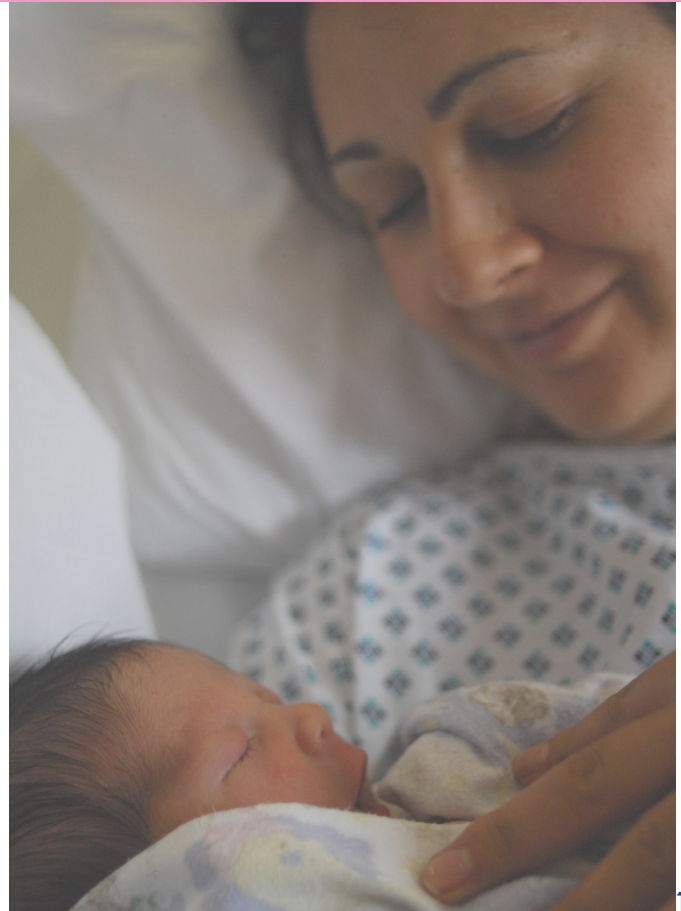
Prescription medications and tablets

Non-prescription medications and tablets

Some traditional medications and herbs

Pesticides and insecticides

Caffeine



# Healthy Living at Home

**MEDICATION:** Be aware that some medications are not safe during pregnancy or breastfeeding.

**CAFFEINE:** Too much caffeine can affect your baby's heart, blood pressure and nervous system.

**TOBACCO/SMOKING** Smoking is not good for any living being whether you smoke or are near a smoker. Smoking reduces blood flow, removal of poisons, toxins and decreases oxygen to your baby thus impairing your babies nutrition and so the development of your baby.

**ALCOHOL** Drinking alcohol during the pregnancy, especially in the first trimester, can cause permanent damage to the brain and body of your baby. This is called Foetal Alcohol Syndrome (FAS) and can cause:

Low birth weight

Mental and physical retardation

Poor motor skills

Behavioural problems

Learning problems

Memory difficulty

Attention problems

Poor judgement

Abnormal body and facial features including small eyes, flat mid-face, small chin, ear abnormalities, short nose and thin upper lip.

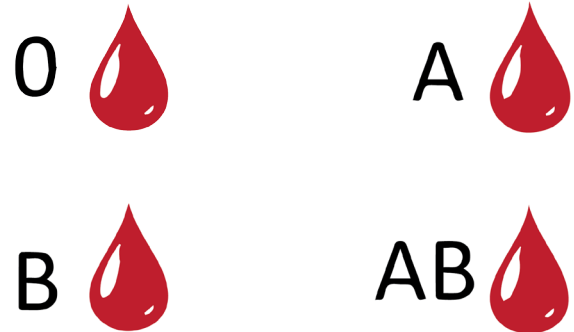
*Note that alcohol used in cooked foods is usually evaporated by cooking so is mostly safe.*

# RH Sensitivity or Incompatibility

This is a disease occurs when a mother who is Rh- carries an Rh+ baby, e.g. the mother is O- and the baby is O+. It happens because the father is Rh+ so the baby inherits the father's blood type. In this case if the baby's blood crosses the placenta and enters the mother, the mother will create antibodies against the baby's blood group. Some babies get anaemic and very jaundiced. If the baby has this condition and will need intensive monitoring and care.

When the mother delivers the baby, she will receive Anti-D antibodies / immunoglobulin within 72 hours of birth preventing her from creating the antibodies that would affecting other pregnancies.

## Blood Types





# Healthy Living at Home

## INFECTION AND ILLNESS



**TUBERCULOSIS (TB)** can cause harm to you or your baby. At least 2 weeks of coughing, fever, and weight loss are the most common symptoms. It is spread by coughing and can transmit to your baby if you get TB into your blood. Anyone with TB can transmit TB so household contacts are important to know.

**GROUP B STREPTOCOCCUS (GBS)** is a bacteria frequently found in the intestinal and genital tracts. It can be found in the urine and in the blood without any symptoms at all. It may lead to infection of the placenta and/or pass to your baby at birth.

**LISTERIA** is causes an illness that feels like influenza (fever, chills, and back pain) and most common in the third trimester. It can cause preterm labour and illness for your baby, even meningitis.

**TORCHES (TOXOLASMOSIS, RUBELLA, CYTOMEGALOVIRUS, HERPES, AND SYPHILIS)** can also be transmitted during pregnancy or delivery. Rubella and syphilis are screened routinely during antenatal care labs.

# Healthy Living at Home

**HUMAN IMMUNODEFICIENCY VIRUS (HIV)** is spread through blood, semen, vaginal fluids, or breast milk. If untreated it can make you very ill and can be transmitted to your baby. However, if you are on medications for HIV and get your viral load very low, the likelihood of transmission to your baby is almost zero. This is screened at every pregnancy, and at risk children are screened as well.

**HEPATITIS B (HEPB)** is a virus that usually attacks the liver. It is spread through blood and bodily fluids such as saliva, sexual contact and childbirth, and can be transmitted by sharing needles. It is not transmitted through breast milk. This is tested during pregnancy. If you are Hepatitis B positive your doctor will be prepared to treat your baby immediately after birth to prevent your baby from getting this infection.

**SEXUALLY TRANSMITTED INFECTIONS SUCH AS SYPHILIS, GONORRHOEA, AND CHLAMYDIA** can cause discharge, pain on urination, or no symptoms at all. They are dangerous to you and your baby and are therefore screened routinely.



**HIV AIDS**  
**HEPITITIS B**  
**SEXUALLY TRANSMITTED INFECTIONS**

# Pregnancy problems and solutions

## BACKACHE

This gets progressively worse during pregnancy from hormones, the increasing weight in the front, curvature of the back. Some techniques to relieve backache:

1. Keep a straight back by tucking in your pelvis and pulling in your stomach
2. Sleep on one side with a pillow or two between your legs
3. Don't bend at the waste; squat or bend at the knees while keeping your back straight to pick things up
4. Back muscle strengthening exercises that are low impact
5. Wear shoes with good arch support, low heeled shoes.
6. Move your whole body instead of twisting
7. Sit up with a straight back
8. Use a firm mattress or place a board underneath for more support.



# Pregnancy problems and solutions

## CRAMPS

Abdominal cramps are common and harmless during a normal pregnancy. If they are not severe, constant, and no bleeding, they are normal. Most of these cramps are due to ligament and muscle changes during pregnancy or dehydration. If there are menstrual-like cramps with or without diarrhoea, nausea, lower backache and/or vaginal discharge that may indicate labour. In this case, consult with the doctor or the midwife.

Leg cramps are common, mostly at night in the 2nd and 3rd trimesters. Leg cramps can be caused by fatigue, fluid retention in the legs, or calcium deficiency. Avoid leg cramps by resting, drinking at least 2 litres of water daily, and doing calf stretching exercises. If there is a continuous pain, seek medical attention to check for a blood clot.

## SWELLING

Swelling of your lower legs is common, but severe swelling could mean you require medical attention.

Normal swelling in your legs reduces in the morning but will worsen as the day goes on. Normally the swelling will be in both your legs with an uncomfortable ache. There can also be mild swelling of your hands. You can manage this by reducing your salt intake, drinking the right amount of water, elevating your legs while resting and stick to your routine exercise.

Severe swelling of the legs, especially in one leg more than the other, can be a sign of complications like a clot in the leg or pre-eclampsia (pregnancy-induced hypertension) and will be painful. A sign of pre-eclampsia is increased rapid swelling with headache or vision changes. Other complications can be severe pain in your hands accompanied by numbness, pain, or weakness is also a potential complication or severe swelling of your face.

# Pregnancy problems and solutions

## CONSTIPATION

This can be managed by drinking a lot of water and eating more fibre (wholegrain, fruit, vegetables). Prunes are useful. Consider decreasing dairy intake to less than 480ml daily.

## FATIGUE

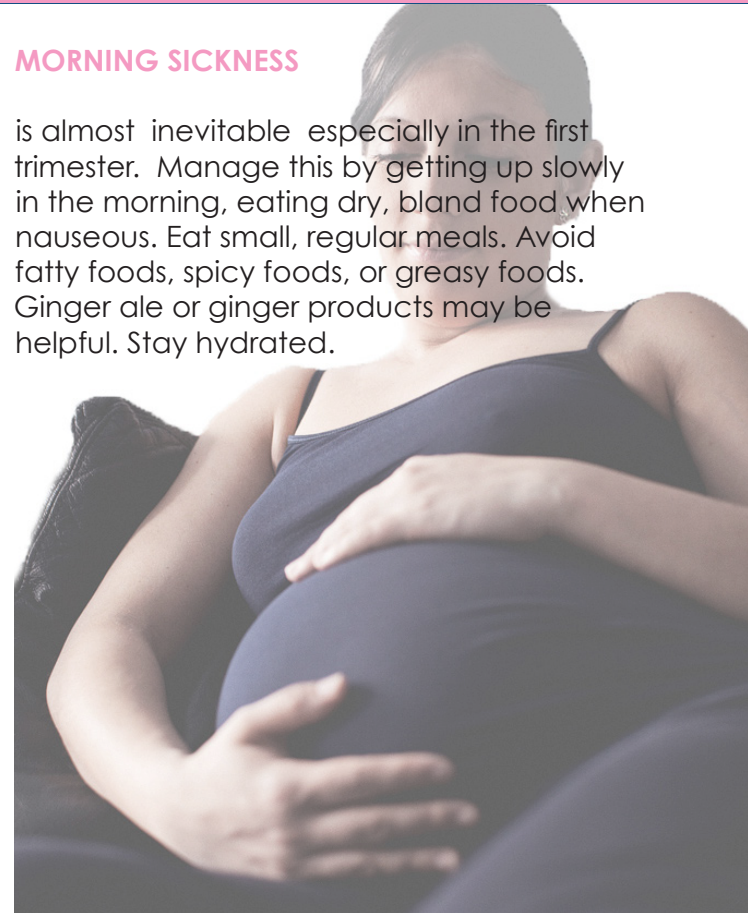
This is managed through drinking a lot of water, getting a lot of rest, and eating a balanced diet with proper vitamins and minerals like iron, folate, and vitamin B12. Heartburn or reflux can be treated by avoiding fatty foods, cool drinks. Also snacking on ginger, almonds, or liquorice helps some mothers.

## PILES OR HAEMORRHOIDS

can be prevented or managed by avoiding constipation, increased vitamin C, and taking stool softeners. Warm sitz baths help as well.

## MORNING SICKNESS

is almost inevitable especially in the first trimester. Manage this by getting up slowly in the morning, eating dry, bland food when nauseous. Eat small, regular meals. Avoid fatty foods, spicy foods, or greasy foods. Ginger ale or ginger products may be helpful. Stay hydrated.



# Pregnancy problems and solutions

## SPECIAL EXERCISES AND MASSAGE FOR THE PELVIS

### KEGEL EXERCISES

These exercises are for the pubococcygeus (P-C) muscle. The exercises help the P-C muscle in the following:

- Strengthening urinary sphincter control, i.e. better bladder control
- Increasing vaginal muscle tone
- Increasing your ability to constrict the vagina voluntarily, thereby making intercourse more enjoyable
- Reduces pain from sexual intercourse
- Trains you to relax your pelvic floor muscles to make delivery of the baby easier
- The recovery of the muscles after childbirth are improved
- Active phases of labour are shorter because the muscles are stronger in pushing baby out.
- Reduces leakage of urine and haemorrhoids

In all, kegel exercises make child birth easier. To identify the P-C muscle, sit on the toilet with your legs spread apart as far as possible. Start and stop your urinary flow. The muscle that does this is the P-C muscle. This muscle must be exercised about 5 times a day, 15 contractions each by holding the contractions for 3 seconds each, then relaxing, then repeat. If sore, rest for one or two days and resume.

# Pregnancy problems and solutions

## PERINEAL MASSAGE

The perineum is the soft skin between the anus and the vagina. Because of its proximity to where the baby exits the vaginal canal, as well as the pressure put on it while pushing, this delicate area is prone to tearing, especially for women having their first vaginal birth. Perineal massage helps to soften the tissues to ease the delivery of the baby to minimize and tears during delivery. Start this massage at about 34 weeks:

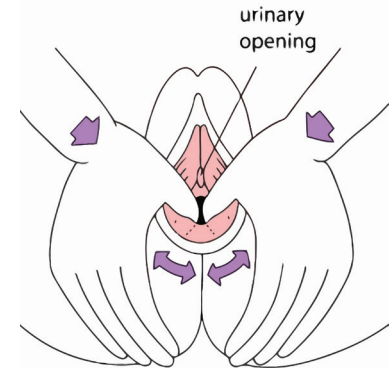
- Make sure your hands are clean with neatly trimmed nails
- Have safe, non-toxic and non-irritating massage oil like almond oil, vitamin e oil, or coconut oil, a clean towel and a mirror (optional)
- Take a warm bath or use a warm washcloth compress to soften the area (10 minutes).
- Lay in a comfortable position on a clean towel. Try propping your back up with pillows. Position mirror if needed. Keep yourself relaxed and calm so that your bottom can be relaxed and calm too.
- Apply massage oil to the perineum.

Next, follow these three steps:

1. Insert your one or two thumbs about an inch into your vagina (about to your thumb's knuckle), and put firm but gentle pressure straight down on the perineum. Allow the perineum to stretch for a minute or two. After it stretches for a few minutes, you may be able to get the second thumb in more easily. Slight burning or stretching is OK, but if you experience pain, use more gentle pressure, or stop the massage.

2. Once the perineum has been stretched for a couple of minutes, gently move your thumb up along the sides of the vagina, stretching it from side to side. Think about it like running your thumb on the inside of a bowl from one side to the other.

3. If you're using two thumbs, you can run them from the bottom up to each side, like you're starting with your thumbs at the bottom of the bowl and running them up opposite sides.





# Your baby during pregnancy

## MONITORING YOUR BABY

Now that you know how the baby develops inside of you, it is important for you to know how to make sure the baby is doing okay. You will count foetal movements twice per day for 30 minutes each and record them on the Kick Count Diary. There should be at least 5 movements in that span. If there are less than 10 movements in 12 hours, consult your doctor. If you have a high risk pregnancy, you must count 3 times daily instead. Any change in movements, either decrease or sudden vigorous movement that may indicate foetal distress and you must consult your doctor.

Also during the growth, you will be able to monitor the baby via the ultrasound done during the antenatal check-ups. The medical staff will review your progress and the baby's as well.



# Your Baby During the Pregnancy

## MILESTONES OF FOETAL DEVELOPMENT

- DAY 1** The sperm and the egg cell join. Once fused, the union will divide into two parts and grow.
- DAY 5 TO 9** The fused cell turned into hundreds of cells and now implants into the womb and will begin forming a placenta and embryo.
- DAY 14** It is now an embryo. The embryo now releases hormones to stop the menstrual cycle to allow for its development.
- DAY 18** The heart and the eyes are formed.
- DAY 20** The brain, backbone, and nervous system begin to form now.
- DAY 24** The heart begins to beat.
- DAY 30** The baby is about 6 – 7 mm long and the brain is formed. The blood begins to flow in the arteries.
- DAY 35** The ears, nose and mouth develop.
- DAY 42** The skeleton begins to form with the muscles. If it's a boy, the penis begins to develop.
- DAY 43** The brain activity can be measured now.
- DAY 45** The baby begins to move and the first signs of teeth are present.
- 7 WEEKS** Lips are sensitive to touch and the ears start to develop family traits.

# Your Baby During the Pregnancy

- 8 WEEKS** Baby is about 1g in weight and 3cm long. All organs are developed, good heart beat. Taste buds are formed.
- 8 ½ WEEKS** Folds in the soles of feet are formed. Hand, palms, eyelids are sensitive to touch.
- 9 WEEKS** Fingers move, fingernails are formed. Starts to suck thumb.
- 10 WEEKS** Baby's body begins to be sensitive to touch. Eyelids begin to develop. Baby begins to swallow and to frown.
- 11 WEEKS** Baby starts to urinate. Baby has facial movements and starts to smile.
- 12 WEEKS** Baby starts to kick. Toes start to move. Head turns. Lungs start to do breathing exercises.
- 13 WEEKS** Baby's family traits start to develop. Vocal chords develop now.
- 4 MONTHS** Baby can touch with hands. It can swim and do somersaults.
- 4 – 5 MONTHS** Mother can feel the baby's movements!
- 5 MONTHS** Baby reacts to noise.
- 6 MONTHS** Hair starts to grow. Eyelashes begin to grow. Baby weighs about 640 g and is 23 cm long.
- 7 MONTHS** Teeth begin to form in jaw. Eyelids close and open. Baby recognizes mom's voice.
- 8 MONTHS** Baby weighs about 1kg.
- 8 ½ MONTHS** Baby is developing the ability to suck.
- 9 MONTHS** Baby is starts preparing for birth. Welcome to the world!

# Labour and Delivery

## METHODS OF GIVING BIRTH

The birth method depends on the position of the baby, your attitudes toward child-birth, the facilities available to you, your doctor's advice and whether or not you have been prepared to make an informed decision. By having this guide and antenatal classes, in addition to your own research and learning, we hope that you will be able to make the best decision possible.

The options available to you are two categories:

- Normal vaginal delivery
- Caesarean section

Have an honest, open discussion with your doctor and midwife so that you make the best decision possible. Once decided, this can be documented on your birth plan.



# Labour and Delivery

In general, history and research have shown that normal vaginal deliveries are better for the overall health of the mother and the baby than caesarean sections, except in cases where there is a complication or life-threatening illness where the baby must be taken out surgically.

After a normal delivery, once the baby is out, the doctor or midwife will place the baby on your chest for the first bonding experience called “skin to skin”. This helps the baby to transition to birth much faster, it will facilitate breastfeeding, and it will help you recover as well. The cord will be cut after as much blood goes to the baby as possible.

The placenta will be delivered gently and carefully, and you will be examined to make sure everything is okay. The baby will be examined to make sure everything is okay.

If there are any problems, they will be addressed and you will be made aware.

After a caesarean section (c-section), the attending doctor or midwife will examine the child to make sure everything is okay. The mouth and nose may be suctioned if there is excess fluid. If there are any problems, you will be made aware.

Depending on your blood group, blood may be taken from the placenta to check the baby's blood group and the presence of antibodies against its blood cells.

# Labour and Delivery

We know that certain things will improve the pain, and some things will make it worse. The pain increases mainly due to mother's anxiety, mother's fatigue, poor breathing, and position. For anxiety it is important to use relaxation techniques that work for you. This will be determined during the antenatal classes or from prior experience.



Some examples are bringing your favourite music, a book of your choice to read, perfume or oils, candles, lip ice to prevent dry lips from the breathing, clear fluids that you like to drink, small sweets for energy, cold and warm compresses, and massage oil.

Breathing during the contractions is important, as holding your breath actually increases the pain due to a deficiency of oxygen and relaxation hormones. Also, lying on your back will also increase the pain, so moving around in the early stages of labour is important. Exercising during pregnancy is also shown to ease the pain of labour. Urinate often to prevent the bladder from interfering with delivery.

# Labour and Delivery

If you experience any of the following, you must contact your medical team as soon as possible:

- Vaginal bleeding or discharge
- Stomach pain
- Severe swelling of one or both hands and/or feet
- Severe swelling of the face
- Severe headache or nausea
- Vision changes
- Abrupt change in foetal movements
- If anything feels wrong with your body

False labour is when contractions are irregular and short. They are only felt at the top of the stomach and resolve with rest. The cervix is soft but is not opening or thinning yet. Also, the baby's position doesn't change.

True labour is when the contractions get stronger, more regular and felt in the back. The cervix is soft, thinning, and starting to dilate from the strength of the contractions. The foetus will move into the pelvis. As the head presses on the cervix, the hormone oxytocin is released to increase the force of the contractions. This is even more pronounced when the water breaks, and thus why mothers have pain during labour. The mother has a vaginal discharge that is bloody and slimy, and we call this the "show". When your contractions are about 5 to 7 minutes apart, it is time to go to the hospital, or anytime your water breaks. The water, called amniotic fluid, is a light straw colour and smells sweet when it is clear and normal. If the colour is brownish-greenish, then go to hospital immediately, as this is a sign of foetal distress.



# Labour and delivery - stages of labour

## STAGE 1

Stage 1 lasts about 7 to 20 hours for first time mothers, and 4 to 14 hours for those who have delivered before. Longer than this is called a prolonged labour. It is divided into a latent phase and an active phase.

**The latent phase** starts with irregular contractions lasting 15 to 30 seconds, 15 to 30 minutes apart. The cervix will dilate to 3 cm. You will feel pain in the lower back and lower abdomen.

**The active phase** presents with the contractions getting longer (about 30 to 40 seconds long), closer together, (about 5 to 7 minutes apart), and more intense. The pain is from the dilation of the cervix, going from 3 cm to 10 cm. At this point the water will break naturally or the midwife or doctor will rupture with an amniotic hook. You will continue to feel pain in your lower back and your perineum.



# Labour and delivery - stages of labour

## STAGE 2

Stage 2 takes about one hour. The cervix is 10 cm dilated and the baby is near being born. The contractions are now 60 to 90 seconds long, about 2 to 3 minutes apart. You will feel an urge to push as the baby's head descends. You have to work with the midwife or doctor to push WITH the contractions.

### How to push

Push as if you are trying to pass stool. When you push, push evenly and with control according to instructions. This allows the baby to be born gently and minimizing problems to the baby. It will also help to minimize episiotomy and tears. Rest between contractions.

## STAGE 3

Stage 3 is the birth of the baby! Congratulations! After all your hard work, the baby is born, with a white, fatty substance called vernix. This helps to keep the baby warm, protects the skin, and prevents infection. For these reasons it needs to stay on the baby for about 6 to 24 hours until the baby's temperature and condition is normal.

After the baby is out and taken care of, the baby will be given to the mother. The placenta is then delivered in a controlled manner.

## STAGE 4

Stage 4 is the stabilization phase that starts with the delivery of the placenta and ends when your condition is stable. Pain control and assistance will be provided as needed.

# Labour and delivery - pain management

## BEFORE DELIVERY:

Pain management during delivery actually begins during the pregnancy. Following the healthy living basics mentioned earlier makes your body as fit as possible for the delivery. Proper nutrition and hydration minimizes cramps and unwanted side effects. Exercises strengthen the body and actually improve pain tolerance. Stretching exercises, yoga, and Pilates are also quite helpful. Massages are helpful as well.

## NORMAL DELIVERY:

As for any pain, relaxation techniques are very important, like breathing, music or reading. A lot of literature shows that distracting the mind from the anxiety of pain actually reduces pain. Massages are very good for helping to relieve some of the pain of contractions.

Secondly, you can release your own natural pain killers. For example, during contractions you should bend forward and lean on a table or chest of drawers to ease the pain. In the hospital, you can kneel on the bed to make the labour faster and less painful. Making deep, "lowing" sounds as the contractions intensify trigger the release of endorphins from the brain to reduce pain as well. Lying flat causes the weight of the womb to press on more nerves and blood vessels increasing pain, so the less you lie flat, the better. Squat as much as possible, but do this with someone to assist you.

# Labour and delivery - pain management

For the second stage of labour, the following positions are useful to many mothers. You may need to practice the one that is best for you:

## Kneeling

Hands on the bed, and knees comfortably apart or one knee up.

On hands and knees, arching back occasionally, especially good for back labour, big babies, and posterior babies.

Semi-sitting with pillows underneath the knees, arms and back.

During contractions, wrap hands around knees and pull knees up toward shoulders as in squatting position.



# Labour and delivery - pain management

## There are quite a few pain control options available to you during your delivery

Medical pain relief via intravenous (I.V.) can be done using pethidine, an opioid (like morphine). It is given during the active phase and can be injected or through IV. It takes 20 minutes to work and lasts for about 2 hours and can be given with an antihistamine for its calming effect.

**Advantages:** it can accelerate the birthing process, and can be used after birth. Any effects on the baby can be reversed with an antidote.

**Disadvantages:** it can suppress the breathing of the newborn; make the mother sleepy and may cause nausea. It can drop blood pressure and labour can be prolonged if given in stage 1. The degree of pain control is unpredictable with this medication as is the case with many opioids, like codeine which is found in Stilpain.



# Labour and delivery - pain management

Medical pain management through inhaled medication is a 50/50 mix of nitrous oxide and oxygen sometimes called “gas and air”. It is usually used if there is no time to use pethidine or a local anaesthetic epidural. It starts within 30 seconds of administration, so is ideal about 30 seconds before an expected contraction. It also wears off very quickly.

**Advantages:** it does not accumulate in the body, so it doesn't affect the baby; it can be used continuously.

**Disadvantages:** it may only help a little bit to control pain, and that it does last a short time so it may have to be used continuously.

**Epidural** is a local anaesthesia called local anaesthesia. An anaesthetist puts a needle in the lower back to put numbing medicine in to take the pain away. There is epidural for normal deliveries and spinal anaesthesia for caesarean sections.

**Advantages:** excellent pain control once established. For normal deliveries it can be topped up as needed. The mother is awake and aware, and because it doesn't go into the blood stream the baby is much safer with this than intravenous medication.

**Disadvantages** include a less than 1% chance of headache (dependent on the size of the needle used and also the mother's hydration status), that some mothers can lower the blood pressure (but it is resolved by giving more fluids through the IV), and that the numbness takes time to wear off.

# Post-Natal Care – Welcome, Baby!

## EXAMINATION

Once your baby is born he/she is given an examination by our Paediatrician. Your baby's weight, length, head circumference, and chest circumference are measured. The heart rate, respiratory rate, blood pressure, blood oxygen levels, and temperature are also measured. Your baby receives a head-to-toe examination to ensure good health.

Your baby immediately receives Vitamin K to prevent any bleeding problems, and will receive an eye ointment to prevent eye infection. After that, the midwife will check your baby during rounds for signs of jaundice or other problems. Your doctor will also check on your baby.

## ROOMING - IN

Your baby is to be left with you 24/7 unless there is an urgent problem requiring ICU or high care. This allows better bonding between you and your baby, promote breast milk production, and easier feeding on demand.





# Post-Natal Care

## LABORATORY TESTS

If there are any signs of illness or problems, appropriate blood tests will be done to evaluate your baby. A blood sugar will be taken before feeding. At 24 hours of age, your baby will have drops of blood taken from the foot to check for bilirubin, the chemical that causes jaundice.

## IMMUNISATIONS

A newborn baby has a weak immune system is very susceptible to disease. Due to the large number of diseases that can threaten one's life, vaccines are given to boost the antibody response against certain diseases. In this way, the body will be able to fight off infection and illnesses.

Your baby will be given vaccinations prior to going home and the vaccinations will be written on the vaccination health record. You will be informed of the vaccinations given.

Then your baby will have vaccinations according to the vaccination schedule. The schedule is also noted your health record.

When a child receives vaccinations, reactions that may occur include localized inflammation at the site, redness, swelling, fever, some pain, and some irritability for up to 48 hours. If your baby develops pain or fever, you may give Paracetamol syrup, 1.5 ml orally every 4 hours ONLY if there is pain or fever above 38°C. Be sure to check with the doctor for any complications or problems.

# Post-Natal Care

## BATHING YOUR BABY

Your baby is not able to maintain its temperature for some hours so the first bath will not occur until he/she keeps normally body temperature. This usually happens after 24 hours after birth.

The white creamy substance on your baby's skin, called vernix, actually gives skin protection from infection and is a natural moisturiser so its not removed too early to prevent a rash and skin irritation.

Babies do not sweat or smell like older adults so they do not need bathing every day, every 2 to 3 days is fine but keep your baby's face, neck and diaper area is wiped daily.

Your midwife will teach you how to bath your baby before discharge home.



# Post-Natal Care

## UMBILICAL CORD CARE

Besides the first bath the umbilical cord should be kept dry so your baby cannot be placed into water until the cord falls off so only sponge or wipe as unless the umbilical cord is dirty, for example from a dirty nappy, there is no need to clean it. If it does get dirty then use surgical spirits to gently clean it. Once the cord falls off then it is okay to bath your baby in water. Your midwife will demonstrate cord care to you.

## HUNGER AND THIRST

A hungry cry is usually high-pitched, regular and often persistent. Your baby will be restless. Offering your baby a feed will not hurt unless you overfeed your baby. The best way to know that a baby is actually feeding due to hunger is that he/she will suck hard and fast and when he/she slows down and sucks as if soothed then the baby is actually full. If your baby falls asleep at the breast, there is a high chance of hiccups and heartburn due to overfeeding.

## PAIN

A pain cry is usually urgent, sharp, short (like a scream). Your baby may hold its breath momentarily followed by a breath then another sharp cry. In this situation find the source of the pain and address it. Soothing techniques are recommended. Consult your doctor for pain medication if the pain seems persistent.

## DISCOMFORT

Discomfort cry may be restless or whining. Usually there may be wriggling of the body. Examples are dirty or wet nappies, being too hot or too cold. In this case, relieving the discomfort and soothing techniques help.

## TEMPERATURE REGULATION

Babies are most comfortable and healthy between 36 and 37.4°C Being too hot or too cold is not good. Babies that are too warm have an increased risk of cot death due to being lethargic, and dehydration from sweating. When dressing the baby only one more layer (clothing or blanket) than you do is required. Do not overheat!

# Soothing techniques

Picking your baby up

Feeding

Talk or sing

Music or soothing sounds

Hold the baby close to your body

Swaddling the baby

Walk around with your baby

Massage your baby's back or belly

Bathing and massage

A dummy or soother

Riding in the car with your baby in the infant car-seat



# Post-Natal Care

## **GAS/WIND**

This may cause bouts of crying with other signs of abdominal upset, e.g. distress and drawing knees up to the tummy. In this case, hold your baby upright over your shoulder to pass by burping. You may also gently bring the knees up to the belly or gently rub and press on his/her belly to assist in passing the wind. If it persists, consult the doctor to evaluate other causes. Sometimes something in milk (something mother eats in breast milk or just the proteins found in formula) can cause the problems. If so, then removing the offending agent helps to resolve the problem.

## **TIREDDNESS/FATIGUE**

A tired cry sounds more like a restless whining. Babies will usually rub the face or roll the head from side to side. Gentle soothing techniques will help calm your baby to sleep.

## **VITAMINS**

Your baby will need Vitamin D 400 IU daily (basically one drop per day) by mouth. You can also take Vitamin D daily.



# Breastfeeding - why breast is best!

## WHY BREAST IS BEST FOR BABY!

The World Health Organization recommends all mothers to breastfeed exclusively for the first 6 months of life and continue until your baby is 2 years old. What happens in your baby's first couple of years has a big effect on how healthy he/she will be in the future. Baby's intestines have not matured enough to handle other foods or milk besides breast milk; even formula, because it is modified cow's milk, tends to cause more intestinal problems (colic, diarrhoea, constipation, allergies, illness) than human breast milk. Breast fed babies also have fewer infections.

Breastfeeding also helps you and your baby get closer – physically and emotionally. So while you are feeding your baby, the bond between you grows stronger. Mothers have reduced chances of getting some illnesses later in life such as breast and ovarian cancer.

## BREAST IS BEST FOR MUM, TOO!

**Lowers the risk of getting breast and ovarian cancer**

**Lowers the risk of type 2 sugar diabetes**

**Naturally uses up about 500 extra calories a day so mothers will find it easier to lose the weight after pregnancy**

**Saves money – formula feeding can cost a lot of money**

# Breastfeeding

## SKIN-TO-SKIN OR KANGAROO CARE

This is the process where your baby is kept on your (or father's) chest, baby's skin in contact with parent skin. Holding your baby against your skin straight after birth will calm your baby. It will also steady his/her breathing and help to keep him/her warm. This is a great time to start your first breastfeed because your baby will be alert and want to feed within a couple of hours of birth. Your midwife can help you with this.

Your baby will be happier if you feed whenever there are signs of hunger. This will remind your body to produce plenty of milk.





# Breastfeeding - how to breastfeed successfully

## POSITION

There are lots of different positions for breastfeeding. You just need to check the following:

1. Are your baby's head and body in a straight line? If not, your baby might not swallow easily. The ear, shoulder, and hip should all be in a straight line
2. Are you holding your baby close to you? Support his neck, shoulders and back. He should be able to tilt his head back easily. And he shouldn't have to reach out to feed.
3. Are you comfortable? It's worth getting comfortable before a feed, although it's ok to change your position slightly once the baby is attached to the breast.





# Breastfeeding - how to breastfeed successfully

4. Is your baby's nose opposite your nipple? Your baby needs to get a big mouthful of breast from underneath the nipple. Placing your baby with his nose level with your nipple will allow him to better attach to the breast.
5. Is your ENTIRE nipple in the baby's mouth? Make sure the entire nipple is inside the mouth, and that the baby is sucking on the areola (the darker, thicker part of your breast around the nipple). If the baby sucks and pulls on the nipple, you will feel a lot of pain and your nipples may become cracked or infected.



# Breastfeeding - how to breastfeed successfully

## SOME TIPS ON SUCCESSFUL BREASTFEEDING AND A HEALTHY BABY

1. The more breast milk you give your baby, the more milk you will produce. Giving other food or drink will reduce your milk supply. Giving less breast milk means there is less immunity, and so baby cannot fight illness as effectively.
2. Feeding your baby solid food before they are ready (they are ready at around 6 months) could lead to him or her getting an upset tummy, allergies, and illness. The baby's intestines and organs are not able to properly digest solids and even formula until about 5 to 6 months of age.
3. Delay the introduction of a dummy/soother/pacifier. Babies who have a dummy sometimes have difficulty attaching to the mother's breast for proper feeding, and thus will take less milk. Wait about 2 weeks before

introducing the dummy unless indicated by the doctor.

4. Do not be afraid to ask for help from the midwife or healthcare provider to support your breast feeding. Follow Healthy Living Basics by eating and drinking properly, resting, exercise. Take vitamin D daily to supplement it in the breast milk.

## HOW DO YOU KNOW THAT YOUR BABY IS FEEDING WELL?

Your baby has a large mouthful of breast. Your baby's chin is firmly touching your breast. It doesn't hurt you when your baby feeds (although the first few sucks may feel strong). If you can see the dark skin around your nipple, you should see more dark skin above your baby's top lip than below your baby's bottom lip. Your baby's cheeks stay rounded during sucking.

# Breastfeeding - how to breastfeed successfully

Your baby rhythmically takes long sucks and swallows with pauses, often making a “K” sound.

Your baby finishes the feed and comes off the breast on his or her own. The baby stools well, has at least 4 wet nappies daily and gains weight normally.

## HOW OFTEN TO FEED THE BABY?

In general, a baby should be fed on demand. On average babies feed anywhere from 8 to 12 times in 24 hours. The times may vary based on the baby's hunger, stool pattern, and growth spurts.



# Expressing breast milk

Expressing milk means squeezing milk out of your breast. You can express milk by hand or with a hand (manual) pump or with an electric pump. Different pumps suit different women, so ask for information to compare them. Whichever pump is used, it needs to be CLEAN and STERILISED each time it is used.

**Why express milk?** Expressed milk can be given to your baby even if someone else is feeding the baby. This is useful if you are away from your baby, for example, at work. Giving expressed milk for your partner or another carer to feed the baby should be done well after you have achieved quality feeding first.

**Why express by hand?** Expressing milk by hand is useful if your breasts feel uncomfortably full, what is known as “engorged”. It is also helpful if the baby cannot suck well and you still want to give breast milk.

Also, in the first few days, because the breast milk is very thick (it is called “colostrum”), it is easier to express by hand than with a pump. After that, the pump will be easier for most mothers to use.

Expressed breast milk can be given by cup or by bottle. Check with your Doctor for the best method for your situation. The midwife will demonstrate the proper use.



# Expressing breast milk

## SAFE STORAGE OF BREAST MILK AT HOME

### PLACE

### MAXIMUM TIME

#### FRESH BREAST MILK

Room:		6 hours
Refrigerator:	5 to 10°C	3 days
Refrigerator:	0 to 4°C	8 days

If temperature rises above 4°C after 3 days, use within 6 hours or throw away

Defrosted in Fridge:		12 hours
Defrosted outside fridge:		Use immediately
Freezer:	-18 °C or lower	6 months

DO NOT microwave or boil milk above body temperature as this could burn your baby and ruin the milk!

# Breastfeeding - problems

Too little milk can occur when the breast milk supply decreases and baby doesn't receive enough.

Reasons include:

- Mother gives the baby other foods or formula in between breastfeeding. This is why baby should only be given breast milk unless there is a medical reason to include something else!
- Baby is not fed on demand or often enough — the baby should be fed more often, about 10 to 12 times daily.
- Sore nipples can occur from poor latch or positioning, or the baby isn't being removed from the breast properly. This results in red, sore, cracked nipples.

To solve this problem:

- Make sure the latch and positioning are correct

- Use nipple cream for cracked, sore nipples
- Use nipple shields to protect the nipple while continuing to breastfeed until the nipples are healed
- Avoid breast engorgement

Engorgement occurs when the breasts become swollen and hard to touch, often painful. This is caused by milk retention in the ducts. The milk doesn't flow well. This can be due to poor latch or positioning (so often accompanied by sore nipples), by the baby not being fed on demand, or having an improperly fitted bra (tight). This can be treated by correcting the latch and positioning, more frequent feeds from the engorged breast. You can also express milk under warm water in the shower.

# Breastfeeding - preterm or low birth weight baby

Research has shown that breastfeeding is vital for the improved health and growth of preterm (younger than 37 weeks gestation) and low birth weight babies. Breast milk has been shown to not only contribute to growth and weight gain, but it provides the nutrients necessary to keep the baby healthy and to strengthen their bodies and immune systems when they are most vulnerable.

If your baby is preterm or low birth weight, it is important to start expressing your breast milk as soon as possible. You will want to express your milk and/or feed the baby every 2 hours (maximum every 3 hours) day and night. This will ensure that you will produce plenty of milk needed for the baby's health and nutrition. It is important to understand that this may be difficult, so be sure to ask the hospital staff for help.





# Newborn Danger Signs

The following are the most common danger signs that some newborns may encounter. Any of these findings require immediate medical attention.

These are things that parents MUST be aware of:

Breathing rate less than 30 times per minute	Fever greater than 37.5 °C
Breathing rate more than 60 times per minute	Redness or abnormal rash of the skin
Gasping or signs of troubled breathing	Swelling, pus, foul odour or increasing redness around the umbilical cord/umbilicus/belly button
Bad coughing	Convulsions/fits
Feeding problems	Jaundice or yellow skin
Difficulty sucking	Very yellow eyes
Feels cold and the temperature taken is less than 35.5 °C	Decreased urination of 3 or fewer nappies in 24 hours
Red, swollen eyelids with or without pus or discharge from the eyes	



# Sleeping

Babies normally sleep many hours over a 24 hour period, waking only to play or to feed. Many newborn babies will sleep from 14 to 18 hours. Healthy and safe sleeping habits are important. You should sleep when the baby sleeps, especially if your baby naturally prefers to be more awake at night than the daytime. Bathing should be done at night, since bathing is soothing and calming enough to help babies go to sleep. Sleep time should be dark and quiet, whereas waking time should be brighter and more active.

Safe sleep is important to avoid cot death.

## COT DEATH CAN BE AVOIDED BY:

Babies should be “back to sleep”, i.e. your baby should either be on his/her back or side to sleep, NOT face down. There is a much higher chance of suffocation if your baby is placed face down, despite rumours to the

contrary

Avoid having too many things, stuffed animals, soft blankets, etc. in your baby's cot. These things may suffocate your baby and are best left outside the cot.

Baby sleeping in its own bed or cot,  
**NOT IN BED WITH ADULTS OR CHILDREN.**



## Going home

# The second most exciting day is going home with your baby!

Normal vaginal deliveries usually go home within 24 hours, while c-section babies go home within 48 to 72 hours. On discharge, you will be given discharge instructions including newborn danger signs as above, other infant care instructions. Remember to get the baby's birth certificate, and also register for medical aid as soon as possible.



# Going home

Babies, due to their size, very easily can suffer permanent damage if they experience too much force like sudden braking or a car accident; holding the baby does NOT protect the baby from harm, as they may still get whiplash or spinal injury. It is for this reason that many countries make it the law that infants be placed in rear-facing car seats. Please make sure to have an infant car seat ready prior to baby going home.

You should make sure that you and the baby have your follow-up appointments scheduled with your doctor and with the paediatrician. The baby will need to be seen on the 7th day of life to check weight and feeding and any other problems.



# sofikile ekhaya



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