Royal Victoria Infirmary

Pregnancy Book

Healthcare at its very best – with a personal touch
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Before 37 weeks of pregnancy (preterm)

Please phone the Maternity Assessment Unit on 0191 282 5748.

Before 37 weeks, whether you plan to give birth using the Delivery Suite or the Newcastle Birthing Centre, if you think that you might be in labour or if you have any questions or concerns please use the Maternity Assessment Unit number.

A midwife will answer your call and the number is always available 24hrs every day.

After 37 weeks of pregnancy (at full term)

Please phone the Labour line on 0191 282 6363.

After 37 weeks, whether you plan to give birth using the Delivery Suite or the Newcastle Birthing Centre, the labour line will take your call and transfer you to the most appropriate number.

A midwife will answer your call and the number is always available 24hrs every day.
Thank you for choosing the RVI for the birth of your baby

This book belongs to you. We hope that it will be helpful both before and after the birth of your baby.

Welcome to the Maternity Department. You will find us in the Leazes Wing of the RVI. We are part of the Newcastle Upon Tyne Hospitals NHS Foundation Trust which is one of only five in the UK to achieve excellent status for 11 consecutive years.

This guide collects all of the information that we hope will be helpful during your pregnancy. It explains the services available in Newcastle and the role your team of healthcare professionals can play in the care of you and your baby.

The guide is colour-coded to help you to find sections quickly, and in this third edition we have incorporated feedback from pregnant women, new mothers, fathers and staff to make it as up to date, relevant and as valuable as possible.

The guide is designed to be useful for all pregnant women but if you have a pregnancy with two or more babies further information is available which will be given to you separately.

This symbol means that there is additional material on our website at newcastle-hospitals.org.uk/services/
The quickest way to our pages is to type in bit.ly/1NAhGes directly as a webaddress rather than a search term in your browser.

As this is a large teaching hospital, many people may be involved in your care. As well as the qualified midwives and doctors we sometimes have staff in training working with us.

You should always be introduced to all the people caring for you and all staff wear identification badges. Students are supervised in caring for you. They can give you lots of support and information and they appreciate being involved in your care. If you do not feel you wish students to be involved in your care, let staff know.
How to find us

You will find the Newcastle Birthing Centre on level 3 (which is actually on the ground floor) of the Leazes Wing of the RVI. The Maternity Assessment Unit and the Delivery Suite are directly above on level 4, next to the antenatal clinic and the maternity wards.

Please keep your hand held notes with you at all times. If you think you may be in labour or wish to be seen urgently, please phone beforehand as this will allow the midwives to give you any information and direct you to the correct department.

Parking

There are a number of maternity parking bays for emergency use near the Leazes Wing Entrance. You will need to ask for a pass at Reception. Please note that this is only available to you if you are admitted in labour, not for planned admissions (such as a planned caesarean section or the induction of labour.

There is limited street parking on Richardson Road, and also the main RVI multi-storey car park off Queen Victoria Road.
What to bring into hospital for the delivery

- Your hand held notes
- One small or medium sized bag or suitcase
- Toiletries for you
- Nightwear
- Towel
- Maternity pads
- Loose comfortable underwear
- Disposable nappies
- Baby clothes
- If you do not intend to breastfeed, powdered baby milk, 2 bottles, 2 teats and a new bottle brush.
- On the postnatal ward, we have baby linen (cot sheets, blankets).

Please don’t bring too much into hospital as space is always limited and be careful with valuables as we cannot ensure their safety.

Courses

We offer a wide variety of courses, some at the RVI and some based in the community. Courses include:

- Preparation for labour and birth
- Using water for Labour and birth
- Tour of the maternity unit
- Women only breastfeeding information sessions
- Couples breastfeeding information sessions
- Courses for twins or more
- New baby practical session covers what to expect in the early weeks of becoming a parent.
- Homebirth special interest group

To book your place phone 0191 282 4555 or 0191 282 4930 if you plan to deliver at the Newcastle Birthing Centre. Alternatively email: parent.education@nuth.nhs.uk.

If English is not your first language please let us know in advance so we can make arrangements if necessary.

We offer free sessions for women who plan to give birth in Newcastle. For the most up to date course information please visit: www.newcastle-hospitals.org.uk/services/maternity-unit_courses-and-events.aspx
A healthy diet and lifestyle helps you to keep well and gives your baby the best possible start in life.

- Aim to eat a variety of food everyday to ensure you get the right balance of nutrients.
- Base your meals on starchy foods such as potatoes, bread, rice and pasta, choosing wholegrain where possible.
- Watch portion sizes and how often you eat.
- Do not ‘eat for two’.
- Always eat breakfast.
- Eat a low-fat diet. Avoid increasing your fat and calorie intake. Eat as little as possible of fried food, drinks and sweets high in added sugars, and other foods high in fat and sugar.
- Eat fibre-rich foods such as oats, beans, lentils, grains, seeds, fruit and vegetables as well as wholegrain bread, brown rice and pasta.
- Eat at least 5 portions of a variety of fruit and vegetables each day, in place of foods higher in fat and calories.
How much should I eat?
You do not need extra calories for the first 6 months of pregnancy and it is only in the last 12 weeks that you need an extra 200 kilocalories a day (this is equal to 2 bananas).

Trying to lose weight by dieting during pregnancy is not recommended even if you are overweight. However, by making healthy changes to your diet you may not gain any weight during pregnancy and you may even lose a small amount. This is not harmful.

Diet supplements
It is best to get vitamins and minerals from the food you eat, but when you are pregnant you will benefit from supplements as well.

Vitamin D
Vitamin D is needed for healthy bones. Your baby relies on your stores to provide enough Vitamin D for the first few months of life and too little risks softer bones or ‘rickets’. To try to make sure you have enough vitamin D stores during pregnancy and whilst breastfeeding we recommend a supplement of 10 micrograms of vitamin D daily. Women at increased risk of vitamin D deficiency include women from South Asia, Africa, the Caribbean or the Middle East. Also women who have reduced exposure to sunlight (such as women who are housebound or usually remain covered when outdoors) women who are overweight and women who eat a diet low in vitamin D such as women who rarely eat oily fish.

Folic acid
You will benefit from extra folic acid in your diet ideally for at least 3 months before you are pregnant and until the 12th week of pregnancy. This increase can not be achieved through diet alone, so a supplement of folic acid (400 micrograms daily) is recommended. Folic acid reduces the risk of having a baby with neural tube defect (such as spina bifida). If you have a high BMI (over 30), a baby with spina bifida, or if you have coeliac disease, diabetes or take anti-epileptic medicines, we recommend a higher dose of folic acid 5mg each day which is available from your GP.

Vegetarian, vegan and special diets
A varied and balanced vegetarian diet should give enough nutrients for you and your baby. However, you might find it hard to get enough iron and vitamin B12. Talk to your doctor or midwife about how you can make sure that you are getting enough of these important nutrients. Also talk to your doctor or midwife if you have a restricted diet because you have a food intolerance (such as coeliac disease) or for religious reasons.

Foods to avoid
• Vitamin A supplements should not be taken as too much could harm your unborn baby. Foods that contain high levels of vitamin A such as liver and pate should be avoided.
• Un-pasteurised milk and cheese as they may contain harmful bacteria.
• Avoid mould ripened soft cheese such as Camembert, Brie and blue-veined cheese which may contain high levels of listeria, a
bacteria which may cause problems in pregnancy. There is no risk with hard cheeses such as cheddar cheese, or cream or cottage cheese, feta, parmesan and processed cheese).

- Any kind of pate.
- Raw or partially cooked eggs or food that may contain them such as homemade mayonnaise or ice cream (shop bought varieties are safe). Ensure eggs are thoroughly cooked until the whites and yolks are solid. This will help to prevent the risk of salmonella.
- Ensure shellfish are thoroughly cooked, and have no more than 2 portions of oily fish a week.
- You should not eat under cooked food or uncooked ready-prepared meals

- Shark, sword fish or marlin. These fish may contain a high level of mercury and other pollutants which can harm a baby’s developing nervous system. Tuna fish also contains a small amount of mercury so should be limited (two steaks or four medium tins/week).

You may have heard that some women have, in the past, chosen not to eat peanuts when they were pregnant.

This is because the government previously advised avoiding eating peanuts during pregnancy if there was a history of allergy in the immediate family (such as asthma, eczema, hayfever, or other food allergy). This advice has now been changed as the latest research shows no clear evidence that eating or not eating peanuts during pregnancy affects the chances of peanut allergy.

Caffeine Intake

High levels of caffeine in pregnancy have been found to cause low birth weight and miscarriage. Caffeine is found in coffee, tea, energy drinks such as ‘Red Bull’, cola and chocolate. Some medicines including headache and cold tablets also contain caffeine. It's best to limit the amount of caffeine to no more than 200mg a day.

This is approximately:
2 mugs or 3 cups of coffee
or
4 cups of tea
or
5 cans of cola
or
4 small bars of chocolate.

Food Safety

Good food hygiene is essential to avoid harmful bacteria.

Wash your hands before and after handling any food. Wash all fruit, vegetables and salad before eating. Use a separate chopping board for raw meats. Cook raw meat and poultry thoroughly. Store raw foods separately from ready-to eat foods so there is no risk of contamination. When handling soil or gardening you should wear gloves and wash your hands when you have removed the gloves. This is to avoid catching toxoplasmosis which is harmful in pregnancy.
Why your weight matters

Most women who are overweight have a straightforward pregnancy and birth and deliver healthy babies. However, being overweight does increase the risk of complications for both you and your baby. This information explains the extra care you will be offered and how you can minimise the risks in this pregnancy and any future pregnancy.

Your healthcare professionals will not judge you for being overweight and will give you all the support that you need.

What is BMI?

BMI is your body mass index which is a measure of your weight in relation to your height. A healthy BMI is above 18.5 and less than 25. A person is considered to be overweight if their BMI is between 25 and 29.9 or obese if they have a BMI of 30 or above. You should have your BMI calculated at your first antenatal booking appointment and again at 28 weeks. Almost 20 in every 100 pregnant women have a BMI of 30 or above at the start of pregnancy.

Please read this next section carefully if your BMI is 30 or more at any time in your pregnancy.

This table allows you to work out your BMI from your height and weight.
What are the risks of a raised BMI during pregnancy?

Being overweight increases the risk of complications for you and your baby. The higher your BMI the greater the risk.

**Thrombosis** - a blood clot in your legs (venous thrombosis) or in your lungs (pulmonary embolism). Pregnant women have a higher risk of developing blood clots compared with women who are not pregnant. If your BMI is 30 or above, the risk of developing blood clots in your legs is increased further.

**Gestational diabetes**
Diabetes which is first diagnosed in pregnancy is known as gestational diabetes. If your BMI is 30 or above, you are three times more likely to develop gestational diabetes than women whose BMI is below 30.

**High blood pressure & pre-eclampsia**
A BMI of 30 or above increases your risk of developing high blood pressure and pre-eclampsia. If you have a BMI of 35 or above at the beginning of your pregnancy, your risk of pre-eclampsia is doubled compared with women who have a BMI under 25.

**Risks for your baby**

**Miscarriage** 20 in every 100 pregnancies miscarry before 12 weeks. A BMI over 30 increases the number of miscarriages to 25 in every 100.

**Spina bifida** 1 in every 1000 babies will develop a spina bifida. If your BMI is over 40, your risk is tripled to 3 affected babies in every 1000.

**A large baby** 7 in every 100 babies born weight more than 4kg (8lb. 14 ounces). A BMI over 30 doubles this to 14 in every 100 babies.

**Stillbirth** A BMI over 30 doubles the risk of stillbirth.

If you are overweight your baby will also have an increased risk of obesity and diabetes in later life.

What are the increased risks for labour & birth?
These include:

- being born prematurely (before 37 weeks)
- a long labour
- the baby’s shoulder becoming ‘stuck’ during birth
- an increased risk of an emergency caesarean birth
- a more difficult operation if you need a caesarean section and a higher risk of complications afterward
- anaesthetic complications, especially with a general anaesthetic
- heavy bleeding after birth or at the time of caesarean section.
How can the risks of a raised BMI be reduced?

By working together with your healthcare professionals, the risks to you and your baby can be reduced by:

**Healthy eating**
The amount of weight women may gain during pregnancy can vary greatly. A healthy diet will benefit both you and your baby during pregnancy. It will also help you to maintain a healthy weight after you have had your baby. You may be referred to a dietician for specialist advice about healthy eating.

**Exercise**
Make activities such as walking cycling, swimming, low impact aerobics part of everyday life and build activity into your routine by taking the stairs instead of the lift or going for a walk at lunchtime. Minimise sedentary activities, such as sitting for long periods watching television or at a computer. Physical activity will not harm you or your unborn baby. However, if you have not exercised routinely you should begin with no more than 15 minutes of continuous exercise, three times per week, increasing gradually to 30 minute sessions every day. A good guide that you are not overdoing it is that you should still be able to have a conversation while exercising.

**An increased dose of folic acid**
Folic acid helps to reduce the risks of your baby having a neural tube defect (such as spina bifida). If your BMI is 30 or above you should take a daily dose of 5 mg of folic acid. This is a higher dose than the usual pregnancy dose, and it needs to be prescribed by a doctor. Ideally you should start taking this a month before you conceive and continue to take it until you reach your 12th week of pregnancy. Even if you have not started taking it early, there is still a benefit from taking folic acid when you realise you are pregnant.

**Vitamin D supplements**
All pregnant women are advised to take a daily dose of 10 micrograms of vitamin D supplement. This is particularly important if you are obese as you are at increased risk of vitamin D deficiency. Vitamin D is available without prescription from your chemist.

**Venous thrombosis**
Your risk for blood clots is assessed at your first antenatal appointment and monitored during your pregnancy. You may need to have injections of low molecular weight heparin to reduce your risk. These injections are safe in pregnancy.

**Gestational diabetes**
You will be tested for gestational diabetes between 24 and 28 weeks. If your BMI is more than 40 you may also have the test earlier in pregnancy. If the test indicates you have gestational diabetes, you will be referred to a specialist team to discuss this further.

**Pre-eclampsia**
Your blood pressure will be monitored at each of your appointments and your urine tested for protein. If there is any concern your midwife will refer you to the Maternity Assessment Unit for further assessment.
Your pre-eclampsia risk increases further if:

- this is your first baby
- you are over 40 years old
- you had pre-eclampsia in a previous pregnancy
- your blood pressure was high before pregnancy

If you have two or more of these risk factors, you may be advised to take a low dose of aspirin each day to reduce the risk of developing pre-eclampsia.

**Additional ultrasound scans**

Having a BMI of more than 30 can affect the way the baby develops in the uterus (womb) so you may need additional ultrasound scans. You may also need further scans because it can be more difficult to check that your baby is growing properly or feel which way round your baby is lying.

**Planning for labour and birth**

Because of possible complications, you should have a discussion with your obstetrician and/or midwife about the safest way and place for you to give birth. If you have a BMI of 40 or more, arrangements should be made for you to see an anaesthetist to discuss a specific plan for pain relief during labour and birth. As you are more likely to need a Caesarean section if your BMI is raised this needs to be considered when planning delivery.

**Where to give birth**

If your BMI is less than 35 and you have no other problems you are able to remain under midwifery led care. You may choose to deliver at home, at the Newcastle Birthing Centre or the consultant-led Delivery Suite.

If your BMI is more than 35 the risks to you and your baby are increased and you will need to be under the care of a consultant and labour on the Delivery Suite, not on the Birthing Centre...

**What happens in early labour?**

If your BMI is raised, it may be more difficult for your doctors to insert a cannula (a fine plastic tube inserted into a vein) to allow drugs and/or fluid to be given directly into your blood stream. Your doctors will usually insert this early in case it is needed in an emergency.

**Pain relief**

All types of pain relief are available to you. However, having an epidural (an anaesthetic given into the space around the nerves in your back to numb the lower body) can be more difficult and take longer to place.

**What happens after birth?**

An injection in the top of your leg is normally recommended to help with the delivery of the placenta to reduce the risk of heavy bleeding.

In some cases you may need a special bed while you are in hospital to ensure that you have a comfortable and safe stay. This will have been discussed with you before giving birth, usually when you are seen in the antenatal clinic.

If you have a caesarean section or stitches from the birth, your wound needs to be checked daily to ensure that your skin is healing well. The midwives will advise you how best to look after your wound and in some cases the doctors will want to check your wound before you go home.
Reducing the risks linked to a high BMI after birth

**Monitoring blood pressure**
You are at increased risk of high blood pressure for a few weeks after the birth of your baby and this will be monitored.

**Prevention of thrombosis**
You are at increased risk of thrombosis for a few weeks after the birth of your baby. To reduce the risk:
- Try to be active
- Avoid sitting still for long periods.
- Wear special compression stockings if you have been advised to wear them.
- If you have a BMI of 40 or above, you should have low molecular weight heparin injections for at least a week after the birth of your baby - regardless of whether you deliver vaginally or by caesarean section. It may be necessary to continue taking this for 6 weeks.

**Test for diabetes**
If you developed gestational diabetes, your blood sugar levels usually return to normal after birth and medication is no longer required. You should be re-tested for diabetes about 6 weeks after giving birth. Your risk of developing diabetes in later years is increased and you should be tested for diabetes by your GP once a year.

**Breastfeeding**
Breastfeeding is best for you and your baby. It can help with weight loss and reduce your future risk of diabetes.

Our hospital and community staff will provide you with all of the help and support that you need. Please continue to take vitamin D supplements whilst you are breastfeeding.

**Healthy eating and exercise**
Continue to follow the advice on healthy eating and exercise. If you want to lose weight once you have had your baby, you can discuss this with your GP and health visitor.

**Planning for a future pregnancy**
If you have a BMI of 30 or above it is advisable to lose weight.

Your GP can offer you a structured weight loss programme. You should aim to lose weight gradually (up to about 1 kg or about 1 to 2 lbs a week). Crash dieting is not good for your health. Remember even a small weight loss can give you significant benefits. If you are not yet ready to lose weight, you should be given contact details for support for when you are ready.

**An increased dose of folic acid**
If you have a BMI of 30 or above, remember to start taking 5 mg of folic acid at least 3 months before trying to conceive. Continue taking this until you reach your 12th week of pregnancy.
Smoking in Pregnancy

Stopping smoking benefits both you and your baby immediately. Carbon monoxide and other harmful chemicals will clear from the body and oxygen levels will return to normal.

When you smoke, 4000 chemicals and a poisonous gas called carbon monoxide pass into your lungs making less oxygen available for the baby which means the baby will be smaller than it should be. For every cigarette you smoke the oxygen supplied to the baby is disrupted and your baby experiences reduced blood flow for 15 minutes.

If you stop smoking at any point during your pregnancy it is beneficial to you and your baby, the sooner you stop the greater the benefit for both of you.

If you stop smoking
- You will reduce the risk of stillbirth
- You will reduce the risk of cot death
- You are more likely to have a healthier pregnancy and baby
- Your baby will cope better if there are any birth complications
- Your baby is less likely to have breathing difficulties, feeding and the health problems that occur with prematurity
- Your baby is less likely to suffer with asthma, chest infections, coughs and colds and be admitted to hospital

Stopping smoking
With help from the NHS you are 4 times more likely to be able to stop smoking. Talk to your midwife or GP about your local NHS Stop Smoking Services.

Phone the NHS Pregnancy Smoking Helpline for support on 0800 169 9 169 (12 noon to 9pm daily).

Nicotine Replacement Therapy (NRT)
NRT works in a different way to cigarettes; it does not contain toxic chemicals like tar or carbon monoxide. NRT is suitable for most people but when you are pregnant you must check with your doctor. An example of NRT is nicotine patches which are suitable for most regular smokers but when you are pregnant you should remove the patch before going to bed. There is also Nicotine gum which allows nicotine to be absorbed through the lining of your mouth.

If you cannot stop smoking there are still benefits to you and your baby in reducing the amount you smoke. Access the website www.gosmokefree.co.uk for more advice.
Drinking alcohol when pregnant

Alcohol can affect your baby at any stage in pregnancy so stopping or reducing at any time is still beneficial. Alcohol reaches your baby through the placenta. Your baby cannot remove alcohol as quickly as you can, so is exposed to the harmful effects of alcohol for much longer.

What are the risks to my unborn baby if I drink alcohol?
Alcohol affects your baby's brain development throughout the pregnancy. There is still benefit in stopping or reducing the amount you drink at every stage in pregnancy.

The effects on the brain include learning difficulties, low achievement at school, behavioural problems, psychiatric problems and physical difficulties. The effects of alcohol on the baby are greater if you also smoke, binge drink or have a poor diet.

What about when my baby is born?
In the most severe cases babies can be born with Fetal Alcohol Syndrome. Babies with this condition are often small and may appear different. The way the brain develops can lead to long term problems. Even if your baby does not show all the signs of Fetal Alcohol Syndrome your baby may still be affected. Unfortunately there is no cure for these problems. This is why it is important to get help as soon as possible in your pregnancy.

We feel that it is safest not to drink any alcohol during pregnancy

Help and guidance
All parents want the best for their baby and most women are able to stop using alcohol completely during pregnancy. If alcohol has become part of your life, we can help you plan a safer pregnancy for you and your baby. Only you can change your alcohol use, but there are lots of people who can give you support and guidance.

If you drink heavily often or every day it is important not to stop suddenly. Stopping suddenly can be harmful for you and your baby. It is important that you get the right treatment to help you cut down or stop the amount you drink.

If you have difficulties reducing the amount of alcohol you drink please discuss this with your midwife or GP. We offer support through a specialist antenatal clinic at the RVI for alcohol use in pregnancy.

further information on alcohol
With all medicines it is necessary to balance their benefit with any potential risks. Some medicines, including some common painkillers, can be harmful to your baby’s health but some are safe. To be on the safe side always check with your doctor, midwife or pharmacist before taking any medicine.

Talk to your doctor if you take regular medication – ideally before you start trying for a baby or as soon as you find out you are pregnant. Use as few over the counter medicines as possible.

Medicines and treatments that are usually safe include paracetamol, most antibiotics, dental treatments (including local anaesthetics), some immunisations (including tetanus and flu injections) and nicotine replacement therapy.

X rays
X rays should be avoided if possible when pregnant. If you are visiting a dentist ensure he/she knows you are pregnant.

Complementary therapies
It is your choice if you wish to use complementary therapies, however, few have been proven as being safe or effective in pregnancy. It is important that you inform your therapist that you are pregnant if you are using a complementary therapy.

Some medicines are so important for your health that they need to be continued during pregnancy even if there is some risk to the baby.

In these cases we aim to use the lowest dose and the smallest number of medicines possible. In every case we can help by providing up to date safety information to help you to make the right choice at each stage of your pregnancy.
Illegal drug use

Illegal drugs like cannabis, ecstasy, cocaine and heroin can harm your baby. If you use any of these drugs please let us know so we can provide you with advice and support.

Heroin, Methadone, Codeine, Buprenorphine

What are the risks to my unborn baby?
If you use heroin, your baby can be born early and can be smaller. After birth there is an increased risk of cot death. Do not suddenly stop taking your usual drugs or medication without professional help. Stopping suddenly can not only lead to withdrawal for you but also for your unborn baby. Bad withdrawal can lead to a miscarriage at any time in pregnancy.

What help can I get?
It is much safer for mum and baby to be on a treatment programme under the supervision of a doctor. The prescriptions (scripts) are free and other help is on hand. Treatment programmes are a safer option than using street drugs. They help you and your baby to stay stable and have a healthier lifestyle.

What about when my baby is born?
There is a one in three chance that your baby will get withdrawal. This can happen even if you have been on prescribed medication (a script) and may not happen straight away. Extra use of heroin on top of a script increases the chance of your baby withdrawing. You will be helped to look out for the signs of withdrawal as early treatment is very important for the safety of your baby.

Benzodiazepines and other tranquillisers

What are the risks to my unborn baby?
If you take benzodiazepines or tranquillisers, like Diazepam or Temazepam, your baby can be born early and can be smaller. There is also thought to be a higher risk of babies having problems, such as cleft palate. There is a chance that your baby will get withdrawal and this can happen up to two or three weeks after birth.

What help can I get?
Do not suddenly stop taking your usual amounts of benzodiazepines or tranquillisers. We recommend that you work with a doctor to safely reduce the dose. This might mean taking other medications that are safer for baby. We will offer extra care in pregnancy to make sure baby is growing well.
Stimulants
Stimulants include cocaine, crack cocaine and amphetamine (speed).

What are the risks to my unborn baby?
Stimulants affect the blood flow in the womb so they are very dangerous. We recommend you stop using all stimulants when pregnant.
The risks include:
- miscarriage or early labour
- severe bleeding inside the womb which can be very serious
- low birth weight
- problems with development.

What help can I get?
We can help you stop using stimulants. There is no medicine we can give you to replace them but we offer different types of treatment. We will also offer extra care in pregnancy to make sure baby is growing well.

Cannabis
The use of cannabis in pregnancy may be harmful to your baby. Babies born to women who smoke heavily can show signs of being irritable in the first few days after birth. Babies also have an increased risk of cot death.

Cannabis can also affect your health in pregnancy and you are five times more likely to suffer from postnatal depression. Cannabis causes drowsiness so you are more likely to have accidents when caring for your baby and not respond to the baby when it needs attention.

Caring for your baby if you have used illegal drugs
Caring for a new baby is hard work for any new parent. Withdrawal happens to some babies and not others. If your baby shows signs of withdrawal there are plenty of ways you can help.

We ask that you and your baby stay on the postnatal ward for about 5 days so we can help you to look for signs of withdrawal and treat it quickly.

Withdrawal in babies can be very mild or can be more obvious. There are many ways to help your baby, including skin to skin contact and breastfeeding your baby. Breastfeeding has been found to reduce the chances of withdrawal as well as being the best start in life. All new mums need support. You should not hesitate to ask your partner, family, friends or staff for help.

Many checks are carried out on babies to make sure they are well. One of these tests is usually a urine test. It is important you realise the aim is to make your baby safe and comfortable.

If withdrawal happens, we might need to give your baby a small amount of medicine by mouth. We will show you how to give this medicine so that you can give it to your baby when you return home if it is still needed. If this happens you will get a lot of advice and support from the staff, even after you go home and the baby will still be under the care of the doctors.
Crying

All babies cry. Some babies cry a lot. Babies who are withdrawing may cry more than usual and may take a while to settle.

- Hold your baby close to you when he or she cries.
- Try skin to skin contact. The midwives will show you how to do this. It helps baby get to know your smell, hear your heartbeat and feel warm and safe.
- Don’t leave your baby alone. All babies like to feel their mother close by, this makes them feel secure and safe. Your voice and gentle touch will help your baby to feel loved and calm and may help settle a baby who is unhappy.
- Talk and sing to your baby. Baby knows your voice and this will help to calm your baby down.

Tremors

Some babies shake when they have withdrawal. This can come over as being “jumpy” and as if they have got a fright. Your baby may find it difficult to get to sleep or to stay asleep because the jumping makes them wake up. Your baby may not like being touched or handled too much. This can be hard if friends or family want to hold the baby.

Feeding

New babies may want to feed frequently. Some babies bring a bit of milk up after a feed. It can seem like they are always hungry. This can happen to any baby. Give your baby smaller amounts more often rather than trying to give baby a big feed that then comes up as vomit.

Breastfeeding has many benefits for your baby. Breastfeeding may make withdrawal less likely and it also reduces the chance of cot death.
Is sexual intercourse safe during pregnancy?
Sexual intercourse during pregnancy is not thought to be harmful to you or your baby. There is usually no reason why you cannot continue to have sex throughout your pregnancy but if you have had a miscarriage then you should seek advice from your GP and midwife. If you have heavy bleeding during your pregnancy or if your placenta is low lying (placenta praevia) you will probably be advised to avoid sexual intercourse. If your “waters” have broken you should definitely avoid sexual intercourse and seek professional advice.

What effect does pregnancy have on working?
The majority of women can be reassured that working during pregnancy is safe. You should tell your employer as soon as you can that you are pregnant so that a work place assessment can be carried out to avoid hazards at work.

You are entitled to paid time off for antenatal appointments. Your employer may ask you to provide evidence such as an appointment card or letter. You will need to give your employer a MAT B1 form which you can get from your community midwife from 20 weeks into your pregnancy (which details the expected date of delivery).

All employed women are now entitled to 52 weeks maternity leave no matter how long they have worked for their employer. Maternity leave can start as early as 11 weeks before your expected date of delivery, so from 29 weeks of pregnancy.

You must tell your employer the following things by the time you are 25 weeks pregnant:
- that you are pregnant
- the expected week of childbirth
- the date on which you intend to start your maternity leave

If you wish to change the date you wish to start your maternity leave you must give your employer at least 28 days notice in writing. Working out what benefits you are entitled to and making claims can be complicated, you can go to your local job centre for help. Citizens Advice Bureau, law centres and other advice agencies will also be able to advise you.

Helpful websites

www.dwp.gov.uk  www.hmrc.gov.uk/taxcredits
www.eoc.org.uk  www.direct.gov.uk/employees
www.csa.gov.uk  www.adviceguide.org.uk
www.hse.gov.uk
Do I need to take any extra precautions when travelling?

**Car Travel**
Road accidents are one of the most common causes of injury to pregnant women. To protect you and your unborn baby always wear a seatbelt with the diagonal strap across your body between your breasts and the lap belt over your upper thighs. The straps should lie above and below your bump, not over it.

**Air travel**
If your pregnancy has no complications, the best period to travel is between 14 and 28 weeks gestation. It is advisable to find out the healthcare facilities that are available at your destination.
It is advisable to take your health records when travelling in the UK or abroad. Make sure you have holiday insurance that covers all eventualities in pregnancy. Each airline has its own policy regarding flying but most airlines will need a certificate after 28 weeks gestation check with the airline concerned. Long haul air travel is associated with increased risk of venous thrombosis (blood clots) although it is unclear if the risk is greater in pregnancy so the advice is to wear correctly fitted compression stockings. During the flight it is important to ensure you drink plenty of water and move around frequently.

If you are travelling to Europe, make sure that you have a European Health Insurance Card (formerly known as E111), which entitles you to free treatment while abroad. You can get this from a post office, by calling 0845 606 2030, or from www.ehic.org.
Antenatal care

Regular antenatal care is important for your health and the health of your baby. Most antenatal services are now provided in easily accessible community settings. Waiting times in clinics can vary, and this can be particularly difficult if you have young children with you. Try to plan ahead to make your visits easier.

Your antenatal team

While you are pregnant you should normally see a small number of healthcare professionals, led by your midwife or doctor. They want to make you feel happy with all aspects of the care you receive, both while you are pregnant and when you have your baby.

The professionals you see should introduce themselves and explain who they are, but if they forget, don’t hesitate to ask. It may help to make a note of who you have seen and what they have said in case you need to discuss any points later on.

Community midwives are often your first point of contact. Many work from Medical or Health Centres alongside General Practitioners, Health Visitors and Dieticians. The community teams are based in locations within the city close to the women and families to whom they provide care. They work every day and also provide an on call service for home births wherever possible. Community midwives provide care to all pregnant women and often provide the link to hospital services. Community midwives are trained to assess pregnant women and their developing baby, plan their care and to carry out all appointments as long as there are no problems identified in their pregnancy. If problems are identified your community midwife will refer you to the hospital team but will often continue to see you as part of an agreed plan of care.

If you choose to have your baby at home then the community midwifery team will be happy to support this as long as no problems have been identified in your pregnancy. If you have had problems in this or a previous pregnancy a more detailed plan would be needed. If you deliver your baby in hospital your community midwife team will visit you following your transfer home. The community midwives and healthcare assistants also provide support and information on preparing for labour and birth,
feeding your baby and preparing to become parents alongside our parent education team.

A **midwife** will look after you during labour and, if everything is straightforward, will deliver your baby. If any complications develop during your pregnancy or delivery, you will also see a doctor. You may also meet student midwives and student doctors. After the birth, you and your baby will be cared for by midwives and maternity support workers. If you have questions or concerns regarding your care then you can always ask to speak one of our **supervisor of midwives** who is a senior midwife with responsibility for the safety and effectiveness of our Service.

An **obstetrician** is a doctor specialising in the care of women during pregnancy. Your midwife or GP will refer you for an appointment with an obstetrician if they have a particular concern, such as previous complications in pregnancy or chronic illness. You can also request to see an obstetrician if you have any particular concerns.

A **sonographer** performs ultrasound scans. At the RVI many of the midwives are also trained as sonographers for pregnancy.

An **anaesthetist** is a doctor who specialises in providing pain relief and anaesthesia. If you decide to have an epidural, it will be given by an anaesthetist. If you require a caesarean section or an instrumental delivery (e.g. using forceps or ventouse), an anaesthetist will provide the appropriate anaesthesia.

An **women’s health physiotherapist** is specially trained to help you cope with the physical changes during pregnancy and childbirth. You may be referred if you are experiencing back or pelvic pain, bladder or bowel problems. Individual appointments offer advice and safe an effective exercises to help you manage during your pregnancy and return you to health and fitness after delivery.

**Health visitors** are specially trained nurses who offer help and support with the health of the whole family. You may meet your health visitor before the birth of your baby and you will be visited by a member of the team in the first few weeks after your baby is born.
A health care assistant helps with many tasks on the wards, in clinic, in theatre, on the Delivery Suite and Birthing Centre. They ensure the smooth running of the unit.

A domestic assistant helps to maintain a safe environment for everyone in the hospital.

A dietician provides advice about healthy eating or special diets, for example if you develop gestational diabetes.

A nursery nurse will help you care for your baby on the postnatal ward.

A paediatrician is a doctor specialising in the care of babies and children. A paediatrician may check your baby after the birth to make sure all is well and will be present when your baby is born if you have had a difficult labour. If your baby has any problems, you will be able to talk this over with the paediatrician. If your baby is born at home or your stay in hospital is short, you may not see a paediatrician at all. Your midwife or GP will check that all is well with you and your baby.

A researcher may ask if you will participate in a research project. This may be to test a new treatment or to find out your opinions on an aspect of your care. Such projects are vital to improve maternity care. The project should be fully explained to you and you are free to say no.

Some of the health professionals you see will have students with them. The students will be at various stages of their training but will always be supervised. You can say no, but if you let a student be present it will help their education and may even add to your experience of pregnancy and labour.
Your antenatal clinic visits

As soon as you think you are pregnant make an appointment to see your midwife or GP.

Your booking appointment

What should happen
The earlier you make your booking appointment the better. You will receive your set of hand held notes, this Pregnancy Book and the UK National Screening Committee leaflets on all antenatal screening tests.

You will be offered advice about folic acid and vitamin D supplements, nutrition, diet and food hygiene, lifestyle factors such as smoking, drinking and recreational drug use. If you do smoke then you will be offered help to stop or cut down and this will be reviewed at each antenatal visit.

It is important to tell your midwife or doctor if:
• There were any complications or infections in a previous pregnancy or delivery, such as pre-eclampsia or premature birth.
• You are being treated for a chronic disease such as diabetes or high blood pressure.
• You or anyone in your family has previously had a baby with an abnormality, for example spina bifida.
• There is a family history of an inherited disease, for example sickle cell or cystic fibrosis.

Your midwife or doctor should:
• give you your hand-held notes and write down a plan of care.
• Plan any additional support.
• Identify potential risks associated with any work you may do.
• Calculate your body mass index.
• Measure your blood pressure and test your urine for protein.
• Find out whether you are at increased risk of gestational diabetes or pre-eclampsia.
• Offer you screening tests and make sure you understand what is involved before you decide whether to have any of them.
• Offer you an ultrasound scan at 11 to 14 weeks to estimate when your baby is due.
• Offer you an ultrasound scan at 18 to 21 weeks to check the physical development of your baby and screen for possible abnormalities.
16 weeks
At 16 weeks the appointment is designed for the mother only. There may be issues that need to be discussed in private and it is important that time is arranged for this.

Your midwife or doctor should:
- Review, discuss and record the results of any booking and screening tests.
- Measure your blood pressure and test your urine for protein.
- Consider an iron supplement if you are anaemic.

18–20 weeks (anomaly scan)
This scan checks the physical development of your baby.

Please ask at the beginning of the scan if you would like to know the sex of your baby.

25 weeks*
Your midwife or doctor should:
- Check the size of your uterus and plot this on your growth chart in your hand held records.
- Measure your blood pressure and test your urine for protein.

28 weeks
Your midwife or doctor should:
- Offer you anti-D treatment if you are rhesus negative.
- You will be weighed again and your BMI calculated once more.
- Offer a blood test for anaemia, the presence of any new antibodies and your blood sugar level.
31 weeks*
Your midwife or doctor should:
• Review, discuss and record the results of any screening tests from the last appointment.
• Use a tape to measure the size of your uterus and plot this on your growth chart.
• Measure your blood pressure and test your urine for protein.

34 weeks
Your midwife or doctor should:
• Discuss about preparing for labour and birth, including how to recognise active labour, ways of coping with pain in labour and your birth plan.
• Review, discuss and record the results of any screening tests from the last appointment.
• Use a tape to measure the size of your uterus and plot this on your growth chart.
• Measure your blood pressure and test your urine for protein.

36 weeks
Your midwife or doctor should discuss:
• Feeding choices for your baby
• Caring for your newborn baby
• Vitamin K and screening tests for your newborn baby
• Your own health after your baby is born
• The ‘baby blues’ and postnatal depression
Your midwife or doctor should:
• Use a tape to measure the size of your uterus and plot this on your growth chart.
• Check if your baby is in the head down position or bottom first (breech position).
• Measure your blood pressure and test your urine for protein.

38 weeks
Your midwife or doctor should discuss:
• The options and choices about what happens if your pregnancy lasts longer than 41 weeks.
Your midwife or doctor should:
• Use a tape to measure the size of your uterus and plot this on your graph.
• Measure your blood pressure and test your urine for protein.

40 weeks*
Your midwife or doctor should give you more information about what happens if your pregnancy lasts longer than 41 weeks.
Your midwife or doctor should:
• Use a tape to measure the size of your uterus and plot this on your graph.
• Measure your blood pressure and test your urine for protein.

41 weeks
Your midwife or doctor should:
• Use a tape to measure the size of your uterus and plot this on your graph.
• Measure your blood pressure and test your urine for protein.
• Offer a membrane sweep
• Discuss the options and choices for induction of labour.

* An extra appointment if this is your first baby
Ultrasound scans

Ultrasound scans use sound waves to build up a picture of your baby in your uterus. They are completely painless, have no known serious side effects and may be carried out for medical need at any stage of pregnancy.

At the RVI we offer two routine scans. First a dating scan at 11-14 weeks to determine when the baby is due; then a scan between 18 and 21 weeks to check for any problems with the development of your baby.

At these scans it is helpful if you have a full bladder which pushes your uterus up and this gives a better picture.

What do scans tell us?
- Check your baby’s measurements
- Check whether you are carrying more than one baby
- Detect some but not all abnormalities
- Show the position of your baby and your placenta
- Check that your baby is growing and developing as expected.

At the 11-14 week scan we offer the combined screening test for Downs Syndrome. Details of the test are in the National Screening booklet which is given to you as a separate leaflet along with this Pregnancy Information Guide. The anomalies that are screened for at the 18-21 week scan are also discussed in the booklet.

Ask for the image to be explained to you if you cannot make it out. It should be possible for your partner to come with you and see the scan. Although scans are medical procedures, many couples feel that they help to make the baby real for them both. If you wish, you may buy tokens for ultrasound pictures at each scan.
Screening tests in pregnancy

The National Screening Committee regularly update and produce leaflets on the screening tests available for you and your baby and these will be given to you at booking. At the RVI we offer all of these Nationally recommended screening tests.

A screening test
Some tests look at the risk that your baby could be affected by certain disabilities or health conditions. The results of these optional tests will not tell you for sure if your baby has a particular condition but they can show if there is an increased risk. These are called screening tests.

A diagnostic test
A diagnostic test is offered if a screening test indicates that there is a high risk of a particular condition. The diagnostic test aims answer whether your baby definitely is affected by the condition or not.

Examples of a diagnostic test are an amniocentesis which examines cells in some of the fluid around your baby or a chorionic villus biopsy which examines cells from the placenta (afterbirth).
Research in Pregnancy

Here in Newcastle and the North-East of England, maternity research is extremely important. It helps us to collect valuable information to improve our services and the care that we provide to pregnant women, their babies and their families. You may be approached by one of our research team to see if you would like to take part in one or more of our studies at some point during your pregnancy. It is completely up to you if you would like to take part in research and we will give you as much information as you need to make that choice.

The Reproductive Health Research Team is based at the RVI and one of the largest research teams in England. Last year more than 2800 women agreed to take part in our studies.

Our experienced team includes senior doctors, research midwives and nurses, research sonographers, support staff and scientists.

We aim to give you the opportunity to take part in research studies by providing all the information you need to help decide if you want to be involved. Every research study is co-ordinated by a research midwife who will be able to answer any questions and help you to decide if participating in research is right for you. You can be assured that all information will be kept confidential (in the same way as your other medical records), and that the health and well-being of you and your baby will always be our top priority.

All of our studies are approved by an independent Ethics Committee. The studies focus on important issues in pregnancy and childbirth, for example, high blood pressure, premature birth, obesity, ultrasound screening, induction of labour and bleeding at the time of birth. The results improve the maternity care and services provided to women in the North East and also around the world!

Each study is different and you may be offered information at various times during your pregnancy. You may receive leaflets about research at home or you may be given information by your community or hospital midwife. Some studies collect information about the care you receive so you would not be asked to do anything different. There are other studies where you may be asked to do something more that may include:

- Giving samples of urine, blood or small pieces of tissue, (which may require extra visits to the hospital)
- Having extra visits or procedures (such as ultrasound scans)
- Being asked about your experiences and opinions

Where possible we try to fit research around your normal care to make it as easy as it can be for you to be involved.
For further information about taking part in research or opportunities to take part in research in Newcastle, please contact The Reproductive Health Research Team at the RVI on 0191 2820362 or email ReproductiveHealthRVI@nhs.net.
Reducing your risk of a blood clot during & after pregnancy

A deep vein thrombosis (DVT) is a blood clot that forms in a deep vein of the leg, calf or pelvis.

In pregnancy and for six weeks afterwards, 2 in every 1000 women will develop a clot - a venous thrombosis. Although uncommon it is still 10 times more likely than if you had not become pregnant. A DVT can occur at any time during your pregnancy, including the first three months, so it is important to see your midwife early in pregnancy.

Varicose veins
Varicose veins lie under the surface of the skin and are different from the deep veins that may develop clots during pregnancy. It is very unlikely that varicose veins will need any treatment during pregnancy and they do not increase your risk of a DVT. Occasionally compression stocking may be recommended to give some symptomatic relief. Varicose veins in the leg and groin will often improve in the days and weeks following the birth.

Why is a DVT serious?
Venous thrombosis can be serious because the blood clot may break off and travel in the blood stream until it gets stuck in another part of the body, such as in the lung. A clot in the lung or 'pulmonary embolism' (PE) is potentially life threatening. The symptoms of a pulmonary embolus include:
- Sudden unexplained difficulty in breathing
- Tightness in the chest or chest pain
- Coughing up blood
- Feeling very unwell or collapsing

Seek help immediately if you experience any of these symptoms. Diagnosing and treating a DVT reduces the risk of developing a pulmonary embolus.

Everyone can reduce their risk by being as mobile as possible and drinking plenty of water.

Can the risks be reduced?
Your midwife should carry out a risk assessment score at your first antenatal booking. Written in your personal maternity record this assessment is then updated if your situation changes. A further risk assessment should also be carried out if you are admitted to hospital and will be repeated after you have had your baby.

This assessment score helps to decide whether you would benefit from preventative treatment with Heparin. Your midwife or obstetrician will talk with you about your risk factors and explain why treatment may be advised. Heparin is also used to if you have a venous thrombosis, but the dose of heparin used to prevent a venous thrombosis is usually less.

Following these steps will reduce your risk:
- Staying as active as you can
- Wearing special stockings (graduated elastic compression stockings) helps to prevent blood clots
- Keeping hydrated by drinking normal amounts of fluids
- Stopping smoking
- Losing weight before pregnancy if you are overweight
What does heparin treatment involve?
A daily Heparin injections work as an anticoagulant to ‘thin the blood’ making clots less likely. Unfortunately Heparin cannot be given as a tablet so you will be shown how and where in your body to give the injections. We provide the needles and prepared syringes and you will be given advice on how to store and dispose of these.

How do I give the injection?
Heparin is given into the fat layer underneath the skin of the outer part of the upper arm, thigh or abdomen (though not the tummy button). We will show you how to do this. The injection is very safe to give but change the site every day to avoid bruising. If the injection site becomes painful, red or swollen ask you midwife or GP for advice on this.

Wash your hands first, then pinch up the skin to lift the fat layer away from the muscle underneath. Hold the syringe like a pencil or dart perpendicular at 90 degrees to the skin, insert the needle and give the injection slowly. Keep the needle in place for a few seconds the remove the needle in one go. PRESS BUT DO NOT RUB ON THE SITE.

Use a different site each day and dispose of the needle and syringe in the sharps box straight away. Your midwife will dispose of this box for you when you have completed your course.

How long will I need to take heparin?
This varies from only a few days, for example to cover long distance travel, or for between one and six weeks immediately after delivery. Sometimes treatment is of benefit for the whole of your pregnancy.

If prescribed Heparin it is very important to complete the course.

Are there any risks from heparin?
A low-molecular-weight heparin is used which does not cross the placenta so it cannot harm your baby.

There may be some bruising where you inject – this will usually fade in a few days. One or two women in every 100 will have an allergic reaction. If you notice a rash after injecting you should inform your doctor so that the type of heparin can be changed.

What should I do when labour starts?
If you think you are going into labour stop your injections, phone the maternity unit and tell them that you are on heparin treatment.

What happens after birth?
It is important to be as mobile as possible after you have had your baby and avoid becoming dehydrated.

If you were on heparin before the baby’s birth, you may need to continue this for between one and six weeks afterwards. Even if you weren’t having injections in pregnancy, you may need to start having injections for the first time after birth.

Can I breastfeed?
Yes. Heparin is safe to take when breastfeeding. Warfarin (another anticoagulant that is occasionally prescribed) is also safe to take when breastfeeding.
Your baby’s movements in pregnancy

Most women are first aware of their baby moving when they are 18–20 weeks pregnant. However, some people feel movements earlier or later than this. Movements are felt as a kick, flutter, swish or roll.

As your baby develops, both the number and type of movements will change with your baby’s activity pattern. Usually, afternoon and evening periods are times of peak activity for your baby. During both day and night, your baby has sleep periods lasting between 20 and 40 minutes, and are rarely longer than 90 minutes. Your baby will usually not move during these sleep periods.

The number of movements tends to increase until 32 weeks of pregnancy and then stay about the same, although the type of movement may change as you get nearer to your due date. Often, if you are busy, you may not notice all of these movements. Importantly, you should continue to feel your baby move right up to the time you go into labour and your baby should move during labour too.

Why are the movements important?
During your pregnancy, feeling your baby move is reassuring. If you notice your baby is moving less than usual or if you have noticed a change in the pattern of movements, it may be the first sign that your baby is unwell and therefore it is essential that you contact your midwife or local maternity unit immediately so that your baby’s wellbeing can be assessed.

How many movements are enough?
There is no specific number of movements which is normal. During your pregnancy you need to be aware of your baby’s individual pattern of movements. A reduction or a change in your baby’s movements is what is important.

There is not enough evidence to recommend the routine use of a movement chart. It is more important for you to be aware of your baby’s individual pattern of movements throughout your pregnancy and to seek immediate advice if you feel that the movements are reduced.

What factors can affect me feeling my baby move?
You are less likely to be aware of your baby’s movements when you are active or busy.

If your placenta (afterbirth) is at the front of your uterus (womb), it may not be so easy for you to feel your baby’s movements.

Your baby lying head down or bottom first then this will not affect whether you can feel the movements.

If your baby’s back is lying at the front of your uterus, you may feel fewer movements than if his or her back is lying alongside your own back.

What can cause my baby to move less?
Certain drugs such as strong pain relief or sedatives can reach your baby and can make your baby move less. Alcohol and smoking may also...
affect your baby's movements.

Sometimes a baby may move less because he or she is unwell.

Very rarely, a baby may have a condition affecting the muscles or nerves that causes him or her to move very little or not at all.

**What if I am unsure about my baby's movements?**

If you are unsure whether or not your baby’s movements are reduced, you should lie down on your left side and focus on your baby’s movements for the next 2 hours. If you do not feel ten or more separate movements during these 2 hours, you should take action (see below).

If you are certain that the movements are reduced or remain unsure Always seek professional help immediately.

Do not rely on any home kits you may have for listening to your baby’s heartbeat.

The care you will be given will depend on the stage of your pregnancy:

- **Less than 24 weeks pregnant.** If by 24 weeks you have never felt your baby move, you should contact your community midwife, who will check your baby’s heartbeat. If there are any concerns an ultrasound scan will be arranged.

- **After 24 weeks you should contact your community midwife, or the Maternity Assessment Unit (0191 2825748) to check your baby’s heartbeat.** You will have a full antenatal check-up that includes checking the size of your uterus, measuring your blood pressure and testing your urine for protein.

- **If your uterus measures smaller than expected, an ultrasound scan may be arranged to check on your baby's growth and development.**

After 24 weeks pregnant if your community midwife is unable to see you, you must contact the Maternity Assessment Unit. It is important not to wait until the next day to seek help.

**Never go to sleep ignoring a reduction in your baby’s movements.**

Your baby’s heart rate will be monitored. This should give you reassurance about your baby’s wellbeing. You should be able to see your baby’s heart rate increase as he or she moves. You will usually be able to go home once you are reassured.

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Positioning a fetal heart rate monitor on the Maternity Assessment Unit
Will I have a scan?
An ultrasound scan to check on the growth of your baby, as well as the amount of amniotic fluid around your baby, may be arranged if:
• your uterus measures smaller than expected
• your pregnancy is high risk
• the heart-rate monitoring is normal but you still feel that your baby’s movements are less than usual.
The scan is normally performed within 24 hour of being requested.

These investigations usually provide reassurance that all is well. Most women who experience one episode of reduction in their baby’s movements have a straightforward pregnancy and go on to deliver a healthy baby.

If there are any concerns about your baby, your doctor and midwife will discuss this with you. Follow-up scans may be arranged. In some circumstances, you may be advised that it would be safer for your baby to be born as soon as possible. This would depend on your individual situation and how far you are in your pregnancy.

What should I do if I find that my baby’s movements are reduced again?
When you go home you will be advised to keep an eye on your baby’s movements and, should your baby have another episode of reduced movements, you must again contact the Maternity assessment Unit.

Never hesitate to ask your community midwife or the Maternity Assessment Unit for advice, no matter how many times this happens.
Labour and delivery

Giving birth is one of the most exciting things that can happen in your life and is a normal life event. Whilst for some women the pregnancy and birth of their baby may require medical involvement, a normal birth can be achieved by the majority of women.

Where can I have my baby?

There are now three delivery choices available in Newcastle.

- At home
- The RVI Newcastle Birthing Centre
- The RVI Delivery Suite

We recommend that you discuss your choice with your community midwife and doctor before you go into labour.

Choosing where to give birth

Choosing where you give birth is a very important choice for you to make. We feel it is important for you to understand the choices available and we can help answer any questions you may have. When making your decision you may wish to consider the following points.

- You should give birth where you feel safe, comfortable and relaxed.
- You can change your mind about your decision during your pregnancy.
- Sometimes if you have health problems your choice may be limited to receive the safest care.

- You may need to have care provided by specialist doctors as well as midwives. If you choose to have midwife led care but later develop complications in your pregnancy, your choice may have to be changed for the safety of you and your baby.

Recently there has been a large study called the Birthplace Study comparing the safety of birth in a variety of settings, whose findings we have included in this information. One of the key findings was that for “low risk” women giving birth is generally very safe.

Wherever you plan to delivery for all pregnancy or labour advice -

Before 37 weeks please phone the Maternity Assessment Unit on 0191 282 5748.

After 37 weeks phone the Labour Line on 0191 282 6363.

Giving birth is one of the most exciting things that can happen in your life and is a normal life event. Whilst for some women the pregnancy and birth of their baby may require medical involvement, a normal birth can be achieved by the majority of women.
If you wish to have your baby in your own home you will be cared for by community midwives from the team that you have met in pregnancy. When you are in established labour a midwife will stay with you. Nearer the birth of your baby a second midwife will arrive to help.

What are the risks and benefits of a planned home birth?

**Benefits**
- has a higher rate of normal births
- results in women feeling much more satisfied with their birth
- results in women needing fewer drugs for pain management

**Risks**
- Research suggests that babies of first time mothers have an increased risk of a poor outcome. For a planned hospital delivery between 5 and 6 babies in every 1000 have a poor outcome. For a planned home birth this is increased to between 9 and 10 babies in every 1000. For mothers having their second or subsequent baby there were no significant differences in these risks due to place of birth.

Will I need to come into hospital?

- 45 in every 100 first time mothers planning a home birth need be transferred to a hospital during labour.
- 12 in every 100 women need to be transferred if it is not their first baby.

If you are transferred to the RVI then transfer is to the main Delivery Suite and not to the Newcastle Birthing Centre as transfer is usually for strong pain relief or because your care has become “high risk”.

Occasionally the community midwives are unavailable to provide midwifery care to you at home so that you will need to come into hospital for the birth. Whilst this situation rarely occurs it is important that you understand this may happen. Examples of this could be staffing issues or extreme weather conditions making it unsafe for care to be provided for you at home.

Please let your healthcare team know early in your pregnancy if you are considering a home delivery.
Helping you to have a normal birth can be influenced by the support you receive during labour and delivery. With this in mind we have opened the Newcastle Birthing Centre - one of the largest Birth Centres in the country - which provides 24-hour care by midwives who are experts in supporting normal childbirth.

The Newcastle Birth Centre experience is designed for mums-to-be who would like to have an active birth following an uncomplicated pregnancy. You will need to be identified as ‘low risk’, between 37 & 42 weeks pregnant and expecting only one baby in a head down position. One aspect of being low risk is that your BMI must remain less than 35.

If things do not go according to plan in labour or afterwards and you need medical support then normally your care will be transferred to the Delivery Suite which is just above the Birthing Centre and is accessed by the lift.

Evidence from the “Birthplace Study” suggests the possibility of transfer from a birth centres to obstetric led care for first time mothers is 40 in every 100 women.

There may be an occasion when the Birth Centre is full. Whilst this situation is rare it is important that you understand that this could happen. In these circumstances care is given on the Delivery Suite.
Why Choose Our Birthing Centre?

The RVI prides itself on providing a real choice for women with midwifery led care in a home from home setting. The Birth Centre cares for women who have had an uncomplicated pregnancy and go on to have a normal labour and birth. Women and their babies are usually discharged within 24 hours of birth and your birth partner can stay with you throughout your stay. You do not have to live in Newcastle to benefit from our new Birth Centre.

Studies have shown that women who give birth in midwifery-led birth units need less pain relief, have fewer interventions during labour and birth, and are more likely to be mobile during labour. They also report higher levels of satisfaction with their care.

We promise to provide the best possible midwifery care for you. The rooms offer you a home-from-home environment. This helps to make sure you and your birth partner feel as relaxed as possible enabling us all to provide the support you need in helping you to achieve a normal birth.

Inside your birthing room

We have 12 individual birthing rooms, each with their own en-suite and 5 with pools. A range of birthing aids are available including gym balls, bean bags, floor mats, birthing stools, and birthing couches. A Febromed is available to help you to adopt more upright position which helps with the progression of labour. Each room ensures you have the privacy you need throughout your labour, birth, and the early postnatal period.

Your living room

During your stay you will be able to make use of the spacious living room and kitchen, and there is also a small private paved garden outside. We can provide you with cold snacks and hot meals and cater for special dietary or religious requirements including vegetarian, Halal and kosher. You'll be given a locker in the kitchen if you want to bring in formula milk or your own food. There is also a shop and refreshment facilities available just outside near the Leazes Wing main reception area.

Pain Relief

- Relaxation and breathing techniques
- Being active and changing positions regularly
- Entonox (gas and air)
- Water (Birthing pools) for labour & birth (if suitable for your care needs)
- Water papules
- Diamorphine and pethidine (strong pain killers given by injection)

Visiting Us

Your stay with us will more than likely be less than 24 hours, so it'll be best for you and other mums if visitor numbers are kept to a minimum. Of course, your birthing partner is more than welcome to stay with you for the duration. We’d appreciate it if you could limit your visitors to immediate family members. Lastly, it is hospital policy that visiting children other than your baby’s brothers and sisters should be over 10 years old.

Thank you for your understanding.
The Delivery Suite

You can always choose to give birth on the Delivery Suite. The Delivery Suite on level 4 of the RVI Leazes Wing is recommended if your maternity care is classed as “high risk” at any stage. Examples would be a breech baby, a planned caesarean section, high blood pressure or carrying twins.

On the Delivery Suite you will be cared for by midwives and if needed a team of doctors who are available 24hrs a day.

The Delivery Suite is:
- The safest choice for high risk women
- The only place you can have an epidural for pain relief
- The area you would need to come to if medical problems develop
- An option for women who want a natural birth but are not advised to give birth in the Newcastle Birthing Centre or at home for medical reasons
- Where labour can be induced.

There are a range of birthing aids available many of the rooms are en-suite and there is a pool room.

Can my partner stay?
Yes, your birth partner can stay with you throughout labour and birth.

Once you are on the postnatal area your partner is able to stay between 8 o’clock in the morning and 9pm in the evening.

Delivery Suite pain relief options:
- Relaxation and breathing techniques
- Being active and changing positions regularly
- Entonox (gas and air)
- Water (birthing pool) for labour & birth (if suitable to your care needs)
- Diamorphine and pethidine which are strong pain killers given by injection
- Epidural
Making your delivery choice

Choose a home birth if -
• You wish to have an active home birth, your pregnancy is uncomplicated and;
• labour begins naturally between 37 - 42 weeks,
• You have a single baby who is positioned head down,
• You have had less than six babies.

Positives
• You will be able to stay at home for labour and birth looked after by midwives who work in the community
• You may feel more relaxed in your own home which can help your contractions
• Your partner may feel more relaxed in their own environment.

Negatives
• The baby may have an increased risk of problems if born at home.
• Available only for low risk women
• Epidural, Diamorphine and Pethidine injections are not available at home
• You may need to be transferred to hospital

Common transfer reasons:
• Slow progress in labour
• The need for additional pain relief
• Closer monitoring of the baby’s heart rate
• Meconium stained water (when the baby opens its bowels).

Choose the Newcastle Birthing Centre if -
• You wish to have an active birth and your pregnancy is uncomplicated and;
• Labour begins naturally between 37 - 42 weeks,
• You have a single baby who is positioned head down,
• You have had less than six babies,
• Your BMI is less than 35.

Positives
• Midwives will care for you closely, supported by health care assistants.
• The calm, private environment may make you feel more relaxed knowing that if complications arise, the doctors are close by on the Delivery Suite.
• Partners can stay.
• Using water with pools available in 5 of the 12 rooms.
• Diamorphine and Pethidine injections are available.

Negatives
• An epidural requires transfer to the Delivery suite.
• Assisted delivery (caesarean section, forceps or ventouse) requires transfer to the Delivery suite.
• In emergency situations the medical team would attend you and or your baby in the Birth Centre.
The Delivery Suite is -
- Available for anyone giving birth.
- We recommend that you choose the Delivery Suite if your pregnancy is 'high risk'.

Positives
- Midwives will care for you, closely supported by health care assistants.
- The team of anaesthetists and theatre staff are available to provide care if it is needed.
- If needed, your care will be regularly reviewed by the Obstetricians who are the experts in high risk maternity care.
- You can have a natural birth experience.
- Using water with a pool.
- All recommended forms of pain relief are available, Diamorphine and Pethidine injections and epidural.

Negatives
- Your chosen birth partner can stay with you during labour and birth but cannot stay with you overnight once you are transferred to the postnatal ward.
- Your environment is more medical which may not feel as relaxing for you and your birth partner.

Where to find additional information
Birthplace in England Research: www.npeu.ox.ac.uk/birthplace
RVI virtual tours: www.newcastle-hospitals.org.uk
NHS choices: www.nhs.uk
BirthChoice UK: www.birthchoiceuk.com
Childbirth.org: www.childbirth.org
Midwives Information and Resource Services: www.infochoice.org
National Childbirth Trust: (tel: 0870 770 3236) www.nctpregnancyandbabycare.com
The stages of labour

What should I do in early labour?

If all has been well in your pregnancy and you are classed as a low risk pregnancy, it is often better to stay at home during early labour. This increases your chances of a normal birth. This early stage can last for a number of hours while the cervix (neck of the womb) softens and starts to prepare for labour. This stage is usually longer in first time mums and this can be very frustrating, particularly if you are told you are not yet in established labour.

This is called the latent phase of labour as it can seem that very little progress is being made. However, this time is vital to allow your cervix to soften so that it then dilates more easily.

Contractions may start very gradually and be spaced far apart. In the early stages they can best be described as strong period cramps. You may feel sick and have diarrhoea, both are signs that contractions may be on the way. As the cervix softens, thins and starts to open, you may have a 'show'. This is a mucous lightly blood-stained loss from your vagina and is normal.

Established labour is confirmed when your cervix has dilated to 4 centimetres or more.

If you are classed as high risk, or if you go into labour early, it is wise to ring the Maternity Assessment Unit for advice on what to do next and when to come in.

At some time the membranes containing the baby and amniotic fluid may burst. When you telephone the hospital the midwife will ask you to describe what has happened and ask further questions if necessary. You may be quite certain if the waters have 'gone' with a gush, but sometimes it is less clear and there may only be a trickle. In this case, put on a pad and observe the loss for a while. Please phone the hospital and tell the midwife what colour the fluid is and how the baby is moving. Whether your contractions have started or not, we will ask you to come to the MAU to be checked over.

If you think that you might be in labour or that your water have broken we have the following 24 hour services:

Before 37 weeks
- The Maternity Assessment Unit: 0191 282 5748

After 37 weeks
- The Labour line: 0191 282 6363
As Labour Unfolds  
- the first stage

Your midwife will carefully record and monitor your progress. This usually includes a vaginal examination about every four hours once labour has established.

During this time, contractions become longer, stronger and closer together. Your midwife will try to ensure that your needs for support and relief from pain are met. You may want to use the pool.

Labour uses a lot of your energy, try to be well nourished before labour starts. Small, easily digested snacks are best. During labour, you may not have much of an appetite, eat and drink to satisfy your needs. If you decide to use medical forms of pain relief, we would ask you to have only water.

The labour rooms are warm so you and your birth companions may want to dress appropriately and bring bottled water to drink. Some women enjoy sucking on ice, so you might consider bringing a flask with ice in. Partners may bring food for themselves and there is a shop in Leazes Wing open from 8.00 am to 8.00 pm and a café open 24hrs during weekdays and in the daytime at weekends.

Find a comfortable position, try leaning against the windowsill, kneeling on the bed or floor, lying on your side. Use whatever is in the room to make yourself comfortable and change position as you need to. Ask the midwife if you would like to try one of the birth balls, bean bags, the pool or the shower.

The Birth of Your Baby  
- the second stage

When the cervix is completely open, we say that you are ‘fully dilated’. At this point there is nothing to stop the baby from being born but there is still a while to go as the baby has to move down the birth canal.

Soon, the baby’s head will press downwards and stimulate the nerve endings in your bottom. These are the same nerves that are triggered when you open your bowels and the feeling is often similar. You may feel that you will open your bowels if you push now, and sometimes this happens. Please don’t be embarrassed about this, it is a common feeling and the midwife is used to this. The contractions you are experiencing now may have a different feel to those you experienced earlier in labour. You may feel more out of control. This stage is called ‘transition’ and is typically the time when women may become irrational or distressed. Not all women behave in this way, but what you are feeling is very intense. Let yourself go and do whatever feels natural. Midwives are used to this change in behaviour. Please don’t feel embarrassed by anything you want to do or say.

The midwife will tell you when the baby’s head is visible. Listen very carefully to the midwife as the baby is being born. We are trying to keep the soft tissues of your perineum (the area between your vagina and bottom) from tearing and will tell you to breathe as the baby’s head is born. This slows down the force of the pushes and allows the baby to emerge gently.
If you wish, your baby is placed onto your tummy so you can hold him or her next to your skin where the baby will enjoy the feeling of warmth. If you have asked to cut the umbilical cord, the midwife will help you do this now. Please talk to your midwife if you prefer to have your baby wrapped first.

After The Baby Is Born – the third stage

Delayed cord clamping
By waiting one minute or more before clamping the umbilical cord your baby will receive some of the blood which would otherwise remain in the placenta. This can be beneficial to your baby especially if small or born early. Some women prefer to wait 3-4 minutes until the cord has stopped pulsating. This will deliver even more blood to the baby but with a slight increase in the risk of jaundice (see the postnatal section).

Next you need to deliver the placenta and membranes. In most cases, the midwife will give you an injection, called Syntocinon, in the top of your leg. This causes the uterus to contract strongly and separates the placenta so that it can be delivered. If you wish to have delayed cord clamping you can still have this injection. If you would rather not have this injection, the placenta will take longer to be delivered from a few minutes to an hour. Providing you are not losing too much blood, we are happy to wait for the placenta to come by itself. Please talk to your midwife well before the baby is born so you can discuss the method of delivering your placenta. You might want to write down your wishes in your Birth Plan.

Episiotomy and tears
An episiotomy is a deliberate cut to the perineum to help delivery of your baby. When a baby is born the vagina opening stretches often without tearing. But it can take several minutes to stretch fully and if there is a need to urgently deliver the baby an episiotomy may be required to speed up the delivery. To repair the cut or tear you will receive local anaesthetic to numb the area, unless you already have an effective epidural. Dissolvable stitches are used which do not need to be removed.

Skin to Skin contact
Both you and your baby will benefit from close contact after birth. Holding your undressed baby close to your skin helps calm your baby and keep your baby feeling comforted warm and secure. Holding your baby against your skin is a lovely way to get to know your baby. Lots of skin to skin contact in the first few days and weeks can also help with establishing breastfeeding. Skin to skin contact can start almost immediately after any type of delivery, ask your midwife about the benefits and how we can help you at this most important time.
Breastfeeding can start almost immediately after any type of delivery. Ask your midwife about the benefits.
Induction of labour

Most labours start naturally between 37 and 42 weeks of pregnancy but for women who are still pregnant after 41 weeks, or if there are pregnancy concerns an induction of labour is offered.

Membrane sweep explained

A 'membrane sweep' can sometimes be enough to bring on labour. It is a simple technique that can be done in a few minutes, either during a clinic visit or in your home. It involves an internal examination, where the midwife or doctor will feel the cervix (neck of the womb). If it is beginning to open, they will 'sweep' their finger round this area. This can release hormones called prostaglandins which help to start labour. The examination and membrane sweep is safe but can feel uncomfortable. Sometimes there may be some 'spotting' of blood followed by cramp-like pains, a little like period pains, this is normal.

If you are at home please provide the midwife with hand washing facilities and a private environment for yourself. If you have other children it is helpful if someone can care for them for a few minutes during this visit. The membrane sweep is more likely to work if your body is ready to go into labour and your cervix has already begun to soften and thin. 10 in every 100 women respond to the membrane sweep and labour without the need for further induction methods.
Why induce labour?
After 41 weeks you can choose to wait or have your labour induced. The benefit of induction is that for every 400 inductions after 41 weeks we prevent the loss of one baby without increasing risks to the mother. However, induction may increase the chance of medical intervention in labour and means that you are less likely to deliver in the birthing centre. Because of these factors we do not offer induction before 41 weeks without a medical indication.

After 42 weeks you can again choose to wait or have labour induced. The risks to your baby are further increased after 42 weeks and we recommend additional daily monitoring of the baby. Unfortunately, such monitoring will not predict or prevent all potential problems.

Can induction of labour be avoided?
In the final weeks of pregnancy your chance of labour starting naturally increases as each day goes by. A membrane sweep doubles your chances of spontaneous labour and reduces the need for induction of labour. Further membrane sweeps have not been shown to be helpful.

Methods of induction
On arrival to the RVI
The Maternity Reception staff (Level 4, Leazes Wing) will direct you to the Induction Suite. Your midwife will explain the procedure, feel your abdomen to see how your baby is lying and may perform a scan to ensure the baby is head down. This scan will only confirm the position of the baby. A cardiotocograph (CTG), which is a recording of the baby’s heart rate will be performed to ensure your baby is healthy.

Prostin
If your cervix (neck of the womb) is closed the midwife will insert a tablet (pessary) into your vagina. The tablet contains a prostaglandin (‘Prostin’) to help soften and open the cervix, it may also cause some cramp-like abdominal pains and backache.

Your baby’s heartbeat will be monitored again by CTG. After this, you can walk around if you wish. Depending on what happens to your cervix, you may require another Prostin tablet six hours later.

Occasionally a third Prostin pessary is required six hours after that. Each individual woman responds differently to the action of Prostin, so the process of induction can take some time.

Artificial rupture of membranes
Prostin is unnecessary if your cervix has softened and opened ‘dilated’ enough so that we can artificially rupture your membranes, ‘break your waters’. Reaching the membranes sometimes causes discomfort but breaking the waters itself is not painful.

Oxytocin
Once your waters are broken, this is often enough to stimulate your contractions. If the contractions are not coming very often or are not co-ordinated enough to dilate the cervix you will be offered a drug called oxytocin to help the contractions. Oxytocin is given slowly in measured amounts through a drip in the back of your hand. The drip will normally stay in place until after the birth of the baby. During this time, your baby’s heart rate will be continually monitored using the CTG monitor.
Induction: frequently asked questions

Who can accompany me?
Although visitors are not allowed in the Induction Suite a birthing partner can stay with you during the process. You can invite your chosen birthing partners once you are in established labour and transferred into a delivery room.

How long does induction take?
The time induction takes can vary, especially the ‘latent phase’ (the time when the cervix shortens and softens but before it dilates). If this is your first baby, the average time from admission to delivery is 25 hours, although the labour itself usually lasts about 12 hours. If you have had a baby before, the average time from admission to delivery is 18 hours, however, the labour itself usually lasts 8-12 hours.

Can I use the Birthing Centre pool if I am being induced?
If you are being induced with either a Prostin tablet or by breaking your waters then the pool may be used if labour then progresses naturally without the need for an oxytocin drip.
How do most women deliver following induction of labour?
If this is your first baby:
• 33 in every 100 women have a normal vaginal delivery
• 33 in every 100 women have a ventouse or forceps delivery
• 33 in every 100 women have a caesarean section

If you have had a vaginal delivery before:
• 70 in every 100 women have a normal vaginal delivery
• 15 in every 100 women have a ventouse or forceps delivery
• 15 in every 100 women have an emergency caesarean section

If you have had a previous caesarean section:
• you should discuss the success rate of induction and the potential benefits and risks with your obstetrician.

What If the Induction Is unsuccessful?
Sometimes it is still not possible to break your waters after up to three Prostin tablets have been given. If so then a doctor will discuss your options with you. The options will include the offer of a caesarean section and depending on your circumstances may include the option of resting without further Prostin for one or more days before starting the induction process again.

This model shows the baby in the normal head down position. The cervix is a closed tubular structure which needs to dilate to 10 cm for the baby to be born. Before opening the cervix shortens and softens. Prostaglandin tablets enable the cervix to soften and shorten, usually without causing contractions. Once open the membranes can be reached and if necessary artificially ruptured by the midwife or doctor. This usually results in contractions starting in the next 1-2 hours. If not then an oxytocin drip is used to encourage the uterus to contract.
If your waters break after 37 weeks but before labour starts

Often the membranes rupture releasing some of the fluid around the baby without labour starting straight away. The waters breaking is called spontaneous rupture of the membranes (SROM). Most women will go into labour on their own within a few hours of the waters breaking.

The membranes form the sac which helps to provide a barrier against infection. SROM means that the bag or sac in which the baby grows is no longer sealed. It is normally safe for the membranes to be ruptured for a short time but after that the risk of infection affecting you and your baby increases. It is important when you think that your waters have broken to contact the hospital for advice.

24 hour Contact details

- After 37 weeks phone the Labour Line on 0191 282 6363 and a midwife will speak to you.

You will be invited to the RVI to have your baby’s heart beat recorded as well as your temperature, pulse and blood pressure checked. If SROM is confirmed but you are still not in labour then an induction of labour on the Delivery Suite will be offered for you between 12 and 18 hours after the time that your membranes ruptured.

Please contact the hospital again if:

- The fluid turns green. This may mean that your baby has opened its bowels. This is not usual and we would ask you to come in so that we can monitor the condition of your baby.
- The fluid is blood stained. If the waters are slightly pink then this is not a cause for concern. More heavily blood stained fluid may indicate a problem.
- If there is a change in the smell of the fluid particularly if it becomes offensive or smelly.
- If you develop flu like symptoms feeling hot, cold or shivery.
- If you notice that your baby is not moving as usual.
- If you have regular contractions that are getting stronger, lasting longer and becoming closer together.
- If you need stronger pain relief than paracetamol.
- If you have any further concerns or questions.
After being reviewed at the RVI we ask that you check your temperature every 4 hours before returning to the hospital either in labour or to have labour started. Check your temperature with one of the Tempa Dot thermometers provided. If your temperature is 37.2°C or more you will need to phone and return to the Maternity Assessment Unit (not the Birthing Centre).

- Wait 15 minutes before taking your temperature if exposed to cold weather, smoking, eating or drinking.
- Place Tempa Dot under tongue as far back as possible. The dots can face up or down.
- Press your tongue down on the Tempa Dot and keep your mouth closed for 1 minute.
- Remove Temp Dot, wait 10 seconds. Some blue dots will disappear as the device locks in for accuracy.
- Read the last blue dot, ignore any skipped dots.
- Record your temperature. Discard the Tempa Dot as they are only for a single use.

Alternatively you can record your temperature under your arm.

- Place Tempa Dot high under your arm with the dots against your chest.
- Lower your arm and wait 3 minutes. Read the last blue dot and ignore any skipped dots.
Pain relief in labour

Labour pain can be severe, and we encourage you to read about all the options for pain relief before you are in labour.

Options at home

Warm water may help to relax you and helps to release endorphins, your body’s natural painkillers. Massage may provide relief from back ache and reminds you to remain relaxed. Changing positions and being mobile can help to relieve muscle aches. There are alternative and complementary therapies you can use safely in childbirth. Most midwives are not qualified to administer or advise you about these, but we are sympathetic to your wishes if a qualified practitioner has advised you. Speak to your midwife further about this if you wish.

Options at hospital

Entonox

A mixture of ‘gas and air’ half oxygen and half nitrous oxide that you breathe in through a mouthpiece during contractions. To get the best effect start breathing as soon as you feel a contraction starting to relieve intense pain over the height of the contraction.

Benefits

Entonox gives some pain relief. It will not take the pain away completely, but it may help. Entonox is quick to act, and quick to wear off. It can be combined with other forms of pain relief such as the birth pool or diamorphine.

Risks

Entonox sometimes makes you feel light-headed or a little sick for a short time. It can affect Vitamin B12 metabolism so strict Vegans and others at risk of Vitamin B12 deficiency should not use Entonox, however, this rarely leads to any problems.

Diamorphine and Pethidine

These are a group of morphine-like painkillers, including codeine, diamorphine, pethidine and remifentanil. All these morphine-like painkillers act in a similar way, by mimicking natural painkillers produced by the body during labour. Codeine is taken as a tablet, and is usually only used in early labour. We offer diamorphine rather than pethidine because pethidine is a bit less effective than diamorphine, and has more effect on the baby than diamorphine. It is given as an injection by a midwife into your arm or leg. If you would prefer to have pethidine then please discuss this with your midwife; we will support your choice.

Benefits

These are powerful drugs, but they do not take the pain away completely. The effect starts after about 15 minutes and may last a few hours. Although pain relief is often limited, some women say it makes them feel
relaxed and less worried about the pain. Other women are disappointed with the effect of opioids on their pain and say they feel less in control.

**Risks**
Opioids may make you feel sleepy or sick. You are usually given an anti-sickness medication at the same time to prevent this. They may slow down your breathing. Opioids may also make your baby slow to take a first breath or be drowsy after delivery, so in labour the total dose we offer is at most two doses of diamorphine.

**Epidural**
About 1,800 mothers at the RVI have an epidural for labour every year (just under a third of mothers). Usually because the mother chooses to have one (often after trying other options) rather than for a medical reason.

An epidural consists of a small plastic tube, which is placed between two of the backbones at the base of the spine by a specially trained doctor (anaesthetist). Placing the tube needs to be done in a particular way, to ensure that the tube is clean.

You need to sit or lie in a curled-up ‘bad posture’ position, and to be still while the epidural tube is being put in.

Local anaesthetic to numb the skin is used before the tube is inserted. The local anaesthetic stings a bit, but otherwise it does not really hurt to get an epidural put in place. It may take 40 minutes to get pain relief (allowing time for putting in the epidural tube, giving medicine down it and waiting for them to work).

Once the tube is inserted, it is stuck down with a large patch of adhesive tape. You can then move about on the bed. No needle is left in your body. Pain relief is produced by putting a mixture of two medications down the tube – we use a standard mixture of local anaesthetic (levobupivacaine) and an opioid (fentanyl) at the RVI.

**Benefits**
90 in every 100 epidurals give complete pain relief (which is better than any other option). An epidural can be topped up rapidly to provide anaesthesia for a forceps delivery or Caesarean section, so it can reduce the need for other types of anaesthesia.

**Risks**
10 in every 100 epidurals do not work well. One side of the body is often more numb than the other, or you may still have a strong feeling of pressure in the bottom. There are usually steps which can be taken to improve an epidural, but it is sometimes necessary to re-do the epidural. Epidurals are more likely to fail if labour is advanced (if your cervix has dilated more than 7cm), and if you have been taking morphine or similar medication regularly before labour.

1 in every 100 epidurals result in a fall in blood pressure. Your midwife will carefully monitor your blood pressure and a drip in your hand is positioned to help promptly treat low blood pressure with fluids or medication.

1 in every 100 epidurals can lead to a headache called a post-dural puncture headache. The headache can be severe and needs specialist treatment. To minimize the risk of this problem it is important that you keep...
still whilst the tube is being put in. An epidural can cause you to develop a fever – this can happen over a long labour both with and without an epidural. All labouring women have their temperature checked regularly.

1 in 10 000 epidurals can cause nerve damage that may be permanent. So this is very rare. In fact, nerve damage is more commonly due to other causes during labour such as pressure from the baby's head on nerves in your pelvis.

What your epidural won't do

- An epidural generally has little effect on your baby. The total amount of medicine given is small, and the local anaesthetic does not cross the placenta very well.

- Occasionally the baby's heart rate falls shortly after starting an epidural. We will monitor your baby's heart rate continuously once you have an epidural.

- An epidural will not make you sick.

- Epidurals do not cause long-term back problems. Many women have back problems after having a baby, but this is just as likely with or without an epidural.

Can everyone have an epidural if they would like one?

For some women it is not possible to put the epidural tube in safely, for example if you have some types of spina bifida or if your blood does not clot well.

If you have had back problems you can usually still have an epidural safely. Epidurals are often used to treat pain due to disc problems. We would encourage you to discuss this.

Patient-controlled analgesia (PCA)

With this option, you press a button to give small doses of morphine or a similar medicine to yourself through a drip (cannula) in your hand. You do not feel the dose being given and you are in control of the amount of pain relief but the dose is set so you cannot use too much.

This option is set up by an anaesthetist, and requires specialised equipment and a high level of care to ensure safety. It is not available to or appropriate for everyone. Your midwife or an anaesthetist will be able to tell you whether this option might be appropriate for you, and to give you further information.

Benefits

As with all morphine like drugs, pain relief is good but not complete. Most women use Entonox as well. Controlling the administration of the drug yourself, and the fact that each dose is small, allows you to balance the level of pain relief and side effects.

Risks

The total dose of medicine used tends to be much greater than with our usual way of giving opioids. The risks of feeling sleepy and sick are greater, and there is a greater risk of slowing your breathing. For this reason, your breathing will be monitored by your midwife. This is the reason why PCA can't be offered to everyone.
Pain relief for caesarean section

There are three options for anaesthesia. All of them are given by the anaesthetist and an anaesthetic nurse working as a team. A midwife will also be present, as will the obstetric operative team. There is a minimum of seven members of staff present in theatre during most obstetric operations.

Before we start
You will need a working ‘drip’ before the anaesthetic is started. We monitor your heart beat through sticky dots applied to your chest, use an automatic blood pressure cuff and a pulse oximeter to measure oxygen in the blood through a clip on your finger. We usually tilt the bed so your left side is downwards, to keep the weight of your baby off the middle of your back, until the baby is born. You will be offered a dose of antibiotics given through your drip before a Caesarean section. This may be delayed in extremely urgent cases but is usually given before the operation starts.

Spinal anaesthetic
A fine needle is used to place local anaesthetic (bupivacaine), usually mixed with pain killer (diamorphine) for pain relief after the operation, into the spinal fluid at the bottom of the spine. You need to sit up, with your back curled outwards. You are awake during the operation, which means that you and your birth partner can be present when your baby is born.

Cold antiseptic spray is used to clean your back first, then your lower back is covered with a plastic sheet. The needle is fine, and the procedure is not usually painful. The anaesthetic works quickly, usually within 15 minutes. You will be very numb from about the level of the armpit to the toes, and your legs will be heavy and difficult to move.

The anaesthetic is very effective, but does not always get rid of all feeling – you may be aware of movement during the operation. The numbness is checked carefully before we start the operation.

The anaesthetist and other team members, together with your birth partner, are with you throughout the operation, and we can explain things and offer other help if you need it during the operation.

The numbness lasts for at least a couple of hours, then wears off gradually. It is common to feel pins and needles as it wears off.

Your legs should be able to take your weight after about six hours although this can vary. Please be careful and don’t try and get out of bed after the operation without someone else to help.

It is common for your blood pressure to fall as the spinal anaesthetic takes effect. To try and avoid this, we give medicine to raise the blood pressure through the drip. Sometimes, blood pressure falls a lot despite this medicine, and you can feel ill or sick until your blood pressure return to normal. Tell the anaesthetist straight away if you aren’t feeling well; he or she will be able to help.
Benefits
Avoids the risks of general anaesthesia. Compared with a general anaesthetic caesarean section you usually have less pain afterwards.

Risks
2 or 3 in every 1000 women develop a particular type of headache following a spinal anaesthetic, related to a continuing leak of spinal fluid. This can be severe and require treatment with an epidural injection.

3 in every 1000 women are unable to have a spinal anaesthetic because it cannot be placed easily or it is not effective enough for the operation to be started. You may need a general anaesthetic if that happens.

Rarely (about 1 in every 10 000 cases) the anaesthetic has much more effect than intended. If this happens you will need a general anaesthetic until the effects wear off.

Very rarely (about 1 in every 100 000 cases) nerves are damaged during a spinal injection or as a result of complications such as an infection or blood clot in the spine. The effects vary, but are potentially serious.

Epidural top up
If you already have a working epidural, this can be rapidly topped up in about 10 minutes.

Benefits
Rapid anaesthesia without needing any extra procedures. For pain relief after the operation, longer acting pain killer can be given down the epidural tube.

Risks
Epidurals do not always provide enough numbness for an operation; if your epidural has not worked well for labour, we will not top it up for a Caesarean. We recommend a spinal anaesthetic (or a general anaesthetic) instead.

General Anaesthetic
We ask everybody to read about this option before labour, because one of the commonest reasons for choosing this type of anaesthesia is that the situation is such an emergency that there is no time for any of the other options. In an emergency, there may not be much time to explain what is happening, and it is very helpful if you have already read about it.

Unfortunately birth partners cannot accompany you to theatre during general anaesthesia. This is for safety reasons as the team cannot attend to a partner if they have questions or are unwell during critical phases of the anaesthetic or operation, especially in an emergency.

About 1 in every 100 women having a planned caesarean section and 10 in every 100 women having an emergency caesarean section at the RVI has a general anaesthetic. The anaesthetic is given into a drip in your hand or arm, following which you rapidly lose consciousness and ‘go to sleep’ – though it is deeper than sleep.

You will be given a small dose of antacid medicine (sodium citrate) to drink. The anaesthetist needs to check your mouth and neck, looking for loose, capped or crowned front
teeth and to plan breathing assistance for you during the anaesthetic.

First you will be asked to breathe oxygen through a clear plastic face mask. It is extremely important for your safety and that of your baby that you do this. The mask needs to fit closely over your nose and mouth, so that you are not breathing air from the room at all. The purpose is to exchange the air in your lungs for oxygen, this usually takes one or two minutes.

The anaesthetic
As soon as the oxygen breathed out of your lungs reaches the correct level, the anaesthetist will give you some anaesthetic medication through the vein. As this is given, the anaesthetic assistant will start pressing on the front of your neck. This is necessary to prevent vomit going down the wrong way as you are going to sleep.

Waking up
You will wake up shortly after the end of the operation. You may be aware of a tube in your mouth which is taken out as soon as you are awake. You may not remember much for a short time after your anaesthetic.

Benefits
General anaesthesia can be given very quickly. General anaesthesia is the only option in circumstances where a spinal or epidural top up are not possible.

Risks
Your blood pressure can rise at the start of a general anaesthetic. If you have high blood pressure then you will be given extra medication to prevent this. A sore throat is common after a general anaesthetic.

2 or 3 in every 1000 women who have a caesarean section under general anaesthetic are not as unconscious as intended during the operation, and can recall people talking or feel that they have been dreaming.

4 in every 1000 general anaesthetics for caesarean section are complicated by unexpected difficulty in helping the mother with her breathing at the start of the anaesthetic. This is usually managed by following an emergency drill without the mother being aware of the difficulty, but on rare occasions can result in waking the mother up without doing the operation.

Very rarely, serious complications occur, and can lead to serious brain damage or death of the mother. The anaesthetic drugs cross the placenta and can make the baby sleepy or slow to take a first breath. It is unusual for the baby to be sleepy for longer than a few minutes. A paediatrician will come to help look after your baby immediately after birth if you have a general anaesthetic.

During your time in theatre and afterwards in the recovery area we ask that only one birth partner accompany you.
Using water for labour and birth

Using water may reduce pain and the need for additional forms of pain relief. Warm water is soothing and supports your body, helps you to relax, be gently mobile and to change position easily. In this way it may help to shorten labour. Partners can offer support and encouragement either from the poolside, or in the pool if you both prefer (we ask that partners wear trunks). We have a pool on the Delivery Suite and 5 pools on the Newcastle Birthing Centre.

**Things to consider**

Entonox can be helpful and you can continue to use this in the pool. Think about what you would like to wear, you may be happy with nothing, or may prefer a large t-shirt.

We monitor the baby’s heartbeat using a waterproof ‘Sonicaid’. We will listen at about 15 minute intervals when you are in labour and more frequently when the baby is near to being born.

The midwife will check the water temperature regularly. If your body overheats, your baby’s heart rate may increase. The water temperature should be no more than 37°C. We maintain strict standards of pool hygiene and the pools are thoroughly cleaned between uses. If you have an infection that may be transmitted by water, we would ask that you do not use the pool.

Please be aware that the pools may be in use during busy times so consider your options if the pool is unavailable. You may want to draft an alternative ‘birth plan’ if this happens.

To use the pool, on either the Newcastle Birthing centre or the Delivery Suite for labour or birth -

- You must be over 37 weeks pregnant
- You must only be expecting one baby
- the baby must be coming head first
- Your pregnancy must have been straightforward
- Your BMI must be less than 35

Sometimes, it will be necessary to ask you to leave the pool –

- if there are changes in your baby’s heart-rate
- if the baby has opened its bowels before birth as this may indicate distress
- if your labour has slowed down
- If you need further pain relief
- for the midwife to make an assessment of progress by doing a vaginal examination, This takes place in the same room and you can return to the pool straigh afterwards.
Partners can feel rather out of things. But partners can be of enormous help at ‘the head end’, offering support, love and encouragement. It can be a bit intimidating in the midst of all that may be happening but your role is very important. You will be able to stay during the labour at all times and kept fully informed of the progress. If there is the need to have the baby in theatre (for example a caesarean section or forceps delivery) then you are still able to stay; the only exception is on the rare occasions that a procedure requires a general anaesthetic.

Sometimes, women are more worried about their birth partner than anything that is happening to them, which only raises anxiety. Often there are aspects of the birth that you do not wish to see. There is no shame in admitting that this is the case and we can easily accommodate you nearby if this is what you decide between you.

Don’t forget to ask questions if you don’t understand what is happening, or if you have views about how you would like to do things.
If labour is not straightforward

We all want your labour and your baby’s birth to go as smoothly as possible, but it is important to know about some of the ways in which labour and birth may be managed if a complication arises. If any of these things happen to you or if you need an assisted delivery, you may feel disappointed. Please be reassured that we too would rather avoid these interventions and if they are required, it is for the safety of your baby and yourself.

Artificial rupture of membranes
Contractions may be made more effective once the bag holding the waters has popped, so the midwife might rupture the membranes artificially. This is most commonly done when labour is being induced or if your progress is slow.

Augmentation of labour
If contractions are not opening your cervix and moving the baby down the birth canal, then after the membranes have ruptured labour may be speeded up (augmented). Approximately 7 in every 100 women will choose to have labour augmented. A hormone drip is put into the back of your hand or arm. This contains Syntocinon an artificial form of the hormone you are producing yourself to improve the effectiveness of the contractions. You need to have the baby’s heart monitored continually whilst on the Syntocinon. To avoid over contracting the Syntocinon is only gradually increased over time.
Monitoring your baby’s heart beat in labour

Your baby’s heart rate can be measured either at regular intervals (‘intermittent auscultation’) or continuously (electronic fetal monitoring). Before starting any monitoring the midwife or doctor will check your heartbeat as well as your baby’s.

Most babies come through labour without problems but there are a few who don’t cope so well. During contractions blood can’t pass through the placenta (afterbirth) so easily. This is normal and most babies cope without any problems. If a baby is not coping well, this may be reflected in the pattern of their heartbeat. One of the best ways of finding out if your baby is having difficulties is to listen to their heartbeat regularly throughout the labour; this is known as Fetal Heart Monitoring.

Intermittent monitoring
If you are healthy and have had a trouble-free pregnancy this is the recommended method of monitoring your baby’s heartbeat during labour. The midwife usually uses a hand held Sonicaid device to listen to your baby’s heartbeat which is the same equipment most community midwives use in clinic. They should listen in every fifteen minutes during the early stages of labour, increasing to once every five minutes (or once every contraction) in the later stages. Your ability to move around will only be limited when the baby’s heartbeat is being listened to. At other times you will be able to stand up and move around as you wish.

Continuous monitoring
With a continuous electronic fetal monitor two receivers are held in place by belts around the abdomen and your baby’s heartbeat is recorded throughout the labour. More rarely, electric fetal monitoring can also be done with a small clip fastened to the baby’s head. This will leave a small scratch on the baby’s head which will usually heal within a few days.

You may request continuous monitoring or sometimes we may recommend it for a number of reasons relating to you or your baby’s health.

Screen at the midwive's station enables us to see the heart rate recording, supporting your midwife in your birthing room.

Continuous monitoring keeps track of your baby’s heartbeat for the whole of your labour. It is performed on the Delivery Suite but not in the Newcastle Birthing Centre, so for this reason transfer to the Delivery Suite may be required.
Your baby’s heartbeat is recorded as a pattern on a strip of paper called a “trace” or a “CTG”. Your midwife or doctor will read and interpret the trace to help get an idea of how well your baby is coping with labour. It is normal for there to be changes in the pattern of the heartbeat, for example, when your baby is sleeping, moving around or during contractions. You should ask your midwife or doctor if you want the trace explained to you. Being attached to the monitor can limit your ability to move around. Whilst it may be okay to stand up or sit down, it will not be possible to have a bath or move from room to room.

**What happens if there are concerns?**

Occasionally the trace can make your midwife or doctor suspect that your baby is not coping well when in fact they are fine. Fetal blood sampling can help to clarify this and may avoid you having an unnecessary caesarean section.

**Fetal blood sampling**

Compared with the fetal heart rate monitoring alone, fetal blood sampling is a more accurate way of checking if your baby is coping well. Fetal blood sampling involves taking one or two drops of blood from your baby’s scalp - which we can see in the later stages of pregnancy using a speculum placed in your vagina.

This blood is tested for oxygen levels to show if your baby is coping well with labour. The test can take between ten and twenty minutes.

Depending on the result you may be left to give birth without intervention, a decision may be made to repeat the test later, or the decision may be to help deliver the baby if your baby is not coping. There may be reasons why fetal blood sampling is not appropriate for you, for example if you have certain infections and if this is the case your midwife or doctor will discuss this with you.

**The Birth Reflections Service**

After the birth you may feel that it would help to meet with a midwife from the Birth Reflections Team and talk through your experience. We are here to listen and it may help to discuss any concerns. Your partner is also welcome to be with you. Please phone 0191 282 0212 and leave a message on the answer phone so that we can return your call.
Breech means that your baby is lying bottom or feet first in the uterus (womb) instead of in the usual head first position. In early pregnancy, breech is very common; at 28 weeks 30 in every 100 babies are breech. Later your baby usually turns naturally into the head first position so only 3 in every 100 babies remain breech by the end of pregnancy.

Why are some babies breech?
Sometimes it is just a matter of chance at other times certain factors make it difficult for a baby to turn during pregnancy. These might include the amount of fluid in the womb (either too much or too little), the position of the placenta or if there is more than one baby in the womb. Most breech babies are healthy but for a few babies being breech may be a sign of a problem. All babies will have a newborn examination.

What can be done?
After 37 weeks of pregnancy, if your baby is in the breech position we recommend an External Cephalic Version (ECV) which aims to turn the baby to a headfirst position while still in the womb. This then allows you to attempt a normal vaginal delivery and the difficult decisions about breech delivery can be avoided. An ECV reduces the risk of a caesarean section without any increased risk to the baby.

Who can have ECV?
An ECV is not recommended if you have:
- A low lying placenta (placenta praevia)
- Vaginal bleeding
- A low level of amniotic fluid in the sac that surrounds and protects the baby
- A particularly small baby
- Any fetal heart rate concerns.

You will have an ultrasound scan to check for these conditions before the ECV.

How successful is ECV?
45 in every 100 women will have the baby turned to the head down position. Very occasionally the baby will turn back to breech.

The risks of ECV are very small.
- Rarely the baby can be distressed. If this happens we can immediately perform a caesarean section (less than 1 in 100 of cases)
- Labour may start (1 in 100 cases)
- The waters may break (1 in 100 cases)
- There may be a small blood loss from either the mother or baby.

What happens at ECV?
You will be given a two hour appointment at the Maternity Assessment Unit (MAU). On the day of ECV you can drink clear fluids but must not eat for 4 hours beforehand. On arrival you will be scanned to confirm the breech presentation. Just before the ECV you will be given an injection under your skin (Terbutaline), which relaxes your uterus and makes it easier to turn the baby.
You will also be given a tablet (Ranitidine) that reduces the acid in your stomach. We will then try to turn the baby. The procedure is uncomfortable but not painful (and will be stopped if it is). Ultrasound is used to monitor the baby’s heartbeat and the success of the procedure. The operator’s hands are used to lift the baby and turn the baby into the head down position. After the procedure the baby’s heart rate is monitored again.

What if ECV fails?
If the ECV is unsuccessful we will arrange an antenatal clinic appointment with your consultant or a senior member of their team. At this appointment you will be able to discuss the best way to deliver and plan for the remainder of your pregnancy.

What are my choices for birth?
If you decide not to have an ECV or if we are unable to turn the baby then there are two choices for birth, either a planned caesarean delivery or a vaginal breech birth.

Caesarean delivery
Along with the Royal College of Obstetricians and Gynaecologists (RCOG) and National Institute for Health and Clinical Excellence (NICE) we recommend that caesarean delivery is safer for a baby that remains in the breech position.

Caesarean delivery carries a slightly higher risk for you, compared with the risk of having a vaginal breech birth. Caesarean delivery does not carry long-term risks to your health, however, a caesarean section influences your care in future pregnancies which you may wish to discuss.

Sometimes labour may start before your planned caesarean delivery. Your obstetrician will assess whether it is safer to proceed with the caesarean delivery or if the baby is close to being born, it may be safer for you to opt for a vaginal breech birth.

Vaginal breech birth
A vaginal breech birth remains a choice for some women, however, it is not be recommended as safe in all circumstances. This is because it is a more complicated birth as the head is the widest part of the baby and is last to be delivered - occasionally this may be difficult.

Where a vaginal breech birth is being considered, we can support this on the Delivery Suite. We are able to offer this service as we have experienced obstetricians trained to deliver a breech baby vaginally along with facilities for an emergency caesarean delivery should this be necessary.

Before choosing vaginal breech birth, it is advised that you and your baby are assessed. We advise against a vaginal birth if:
- your baby is a footling breech (feet below the bottom)
- your baby is large (estimated weight over 3800 grams)
- your baby is particularly small (estimated weight less than 2000 grams)
- your baby is in a certain position: for example, if the neck is very tilted back
- you have had a caesarean delivery
- you have a narrow pelvis
- you have a low-lying placenta
- you have pre-eclampsia
What can I expect in labour with a breech baby?
Apart from a water birth you have the same choice of pain relief as with a baby who is head first. An epidural has many benefits in these circumstances. We advise that your baby’s heart rate is be monitored continuously. As with any labour, you may need an emergency caesarean delivery. Forceps may be used to assist the baby to be born. This is because the baby’s head is the last part to emerge and may need to be helped through the birth canal. A paediatrician will attend the birth to check the baby.

What if my baby is coming early?
If your labour starts before 37 weeks, the benefits versus the risks of a caesarean delivery or vaginal birth changes and will be discussed with you.

What if I’m having more than one baby and one of them is breech?
If you are having twins and the first baby is breech, your obstetrician will usually recommend a caesarean delivery. The position of the second twin before labour is less important at this stage because this baby can change position as soon as the first twin is born. The second baby then has lots more room to move.
Planned (elective) caesarean section

A caesarean section is ‘elective’ if it is planned in advance.

There are situations where the safest option for you or your baby is to have a caesarean section. As this involves major surgery, it will only be recommended for clinical need. Your baby is delivered by cutting through your abdomen and then into your uterus. The cut is made just below your bikini line.

If you are expecting twins, or more, it is more likely that you will be advised to have a caesarean section. This will depend on how pregnancy progresses, the position of your babies and whether they share a placenta.

Whenever a caesarean is suggested, your doctor will explain why it is advised and any possible side effects. They will ask for your written consent for the procedure; please do not hesitate to ask questions.

An elective caesarean section takes place after 39 weeks unless an earlier delivery is clinically indicated.

Elective caesarean section for maternal request
If your pregnancy is progressing well and there are no medical concerns, you may still wish to request or discuss having an elective caesarean section. As the risks of caesarean section are greater than those for a successful vaginal birth, decisions on whether a caesarean section can be offered are only made after a full discussion of the risks and benefits in each case.

The pre-admission clinic
Designed to avoid admission the night before your operation, the clinic will complete a health check list, review your consent, take all necessary blood tests, provide your Ranitidine tablets and answer any questions. Your appointment time will be given to you when your caesarean section date is booked.

The evening before your caesarean section
Please have a shower and remove all jewellery and makeup especially all nail varnish - fingers & toes. If you can shave the top inch of your pubic hair please do so. This is where the incision will be made to deliver your baby. Your midwife can do this for you on the day of admission if you prefer.

You will have be given two antacid tablets called Ranitidine. Take the first table at 10pm the night before your operation.

The morning of your caesarean section
Take the second Ranitidine tablet in
the morning just before your admission time which will be either early or late morning.

You will be advised not to eat for 4 hours before the start of the operation. You can continue to drink clear fluids up until your operation.

Please come to the Maternity Reception at the time you have been given. Your partner can stay with you if you both want this. Bring your notes and something to do while waiting to go to theatre. You will be shown to your bedside meet your midwife, the obstetrician who will perform the operation and your anaesthetist. There will be lots of opportunity to ask questions.

You will have been told that your operation is planned for the morning or the afternoon. We try to ensure that this happens, but we cannot predict when the theatre might be in use due to an emergency. Delays may be inevitable. The team will keep you informed.

**The birth of your baby**
The midwife will take you and your partner to the operating theatre and your partner will be asked to change into theatre clothes. It takes about 10 minutes to deliver the baby and the whole operation takes about 50 minutes.

You will be offered a dose of antibiotics through a drip which is usually given before the operation starts.

**Spinal anaesthetic**
Most (96 in every 100) caesarean sections are carried out using a spinal anaesthetic as this is usually the safest option for you and your baby. You will be awake and aware of what is happening. You and your partner can see and hold your baby skin to skin immediately after the birth.

After a spinal anaesthetic, 1 in 100 women has a headache but in only about half of these women is it due to the spinal anaesthetic. Your midwife will be able to help you with this and if it persists will arrange a review with one of the anaesthetists.

**General anaesthetic**
Very rarely, the shape of your spine would make a spinal anaesthetic difficult or occasionally a spinal may not provide enough pain relief. In this case, a general anaesthetic is used.

**Side effects of a caesarean section**
A small number of women will have problems during or after a caesarean section.

The most common problems are:

- 1 in every 100 women will have heavy bleeding from the womb and need to return to theatre to stop this. A small number will need a blood transfusion.
- 1 in every 100 women will get a wound infection even though we give antibiotics at the time to reduce this risk.
- 1 in every 100 babies sustain a small cut as the operation is being carried out. Every effort is made to avoid this and it is rarely serious.
- It increases the chance of developing a blood clot in the legs or chest. To minimise the risk you will be given a course of injections of heparin (a drug to thin your blood) after the operation.
Postnatal care
Following theatre you will be in the main recovery area of delivery suite. Only your birth partner, not visitors, are allowed with you in this area. You have a call button to use if you or your baby needs attention and your midwife will support you to feed your baby.

We would encourage you to get up as soon as the feeling in your legs is back to normal. The midwife will help you to the shower when you feel ready. The catheter will be removed once you are up and about. One or two days is the average length of stay. For at least 7 days after the operation you will be given a course of heparin injections. This is to help prevent blood clots in your legs. You will be able to give these injections yourself and we will show you how to do this. If you feel unable to do this we can teach your partner or a member of your family.

The stitch in your abdomen is usually a continuous thread that is removed by your community midwife after 6 to 10 days. You will also receive a booklet with advice on postnatal exercises but if you would like any further information, please ask to speak to one of our physiotherapists.
**Emergency caesarean section**

An emergency caesarean is section necessary if complications develop and delivery needs to be urgent. This may be before or during labour. If your midwife and doctor are concerned about your or your baby's safety, they will suggest that you have a caesarean straight away.

**How urgent is urgent?**
We follow national guidelines to describe the urgency of a caesarean section into grades.

A **Grade 1** caesarean section is performed as quickly as possible if there is an immediate threat to the life of the mother or baby.

**Grade 2** is used if there is compromise to the mother or baby but this is not immediately life threatening.

**Grade 3** is used if there is no immediate risk to mother or baby but the delivery is thought to be safer by caesarean section.

**Grade 4** is a planned, elective caesarean section.

In every case, whatever the Grade, we avoid unnecessary delay and each decision is confirmed with the Consultant Obstetrician on call 24hrs for the Delivery Suite.

**Consent in an emergency**
It is your decision whether to have an emergency caesarean section (or any other form of treatment) and your wishes will be respected. For the most urgent cases (Grade 1) we require your verbal agreement (consent). For all other Grades written agreement (consent) is necessary as for a planned caesarean section.

**Does an emergency caesarean section differ from a planned caesarean section?**
No, the operation is the same. Occasionally a general anaesthetic may be required in which case your birthing partner will be asked to leave the theatre but most emergency caesarean section are performed under epidural or spinal anaesthesia.
Birth after a previous caesarean section

The decision whether to plan for a vaginal birth or have another caesarean section is sometimes difficult. For most women who have had one previous caesarean section, there is no good medical evidence that one choice is ‘better’ than the other. Therefore your involvement in the decision is very important. Here we present the information to help you to make an informed choice about the option that is best for you.

When do I need to make a decision?
It is never too early to start thinking about your preferences when planning for birth and ensuring that you get the information you need to make the right choice. An appointment will be made for you to see either a midwife or a consultant when you attend for your 20 week ultrasound scan. Before you attend the clinic we urge you to read this information and to think carefully about the issues that are most important to you regarding this decision. At this consultation we will be discussing your options for the birth of your baby. If you feel that it would help please make notes and bring these with you to the appointment. The consultation will be very much led by you and we will be discussing your thoughts and preferences to help you to move towards the decision that you feel is best for you, your baby and your family.

Usually a decision will be agreed between you and the obstetrician or midwife between 34 and 36 weeks.

Once a decision is made you can still change your mind although it is better not to do this once you are in labour. If your pregnancy has been uncomplicated, you will have three options:
- You can plan to deliver normally (also called a Vaginal Birth After Caesarean or VBAC). If you don’t go into labour naturally then labour would be induced at 42 weeks.
- You can plan to have an elective caesarean section.
- You can plan to deliver normally but opt for a planned caesarean section if you do not go into labour by 42 weeks rather than have your labour induced.

Planned vaginal delivery or planned caesarean section?
Whichever method you choose the risk of anything going wrong during your pregnancy or delivery is very small. However, because you have had a previous caesarean section, the risk of problems during labour or caesarean section are slightly higher than in a woman without a previous caesarean section.

There have not been any studies directly comparing planned vaginal delivery with planned caesarean section in a group of women with one previous caesarean section. However, the information available from different types of studies allows us to estimate the risks and benefits of the different options.
Vaginal birth after caesarean section (VBAC)

Vaginal delivery is the most natural way to give birth and you should not underestimate the value of this experience. 75 in every 100 women will achieve a successful VBAC after a single previous caesarean section.

After a vaginal delivery women tend to have a shorter hospital stay and return to normal activities, such as driving, more quickly. 2 to 3 in every 100 babies have mild breathing difficulties following a vaginal delivery compared to 4 in every 100 babies after a planned caesarean section.

Birth needs to be in the Delivery Suite as the baby’s heartbeat needs to be monitored continuously once you are in established labour. This allows the midwives to quickly see if the baby is having any problems during your labour. This does not mean that you are obliged to remain on the bed throughout your labour, in fact, if you do not have an epidural your midwife will encourage you to be as mobile as possible to help labour to progress.

What are the potential problems of attempting a VBAC?
Approximately 25 in every 100 women who plan a VBAC eventually require a caesarean section. Often this is because the cervix does not fully open or because the baby shows signs of stress in labour.

There is a risk that the scar on your womb could tear; this is known as scar rupture. This is uncommon affecting only 2 to 7 in every 1000 women attempting a vaginal birth. In fact the same problem can occur in 1 in every 1000 women having a planned caesarean section.

If the scar does rupture then an emergency caesarean section is necessary to deliver the baby and repair the womb. Very occasionally it is not possible to repair the tear and to control the bleeding the womb has to be removed (hysterectomy). A hysterectomy is necessary in only 1 in 10,000 women opting for a vaginal delivery.

Can labour be induced or augmented?
It is possible we may offer you induction of labour but this reduces the chance of a vaginal birth. When it is necessary to use prostaglandins first to open the neck of the womb (cervix) this slightly increases the risk of scar rupture. Increasing the strength, length and frequency of contractions with an oxytocin drip (augmentation) may later be necessary and once again this is a careful decision to make as it may again increase the risk of scar rupture.

All decisions whether to induce or augment labour are only be made by a senior doctor after discussion with you.
Quote from a women having a vaginal delivery after caesarean section

“I was asked to make a choice and I wanted to try for a vaginal birth this time. I think, with having a caesarean previously, I felt as if I got so far and then, the last bit, I just didn’t quite manage it, and it’s almost like you’ve been denied that, you’ve gone through all that hard work and you were denied that last pleasure. I was desperately wanting to feel that experience of having the baby delivered and brought on to my chest. It’s just not the same really when, the baby comes out of your stomach and it’s took away and washed and checked over and brought to you in a towel. It’s just not the same. I’m not some sort of masochist who enjoys going through labour but I just wanted to know what it is like to do it naturally. If I can keep it as natural as possible and try to do it myself I suppose it will give me some sense of achievement.”

Benefits of elective repeat caesarean section.

- You avoid labour altogether.
- You can plan the birth and feel in control.
- Please be aware that 10 in every 100 women who choose elective caesarean section will go into labour beforehand and will be offered an emergency caesarean or will deliver vaginally.
- You reduce the risk of scar rupture (although it does not completely remove the risk).
- 10 in every 100 women who have an elective caesarean section will require a blood transfusion. This compares to 20 in every 100 women who plan a VBAC but require an emergency caesarean section.
- You can still have skin to skin and feeding your baby can start as soon as you wish.

Potential problems of elective repeat caesarean section.

- Pain and difficulty moving around after the operation.
- You may need extra help at home and will be unable to drive for six weeks after delivery (check with your insurance).
- You will need a caesarean section in all future pregnancies.
- 4 in every 100 babies delivered by caesarean section have breathing problems that occasionally require admission to the nursery.
- In a future pregnancy 2 in every 100 women have a placenta that develops under the scar inside the womb (placenta accreta). This makes it difficult to remove the placenta at caesarean section. This may result in heavy bleeding and complications including the possibility of a hysterectomy (removal of the womb).
Quote from a woman having a repeat caesarean section

“It’s just something I decided myself, purely because of my previous experience, just thinking, well it could happen again. Now, I’m relieved that I know what’s going to happen because I’ve had it before. You know the exact date whereas, if you go into labour naturally, it could be any time between now and 42 weeks. I’ve got the date and I know it’s all going to be over then but then you think about the actual operation and the downsides and so, yeah.”

How do other women choose?

Each woman makes choices based on the issues that are important to her. For some women the chance to have a vaginal birth is so important that they feel the benefits outweigh the risks. Other women may choose elective caesarean section because the uncertainty of the outcome of labour is so unsettling that they prefer to have the risks of a caesarean section.

The reasons are personal to each family, which is why we want you to have as much information as possible to help you make your own choice. Please ask questions and be sure you are happy with the answers you are given.
Assisted birth (forceps or ventouse delivery)

An assisted vaginal birth aims to mimic a normal birth with minimum risk to you and your baby. To do this, an obstetrician uses instruments (ventouse or forceps) to help your baby to be born.

There are several reasons why you might need help with the birth of your baby. The main ones are:

- your baby is not moving out of the birth canal as would normally be expected
- there are concerns about your baby’s wellbeing during birth
- you are unable to, or have been advised not to push during birth.

About 12 in every 100 births in the UK will be an assisted vaginal birth, although it is much less common in women who have had a vaginal birth before.

Can I avoid an assisted vaginal birth?

If you have continuous support during labour you are less likely to need an assisted vaginal birth, particularly if the support comes from someone you know as well as a midwife. Using upright positions or lying on your side as well as avoiding epidural pain relief can also reduce the need for an assisted birth.

If this is your first baby and you have an epidural, the need for an assisted birth can be reduced by waiting until you have a strong urge to push or by delaying when you start pushing. The length of time that you delay pushing will depend on your individual situation and your wishes, but is usually 1–2 hours after the cervix (neck of your womb) is fully open. Your midwife will guide you at the time. Starting an oxytocin hormone drip may also reduce the need for an assisted vaginal birth.

What is a ventouse birth?

A ventouse (vacuum extractor) is an instrument that uses suction to attach a soft plastic or metal cup on to your baby’s head. The obstetrician or midwife will wait until you are having a contraction and then ask you to push while he/she gently pulls to help deliver your baby. More than one pull is often required.

Local anaesthetic is given if you have not already had an epidural or spinal anaesthetic. Some assisted deliveries are undertaken in the delivery room and some in theatre, your obstetrician will advise you on the best option.

Depending on the circumstances, your baby can be delivered onto your abdomen and your birthing partner may still be able to cut the cord, if they want to. The ventouse cup can leave a small mark on your baby’s head called a chignon and it may also cause a bruise on your baby’s head called a cephalohaematoma. A ventouse is not used if your baby is less than 34 weeks old, because the head is too soft. A ventouse is less likely to cause vaginal tearing than forceps.
What is a forceps birth?
Forceps are smooth metal instruments that look like large spoons or tongs. They are curved to fit around your baby’s head. After the forceps are carefully positioned the obstetrician will wait until you are having a contraction and then ask you to push while he/she gently pulls to help deliver your baby. More than one pull is often required.

There are many different types of forceps. Some forceps are specifically designed to turn the baby to the right position to be born, for example if your baby is ‘back to your back’. Forceps can leave small marks on your baby’s face, these will disappear quite quickly.

Will I be asked for consent?
Yes. Forceps and ventouse will only be used to deliver your baby if they are considered to be the safest method of delivery for you and your baby. The reasons for having an assisted birth, the choice of instrument and the procedure of assisted birth should be explained to you by your obstetrician.

The risks to you and your baby of an assisted birth will be discussed with you. Your verbal consent will be obtained before delivering your baby. If your delivery is carried out in the operating theatre, your written consent will be obtained.

What happens during a forceps or ventouse assisted birth?
Before your baby is delivered your obstetrician will examine your abdomen and perform an internal examination to confirm if an assisted delivery is appropriate for you. Your bladder will be emptied by passing a small catheter tube into it.

Pain relief for the delivery is either a local anaesthetic injection inside the vagina (pudendal block) or a regional anaesthetic injection given into the space around the nerves in your back (an epidural or a spinal). If your baby's head is lying in a way that will need turning, you are likely to be advised to have an epidural or spinal for pain relief during the birth.

You may need to have a cut (episiotomy) to enlarge the vaginal opening and allow the baby to be born, although this is not always the case, particularly if you’ve had a baby before. If you do not have an epidural, the entrance to the vagina will be numbed with local anaesthetic.

Ventouse or forceps delivery – which one?
Ventouse and forceps are both safe and effective. There are many different types of ventouse and forceps, some of which are specifically designed to turn the baby round, for example if your baby has its back to your back in the late stage of labour. Forceps are more successful in delivering the baby, but a ventouse is less likely to cause vaginal tearing. Your obstetrician will recommend the type of instrument most suitable for you, your baby and your situation.

The ventouse is not suitable if you are at less than 34 weeks of pregnancy because the baby’s head is softer, which can increase the risk of bruising, brain haemorrhage and jaundice.
Assisted vaginal birth is less likely to be successful if:

- you are overweight with a body mass index (BMI) over 30
- your baby is very large
- your baby is lying with its back to your back
- your baby’s head is not low down in the birth canal

If your obstetrician is not sure whether your baby can be safely born vaginally, you may be moved to the operating theatre so that you can have a caesarean section if necessary.

If your baby is not born with the help of a ventouse, occasionally your obstetrician may then decide to change to the use of forceps. Depending on your circumstances, it may still be necessary for you to have a caesarean section at this stage. An obstetrician will recommend the method that is most appropriate for your situation.

What happens after my baby is born?
A paediatrician who specialises in the care of newborn babies may be there when you have your baby, particularly if there have been concerns about his or her wellbeing or if your delivery is carried out in an operating theatre.

What will an assisted vaginal birth mean for me?
It is normal to have bleeding after the birth of a baby. Immediately after an assisted vaginal birth, heavier bleeding is more common. The bleeding in the days afterwards should be similar to a normal birth.

If you have a vaginal tear or episiotomy this will be repaired with dissolvable stitches.

A third- or fourth-degree tear (a tear which involves the muscle and/or the wall of the anus or rectum) affects 1 in 100 women who have a normal vaginal birth. It is more common following a ventouse delivery, affecting up to 4 in 100 women. It is also more common following a forceps delivery, affecting between 8 and 12 women in every 100.

Most women experience some discomfort after they have given birth. If you suffer from discomfort after the birth, you should be offered regular pain relief such as paracetamol and diclofenac.

Problems with moving your bowels or passing urine are common immediately after birth, but the majority of women have no symptoms later on.

Being pregnant increases the risk of blood clots forming in the veins in your legs and pelvis (deep vein thrombosis). The risk goes up after an assisted birth. You can help matters by being as mobile as you can after delivery. You may be advised to wear special stockings and to have daily injections of a type of heparin, which makes the blood less likely to clot.
What will an assisted birth mean for my baby?

- The suction cup used for a ventouse delivery often causes a mark on a baby’s head. This is called a chignon (pronounced sheen-yon) and usually disappears within a day or two.

- The suction cup may also commonly cause a bruise on a baby’s head called a cephalhaematoma. This occurs in between 1 and 12 in every 100 babies who are born by the ventouse and disappears with time; it rarely causes any problems except for a slight increase in jaundice in the first few days.

- Forceps marks on the baby’s face are very common, usually small, and usually disappear within 24–48 hours. Small cuts on the baby’s face or scalp are also common (occurring in 10 in every 100 assisted births) and heal quickly.

Will I be able to discuss the birth before I leave hospital?

Yes. Before your discharge from hospital, you should be able to discuss, ideally with the obstetrician or midwife present at your baby’s birth, why you needed an assisted birth.

How will I feel after I leave hospital?

After any birth, including an assisted vaginal birth, you may feel a little bruised and sore. The stitches and swelling may make it painful when you go to the toilet. Any stitches will heal within a few weeks. Pain relief will help. You can begin to have sex again when you and your partner both feel that it’s the right time for you. You may wish to talk about the emotional impact of childbirth after you have gone home. If you would like to talk to someone, your obstetrician or midwife should be able to help. You can also talk to your GP, who can refer you back to your obstetrician.

At least 80 in every 100 women who have an assisted vaginal birth will deliver without this assistance in their next pregnancy.
Postnatal care

Postnatal Stay

Wards 32 & 33 are the postnatal wards next to the main Delivery Suite on level 4 of the Leazes wing.

After delivery not everyone needs to stay on the postnatal wards. If you deliver at the Newcastle Birthing Centre then you may stay there usually for less than 24 hours. Similarly, on the Delivery Suite if you and your baby are well you may opt for a short postnatal stay and return home directly from your delivery room.
Deciding how to feed your baby is a very personal decision. You need to be happy that you have made the right choice and you do not need to make a firm decision while you are pregnant. Some mothers like to wait until they have had their baby before making this important decision.

During your pregnancy you will be able to discuss feeding on a one to one basis with your midwife or health visitor.

Whatever you decide we recommend that you hold your baby skin to skin as soon as possible after birth. Staying close to your baby helps feeding get underway and helps you and your baby get to know each other.

Babies communicate their needs with a range of feeding cues, we will help you to understand and respond to these so that your baby feeds whenever he or she needs to. This might be quite often especially in the early days or weeks. We will give you information on night feeds once you are at home.

**If you plan to breastfeed**

Babies should feed regularly, at least 8 feeds in 24 hours. They should suck and swallow well at the breast and finish one breast before being offered a second breast. Some will always take one breast, some both, and some will vary depending on how hungry they are. Babies will be content and satisfied after most feeds and will come off the breast on their own.

Wet nappies are a good sign that your baby is feeding well. Discuss the number and frequency of wet nappies with your midwife and health visitor at each visit. Your baby should have at least 2 -3 wet nappies in the first 48 hours and during this time will also pass the first stool (poo) which is black and called meconium.

By day 3 the meconium should be changing to a lighter runnier greenish colour, from day 5 there should be at least 2 yellow stools per day.

Mothers are often worried that they will not be able to breastfeed. We are here to help and nearly all problems can be overcome with help and support.

We recommend avoiding bottles, dummies and nipple shields while your baby is learning to breastfeed. This is because they can make it more difficult for your baby to learn to breastfeed successfully and for you to establish a good milk supply.

Most babies do not need to be given anything other than breast milk for the first 6 months.
Breastfeeding Benefits

For you
- An early breastfeed helps your uterus contract and reduce the risk of bleeding
- Breastfeeding lowers your risk of breast cancer and cancer of the ovary
- Breastfeeding leads to stronger bones in later life.

For your baby
- Boosts the immune system and reduces the chance of becoming ill
- Helps the digestive system adapt and remove waste products that can later lead to difficulties such as constipation
- Protects against chest infections, asthma and eczema
- Lowers the risk of diabetes
- Lowers the risk of childhood cancers
- Lowers the risk of ear infections
- Lowers the risk of cot death.

Breastfeeding your premature or ill baby
We have specialist staff who can help you to learn to express your breast milk so this can be stored and given as needed to your baby.

If you are undecided or planning to formula feed
You do not need to make any final decisions until after your baby has been born and you have spent some time with your baby. Any milk given to your baby is precious and of benefit. Think about offering the first feed as a breastfeed so your baby gets some of the precious first milk. This first milk or 'colostrum' can reduce your baby's risk of infection.

If you choose to formula feed your baby we will show you how to do this safely, to sterilise and make feeds and to control how quickly the feed is given. We can provide you with one bottle following delivery but you will need to bring: two bottles, two new born teats, a tin of first stage powdered (not ready made) formula and one new bottle brush.

If you plan to breastfed there is no need to bring formula feeds and bottles, we will provide these if needed for clinical indications until your baby is able to breastfeed.

For support and advice please use the contact details closest to home.

Newcastle Upon Tyne 07826 531 575 Darlington 01325 743 448
Durham 0191 333 2910 Gateshead 0191 445 2153
Middlesborough 01642 854 876 Northallerton 01609 763 093
Northumberland 0791 959 2281 South Tyneside 0191 404 1022

National services
- Breastfeeding Network Helpline 0870 900 8787
- La Leche League 0845 120 2918
- National Breastfeeding Helpline 0300 100 0212
- NCT Breastfeeding Helpline 0300 330 0771
- Start4Life 0300 123 1021
Contraception after delivery

There is no need to wait until the next period to start these contraceptive methods - it may never come.

### Contraceptive Options after Childbirth

<table>
<thead>
<tr>
<th>Contraceptive method</th>
<th>When to use/fit after delivery</th>
<th>Use with breastfeeding</th>
<th>Number of pregnancies if 1000 women were using the method for 1 year</th>
<th>Additional notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined hormonal contraception including pills, patches, vaginal rings</td>
<td>Day 21</td>
<td>No</td>
<td>90</td>
<td>In breastfeeding women, combined hormonal contraception is not recommended before 6 weeks post delivery. It can be considered after 6 weeks if all other contraceptive methods are unacceptable.</td>
</tr>
<tr>
<td>Progestogen only pills (POPs)</td>
<td>Up to day 21</td>
<td>Yes</td>
<td>90</td>
<td>Needs to be taken within 3 hours of the same time each day for most POPs or within 12 hours for desogestrel a progestogen only pill. May result in irregular bleeding.</td>
</tr>
<tr>
<td>Contraceptive injection</td>
<td>Up to day 21</td>
<td>Yes</td>
<td>60</td>
<td>Injections are effective for 8 or 12 weeks depending on type. May cause irregular bleeding with more than 90 in every 100 women having no periods after 1 year of use. Fertility may not return for several months after stopping injections.</td>
</tr>
<tr>
<td>Implant</td>
<td>Up to Day 21</td>
<td>Yes</td>
<td>less than 1</td>
<td>Effective for 3 years. May cause irregular bleeding</td>
</tr>
<tr>
<td>Hormonal intrauterine system</td>
<td>Fit immediately or delay to 4 weeks after delivery</td>
<td>Yes</td>
<td>2</td>
<td>Effective for up to 5 years. After about 3 months, periods usually become much lighter and shorter.</td>
</tr>
<tr>
<td>Copper intrauterine device</td>
<td>Fit immediately or delay to 4 weeks after delivery</td>
<td>Yes</td>
<td>6</td>
<td>Effective for 3-10 years depending on type used. May cause periods to become heavier, longer and/or more painful</td>
</tr>
<tr>
<td>Natural methods</td>
<td>Ask your contraceptive advisor</td>
<td>Yes</td>
<td>240</td>
<td>More difficult to use just after childbirth as fertility signs are harder to interpret</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>Immediately post-delivery</td>
<td>Yes</td>
<td>20</td>
<td>Only effective before periods return and when fully breastfeeding a baby under 6 months, which means no longer than 4 hours between feeds. Not effective if using a combination of bottle and breastfeeding</td>
</tr>
<tr>
<td>Diaphragm, cap</td>
<td>From 6 weeks</td>
<td>Yes</td>
<td>120</td>
<td>If used prior to pregnancy, check diaphragm size is still correct at 6 weeks.</td>
</tr>
<tr>
<td>Condoms (male and female)</td>
<td>As soon as required</td>
<td>Yes</td>
<td>180 to 210</td>
<td>May need to use a water-based lubricant if dry or sore from stitches</td>
</tr>
</tbody>
</table>
Perineal care after delivery

Following delivery many women will have small tears involving the perineum - the area between the vaginal opening and the anus. Please read this section if you had a tear or an episiotomy (a cut) to create space for the delivery of your baby. This section is particularly important if you had a more extensive tear involving the muscle of the anus (3rd degree tear) or into the lining of the rectum (4th degree tear). The type of tear and its degree will be explained to you when it is repaired.

What happens in the days and weeks following a repair?

To avoid pressure on the wound in the first few days it is best to avoid sitting for long periods and to lie on your side. If you are breastfeeding your midwife will show you comfortable positions for you and your baby.

To speed up healing and prevent infection keep the area clean. Have a warm, not hot, bath or shower at least once a day and pat the area dry to keep it free of moisture. Bubble bath may irritate and delay healing. You may have heard that salt added to bathwater helps but salt can make the stitches break down too quickly. Change your sanitary pad regularly washing you hands before and after you do so. Seek advice if there are signs of infection - an increase in pain or an offensive discharge.

Constipation causes straining and pressure on the recovering tissues. To help prevent this, please eat plenty of foods containing fibre such as brown rice, cereals and fruit. Try to drink about two to three litres of water each day. This helps stools to be softer and easier to pass.

For a 3rd or 4th degree tear laxatives are prescribed for the first 10 days to soften your stools and make them bulky and easier to pass. The aim is not to cause diarrhoea which may cause leakage.

We also recommend 5 days of antibiotics for a 3rd or 4th degree tear to reduce the risk of infection.

Before you go home we suggest that any stitches are checked and that you have been able to comfortably open your bowels.

Stitches usually dissolve by 10 days although sometimes portions can persist for longer. All stitch material will eventually dissolve. Often the stitches around the anus remain in place for up to 12 weeks and can make passing bowel motions uncomfortable. Avoid constipation and if the pain is intense or you lose blood with the stool seek advice. Rarely a connection forms which allows unexpected leakage of faecal material from the vagina. This is not common and you should always seek advice. The connection (fistula) can usually be repaired if it does not heal spontaneously.
Pelvic floor exercises

The pelvic floor muscles are the firm supportive muscles that stretch from your pubic bone at the front of your pelvis to the base of your spine at the back.

Your pelvic floor muscles help to hold your bladder, uterus (womb) and bowel in place, and to close your bladder outlet and back passage. When your pelvic floor muscles are well toned they stop leakage of urine from your bladder and wind or faeces from the bowel. When you pass urine or stools the pelvic floor muscles relax and afterwards they tighten to restore control. They actively squeeze when you laugh or cough to avoid leaking.

During the first few days you may feel numb and sore and it will be difficult to exercise during this period, but keep practising.

How do I perform pelvic floor exercises?
It is not always easy to find your pelvic floor muscles as exercising them does not show at all on the outside.

To start exercising lie down with your knees bent and feet on the bed, as you improve you can sit comfortably upright with your feet touching the floor.

Slowly tighten and pull up the muscle around your anus and vagina. This squeezes the muscle upwards and inwards. Imagine that you are trying to stop yourself from passing wind, and at the same time stopping your flow of urine mid-stream. Try to hold your muscles for five seconds, rest then repeat the exercise up to ten times.

As the muscle gets stronger you can hold for longer.

You do not need to hold your breath or pull in your tummy or tighten your buttocks too much.

Pelvic floor exercises should be continued often for the first six months at least five times a day after this once a day is usually enough.

What follow up is available?
If you had a significant perineal trauma including a 3rd or 4th degree tear we offer an RVI joint clinic appointment with an obstetrician and physiotherapist. This is usually at 6 weeks after delivery.

If you require further treatment this will be discussed and arranged at this appointment. If you have problems after you are discharged from the clinic, then you should seek advice from your GP or health visitor, who can arrange referral back to hospital if necessary.
Bladder care after delivery

Sometimes following the birth of your baby there can be difficulties with passing urine. Here we explain how we monitor bladder function to identify any problems early and prevent long-term problems.

Normal bladder function
The bladder normally holds between 300 - 600ml of urine. The bladder is a stretchy bag which stores urine until it can be passed conveniently. Sometimes after childbirth there can be difficulties with passing urine and emptying the bladder.

Identifying problems
Following the birth of your baby the amount of urine you pass will be monitored for 24 hours. If you plan to leave hospital earlier than this it is still necessary to monitor you have passed urine. Please measure all the urine you pass in the jugs provided and record the volume on a chart. Your midwife will show you how to do this. If you are not sure, please ask.

You may have a problem with bladder function if:
• you are unable to pass urine
• you are passing only small amounts of urine
• you don’t feel empty after passing urine

If this is the case it may be necessary to carry out a bladder scan or to use an ‘in-out’ catheter. This will be fully explained by your midwife. Occasionally it is necessary to leave a catheter in the bladder for 48 hours, to allow it to rest and regain normal function.

Avoiding bladder problems
You can help to avoid long-term bladder problems by:

• Trying to pass urine regularly, about every three to four hours.

• Drinking 6-8 glasses of fluid per day water is best (not fizzy drinks, or too much tea or coffee).

• Not drinking too much.

Please make sure you remember to measure your urine every time you go to the toilet for the first 24 hours.
Vitamin K for newborn babies

The Department of Health and National Institute for Clinical Excellence recommend newborn babies are given a Vitamin K supplement at birth.

Why is Vitamin K important for my baby?
Vitamin K is essential for the normal process of blood clotting to prevent bleeding. Newborn babies have very low levels of vitamin K, so are at risk of serious bleeding problems, although this is very rare. For this reason we advise babies are given a vitamin K supplement at birth. There are no known drawbacks to the treatment.

How is Vitamin K given?
Vitamin K can be given by mouth or injection. For healthy babies it is best to give it by mouth. For babies cared for on the special care nursery who may not be able to feed, the injection is usually better. After delivery your midwife will talk to you about vitamin K and ask if you are happy for the first dose to be given by mouth.

If you intend to breastfeed it is advised that your baby has a small daily dose (0.25mls) of vitamin K by dropper until he or she is 14 weeks old. You will be offered a bottle with enough Vitamin K to last 14 weeks. You will be shown how to give this to your baby. Vitamin K is oil based so sterilising the dropper is not required and it is best just wiped clean if needed. If the bottle is spilt significantly please inform your midwife or health visitor who can arrange a replacement bottle for you.

If you decide to fully bottle feed your baby with formula milk, you will not need to give extra daily vitamin K. This is because the milk manufacturers add vitamin K to formula milk. For babies who are mixed feeding we advise that you continue with the full dropper course of vitamin K until your baby is receiving less than half their milk as breast milk.

Does my baby have to be given Vitamin K?
As a parent you have the right to decline the treatment. However, we strongly encourage you to allow your baby to have this simple treatment, which lowers the risk of death or permanent handicap in a healthy baby. There are no alternatives to Vitamin K. Please talk to the staff looking after you and your baby if you have any concerns, or would like to talk this through.

How common is bleeding from a lack of Vitamin K?
Fortunately bleeding from Vitamin K deficiency is very rare affecting approximately 1 in every 10,000 newborn babies. Approximately 30 in every 100 babies affected are left with some mental impairment because of bleeding in the brain and about 7 in every 100 affected will die. If your baby has any bleeding from the umbilical stump, bottom, skin, nose or gums, in the urine or appearing as bruising on the skin please inform your midwife, doctor or health visitor.
Common health problems:

- Not being able to pass urine within six hours of giving birth: this could due to your bladder not emptying known as urinary retention.
- Leaking urine when you don’t mean to.
- Painful and/or unpleasant smelling vagina or surrounding area (perineum): this could be due to an infection.
- Difficulty or inability to pass stools: you may be constipated.
- Passing stools when you don’t mean to: this is known as faecal incontinence
- Rectal pain or bleeding: this could be due to haemorrhoids
- Low mood, anxiety, restlessness, tearfulness, fatigue: you may be suffering from baby blues/ postnatal depression
- Persistent tiredness: this could be due to anaemia (low iron levels in your blood). You may be offered iron supplements if this is the case

If you have any of these symptoms or any other concerns contact your community midwife, GP or health visitor who will be able to give you advice. You may be referred back to the RVI to see the doctors in maternity.

When should I seek medical advise after birth?

Most women and babies are well after birth but complications can occur.

Infection, haemorrhage, blood clot and pre-eclampsia are examples of serious conditions after birth.

Symptoms may include:

- Sudden or very heavy blood loss and/or passing clots.
- Fever (high temperature), shivering, abdominal pain or unpleasant vaginal discharge.
- Headache, changes in your vision or nausea or vomiting (signs of pre-eclampsia).
- Difficulty breathing, feeling short of breath or having chest pain.
- Pain, swelling or redness in the calf muscle of one of your legs. Possible blood clot (DVT)

If you have any of these symptoms you need emergency medical attention. Contact the Maternity Assessment Unit at the RVI on 0191 2825748. If you are very unwell call 999 and ask for an ambulance.
Caring for your baby in Hospital

Care for your baby

Most newborns are born at a good weight and at a point in pregnancy where they can be expected to adapt well to the challenges of birth. With skin to skin contact and breast feeding most babies will manage their own temperatures and sugar levels well. Occasionally a baby might need some extra help either because they were a little early, or are a little small, or because of other circumstances.

Wherever possible we aim to keep Mums and babies together whilst we provide this extra help, but occasionally admission to special care is needed.

Transitional care

Some babies require transitional care which is simply extra support on the postnatal ward. Examples are: temperature needs (like heated cots or blankets), antibiotic treatment, supplemental feeds until breast feeding is established, treatment for jaundice and support for expressing milk.

As a guide, your baby needs to weigh more than 1.8kgs and have reached 34 weeks gestation before being able to stay with you on the postnatal ward.

We have a team of specialist nurses and nursery nurses who help care for babies on transitional care, and a medical team to support them.

Ward 35 - Special/Intensive care

In Newcastle we can provide on site special or intensive care for babies who need more care than can be provided on the postnatal wards. This might be because they were born less than 34 weeks, unexpectedly poorly at birth, or because they were known to have a problem before birth.

Having a baby in the baby unit is stressful, but we aim to help you be as involved and up to date as possible with their care.

Bliss the National charity for sick or preterm babies has great information if you know that your baby is going to need this care (www.bliss.org.uk), and you will also be able to meet the team before delivery and visit the unit.

We are also supported locally by our own charity Tiny Lives (www.tinylives.org.uk)

Research in Neonates

Our service make progress in knowing how to care for preterm and sick babies through leading and contributing to National and International research efforts. You may be asked about taking part if this is relevant to you or your baby. If so then a full explanation will be given to you at the time.
Common newborn health problems

You will be given a contact number for your own community midwife who will be able to advise you about common queries and worries during working hours. Outside these hours if you feel that your baby requires urgent review please contact your GP or depending on the severity of the problem, your local emergency provider.

Bowels not opening In the first 24 hours
If you baby has not passed meconium (the first stool of new born babies) within the first 24 hours of birth tell your midwife or GP who will arrange a hospital review.

Bowel movements
Baby’s should pass two or more stools (poo) each day by 3 days of age.

Constipation with formula feeding
Bottle fed babies can stool only every few days or every day like breastfed babies. If you have concerns discuss these with your midwife or health visitor who can look at ways to solve any problems with feeding routines and making up the feeds.

Constipation with breast feeding
Breastfed babies very rarely get constipated, they tend to pass stool with every feed once this is established. If this does happen and your baby has not passed a stool in 48 hours contact your midwife or health visitor for advice.

Colic
Colic is common and usually makes your baby cry when they seem otherwise well. Colic is distressing for you and your baby, contact your midwife or health visitor for advice.

Not passing urine
At first your baby may pass urine only once or twice a day but this should increase as your baby becomes older. By the third day 6-8 wet nappies a day is more usual.

Diarrhoea and vomiting
Most babies bring up small amounts of white or yellowish milk at times. If your baby has diarrhoea at every nappy change or vomits after each feed for 24 hours talk to your GP midwife or health visitor.

Green Vomit
If your baby has green vomit seek immediate medical attention. If you cannot get an urgent appointment take your baby to Accident & Emergency as your baby can become very ill if not treated quickly.

Crying
Your baby will cry as a way of communicating with you. Sometimes babies will cry a lot and crying can bedistressing for you particularly if you are unsure of the cause. In the early days, if you are worried that your baby is unwell or distressed phone the postnatal ward for advice and support. Your GP midwife and health visitor are also able to offer support.
Sticky eyes
Your midwife or health visitor can advise you on how to clean your baby’s eyes gently. A swab may be taken which will indicate if there is any infection that might require treatment.

Nappy rash
To avoid nappy rash do not use bubble bath, medicated wipes or strong detergents. Ask for advice from your midwife. Occasionally anti-fungal creams may be needed for stubborn nappy rash (thrush).

Thrush
Thrush is a common fungal infection that can make feeding uncomfortable: in the mouth (a thick white coating) or on the bottom (red spots which can become painful to clean). Ask your midwife, GP or health visitor for treatment advice. If you are breast feeding it is important that both you and your baby are treated.

Skin care
Babies do not need specific cleansing agents. If necessary a mild non perfumed soap should be used.

Cord care
Most cords stay clean dry and healthy with simple drying. Occasionally the cord will become sticky or smelly or the skin on the tummy will look red. If this is the case your baby should see their GP or midwife who can advise whether antibiotics are needed.

Sticky eyes
Many babies have slightly sticky eyes that just need bathing in water. Occasionally the eye looks red, or the stickiness is not settling down and a swab may be taken which will show if there is any infection that might require treatment. Treatment is usually with drops or ointment that your GP can prescribe.

Jaundice
(yellowish colour to the eyes or skin)
Jaundice is very common and most babies do not need treatment and do not have a serious cause. Babies get more yellow if they are feeding poorly, or if they are born a little early or are unwell in some way. Breast milk is best for your baby and should be continued even if your baby is jaundiced.

Jaundice might be harmful if it either starts very early (in the first 24 hours), is due to blood group or antibody problems, has very high levels, or lasts more than 2 weeks. Many babies need us to measure their jaundice levels to see if they need some special light treatment (phototherapy).

If you notice that your baby is yellow at any point tell your midwife and your midwife may refer your baby for testing.

Testing is done with a skin or blood test. If your baby needs phototherapy we will explain this and admit the baby until the jaundice levels fall. After discharge you will need to watch for increasing yellowness and tell your midwife if you think this is happening. Also tell your midwife if your baby’s stools look pale or chalky and the urine looks dark. If we admit your baby we will give you written information on how we have treated them and what to look out for at discharge.
Infections:
All babies have a risk of infection, as they have not yet got a well developed immune system. Some babies have a slightly higher risk than others, and you may have been advised about this before delivery or shortly after. If we have noted special risks we will have given you written advice about this.

Your baby has not got many ways to tell you they are unwell: they may stop feeding, look pale or mottled, have a high temperature or feel cold to touch, have a rash that does not disappear when you press it, have a change in the way that they cry, or become limp or floppy.

Rarely a baby will have a fit, or pauses in breathing. If your baby appears very unwell call 999 otherwise seek urgent advice from your GP or nearest emergency care provider.
Screening tests for your baby

Most newborn babies are healthy but there are several problems where early identification is helpful for the baby.

At the RVI we offer all of the recommended newborn screening tests.

- **Newborn baby check**
  A physical examination from ‘top to toe’ to check everything looks normal, specifically checking your baby’s eyes, heart, hips and testicles (if a boy). This should be within 3 days of birth, and will be done either by the team at the RVI before you go home or by your midwife or GP if your baby was for babies born at home. Sometimes soft sounds in the heart called murmurs are heard. If this is the case your baby’s blood oxygen levels will be checked. Infants who were breech (or those whose twin was) or those with a family history of hip problems in childhood will be referred for an ultrasound of their hips. Boys with undescended testis are referred to our paediatric surgeons. If we identify a concern we will discuss this with you and often give you written information.

- **Hearing test**
  This is done in hospital or in a clinic and can be done up to 3 months of age. Finding out early whether your baby has a hearing problem can help develop speech and language skills.

- **Newborn bloodspot screening**
  This is a set of tests done on a heel prick when your baby is between 5 and 8 days old. It looks for many individually rare but serious health conditions. Early treatment can improve your baby’s health and prevent severe disability or even death.

Further information can be found at: Newbornbloodspotscreening.nhs.uk HearIng.screenIng.nhs.uk NewbornphysicalscreenIng.nhs.uk

The RVI Birth Reflections Service

After the birth you may feel that it would help to meet with a midwife from the Birth Reflections Team and talk through your experience. We are here to listen and it may help to discuss any concerns. Your partner is also welcome to be with you. Please phone 0191 282 0212 and leave a message on the answer phone so that we can return your call.
Your midwife or obstetrician will let you know if parts in this section are relevant to your pregnancy.
Understanding how risks are discussed in healthcare

What is risk?

Risk is the chance that something could happen and harm you. Almost everything we do has risk. Living is a risky business. People will generally take risks because doing so offers some advantage or benefit, they feel that the risk is worth it. So it is best to think about risks and benefits together. Normally the benefits of an action should outweigh the risks.

There is no such thing as a zero risk. How you view risk depends to a large extent on your own circumstances and ‘comfort zone’.

Risk can be given as numbers or words, or both. This table below shows how risk should be described in healthcare.

<table>
<thead>
<tr>
<th>Phrase used</th>
<th>Risk</th>
<th>Risk description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very common</td>
<td>1/1 to 1/10</td>
<td>A person in family</td>
</tr>
<tr>
<td>Common</td>
<td>1/10 to 1/100</td>
<td>A person in street</td>
</tr>
<tr>
<td>Uncommon</td>
<td>1/100 to 1/1000</td>
<td>A person in village</td>
</tr>
<tr>
<td>Rare</td>
<td>1/1000 to 1/10 000</td>
<td>A person in small town</td>
</tr>
<tr>
<td>Very rare</td>
<td>Less than 1/10 000</td>
<td>A person in large town</td>
</tr>
</tbody>
</table>

We have used this approach to describes risks throughout this booklet. Your healthcare professional may also explain the information in a number of different ways, such as pictures, graphs and other tools to help you make a decision. These help to ensure a better understanding. Always ask if you don’t understand, want information presented in a different way or need more time to consider your options.
Nausea and vomiting In pregnancy (hyperemesis)

Nausea and vomiting is a normal symptom of pregnancy and affects up to 90 out of 100 pregnant women to some degree. It is often termed “morning sickness” but in reality can occur at any time of day or night.

One in a 100 women experience more severe nausea and vomiting (called hyperemesis gravidarum). Women with hyperemesis have no relief from feeling nauseous and vomit many times each day. They find that eating and drinking makes them feel worse and can quickly lose weight and become dehydrated. The cause of hyperemesis is not known.

Will it harm my baby?
No - there is no evidence that nausea and vomiting has a harmful effect on your baby. In fact you have a slightly lower risk of miscarriage. Women with very severe nausea and vomiting may however have babies with a lower than expected birth weight.

How long will it last?
Symptoms frequently begin by week six of pregnancy. In most cases subside by 12-14 weeks. In severe hyperemesis, vomiting usually lasts until 18-20 weeks. For one in six women affected it can last until the end of pregnancy.

What treatment will you need?
Treatment may greatly improve your symptoms. The kind of treatment depends on the severity of your hyperemesis. If you become dehydrated you may need a short stay in hospital (six to eight hours) to give you some fluid via a ‘drip’ and anti sickness medication.

Severe hyperemesis
If hyperemesis is so severe that your body weight falls by 5% or more (for example 63kg to 60kg) you may be referred for assessment. In some women steroid therapy is advised. Steroid treatment stops vomiting in most cases and allows weight gain. Importantly, you are likely to feel well and avoid further admission to hospital. For baby, steroids after five weeks of pregnancy are safe. For you, the side effects are the same as outside pregnancy (weight gain, temporary fullness of the face).

After Discharge
You will be given anti sickness tablets to take home. If you feel much better - cut down the number of tablets. If your vomiting gets worse - stop eating but try and keep sipping fluid and taking the anti sickness tablets. You will gradually begin to feel better and can slowly start eating food again. Remember to ask your GP for a repeat prescription before the tablets run out.

Simple measures to ease your symptoms
• Rest as much as you can
• Small, frequent snacks
• Don’t drink and eat at same time, leave a gap of 30 minutes
• Try plain biscuits or crackers
• Try travel sickness wristbands available from chemists
• Try ginger – biscuits, tea, root, stem, capsules.
What is anaemia?
Haemoglobin in red blood cells carries oxygen in your blood stream and gives blood its red colour. Anaemia is when the level of haemoglobin in your blood is lower than normal; it can be mild or severe. Anaemia can cause tiredness, breathlessness, fainting, headaches and your heart to beat faster. Mild anaemia is common during pregnancy and your haemoglobin level will be routinely checked at your first pregnancy appointment and at 28 weeks.

Iron is needed to make haemoglobin and not having enough iron (iron deficiency) is the commonest cause of anaemia in pregnancy. Pregnant women require more iron than usual to provide for the needs of their growing baby.

Why may iron levels be low?
Iron levels can be low for a number of reasons, but some people are particularly vulnerable to iron deficiency. These include:
• teenagers
• women who had heavy periods before becoming pregnant
• those who are dieting or on a restricted food intake
• vegans and vegetarians
• women pregnant with twins or more
• women with certain medical conditions.

What are the signs and symptoms of iron deficiency anaemia?
Tiredness is common. Other symptoms include:
• shortness of breath – particularly on exertion
• poor concentration
• poor appetite
• muscle weakness
• increased risk of infections.
How is anaemia treated?

Iron is prescribed as tablets. Not everyone can take tablets easily or respond quickly to a course of iron. Taking iron with foods rich in vitamin C such as orange juice can help.
Occasionally intravenous iron (through a drip) is necessary.

Intravenous iron is given on the Maternity Assessment Unit as a slow (1 hour) infusion through a drip in the back of your hand. Your general health will be checked together with a simple blood test for anaemia when you arrive. After treatment you will be able to go home. You may need further iron infusions and you will be given an appointment to return.
Please bring reading material or whatever you choose to help pass the time. You may bring someone with you, but we have no facilities for children.

As with all medicines intravenous iron can cause side effects, which are normally mild and resolve without treatment. These may include
• headache
• blurred vision
• feeling sick
• itching
• stomach upset
• reduction in blood pressure

Please tell the midwife if you have any problems that you think may be linked to the iron infusion. More severe reactions to intravenous iron medications such as allergic anaphylactic responses are rare.
Receiving a blood transfusion in pregnancy

A blood transfusion involves the transfer of blood or blood components from one person (the donor) to another person (the recipient). A blood transfusion can be a life-saving process. It is often done to replace blood that has been lost due to severe bleeding or in some cases for the treatment of severe anaemia. Blood is important because it supplies your body with the oxygen and nutrients it needs to function. Blood also carries away waste products such as carbon dioxide.

Why is a blood transfusion needed?

In an emergency situation if you haemorrhage (bleed very heavily) you can become severely anaemic. Without a transfusion to replace the blood you have lost, you could be very ill or even die.

A haemorrhage can happen:
- early in pregnancy if you have an ectopic pregnancy (when the pregnancy is growing outside the uterus) or a miscarriage
- after 24 weeks of pregnancy (antepartum haemorrhage)
- during birth (intrapartum haemorrhage)
- immediately after birth (postpartum haemorrhage).

Even with excellent care in pregnancy and monitoring during labour, it is not possible to predict or detect every complication in time to prevent a life-threatening bleed. Surgical techniques and medication will be used to try to limit the need for a blood transfusion but a blood transfusion might be needed to save your life or to prevent serious harm to your health and your baby’s health.

You may be offered a blood transfusion in a non-emergency situation if:
- If you have anaemia just before you are expecting your baby, there is a risk that if you bleed even a small amount during birth, you may become severely anaemic.
- If you have anaemia immediately after birth, you may be offered a blood transfusion, depending on your symptoms.
- If you have a blood condition, such as sickle cell disease or thalassaemia, it affects your body’s ability to produce healthy haemoglobin.
- If you bleed heavily during or after birth.
- If you bleed heavily during birth your haemoglobin level will be monitored.
- If you are very anaemic and unwell, making it difficult for you to care for your baby, you may be offered a blood transfusion to restore your haemoglobin level.

Your doctor may discuss alternative options to avoid transfusion and restore the haemoglobin to normal.
Having a blood transfusion

How safe is the blood I get?
All blood donations in the UK are tested for viruses such as hepatitis and HIV. Only blood that is free from these infections is used in a blood transfusion. The chance of getting an infection from a blood transfusion is very, very rare. Further information is at: www.blood.co.uk.

How is the blood matched?
There are four main blood groups: A, B, AB and O. Blood is also rhesus (RhD) positive or negative. In the laboratory your blood is tested and compared with the donor blood to make sure that it matches.

During a transfusion
Most transfusions during pregnancy and after birth are given as red blood cells only. Very occasionally, platelets and plasma may be required as well. A cannula (small tube) is placed into a vein in your hand or arm. The tube is attached to a drip and donor blood flows through the drip. Blood for transfusion is stored in small plastic bags containing a unit of blood which is about a third of a litre. Each unit of blood takes about 3 hours to transfuse. In an emergency, blood may be transfused more quickly. You are carefully monitored before and during the transfusion. Your midwife will take your blood pressure, temperature and heart rate during the transfusion.

Some people get mild side effects, such as headaches, chills and fever, a rash and itchiness. These symptoms are relieved by drugs, such as paracetamol, and will improve within a day or so.

Very rarely, there may be more severe side effects, including difficulty in breathing, severe headaches and a sudden fall in blood pressure which can be life-threatening. If you get side effects, the transfusion will be stopped immediately and the situation reviewed.

After a transfusion
Once all the blood has been transfused, the drip is taken down. Your haemoglobin level will be re-checked to make sure that you have received enough blood. Most women do not need another transfusion.

Making the decision to have a blood transfusion
If you are offered a blood transfusion, make sure you have all the information you need to make an informed decision. Ask for information about all your options. If you have any concerns about having a blood transfusion, speak with your obstetrician or midwife.

What happens in an emergency?
In an emergency your doctors need to act immediately. Your obstetrician, anaesthetist and haematologist (a doctor who specialises in the treatment of diseases of the blood) will make an informed decision on your behalf for you to have a blood transfusion.
What if I want to refuse a blood transfusion?

You may decide you do not want to have a blood transfusion. This may be because of personal reasons or because of religious beliefs. You can change your mind at any point about the use of blood. You should not feel as though you have to stick rigidly to your original decision. Unforeseen circumstances sometimes influence events, resulting in previous decisions needing to be changed.

If you would not accept the use of blood products in your pregnancy or after you have given birth, we would like to make an appointment for you to see one of our doctors in the Obstetric Haematology Clinic at the RVI.

In this clinic we will:

- Check your blood count so that if you do become anaemic a treatment can be offered to you that is acceptable.
- Offer you low dose iron therapy (usually ferrous sulphate tablets) to use in pregnancy. This will help prevent you from becoming anaemic.
- Document clearly in your hospital notes where the placenta is situated in the womb and make a detailed plan of care for you if it is low-lying (placenta praevia).
- Confirm exactly which medications and fluids are acceptable, and not acceptable to you, if you experience problems with bleeding in the pregnancy or after you have given birth.
- Make sure that you are well informed about any new advances like the use of cell salvage and artificial blood clotting agents, so that you can decide whether their use would be acceptable to you or not.
- Write your preferences clearly into your hand-held notes and your hospital notes.
- File a copy of your Advanced Directive into your hospital notes (please bring a copy with you when you come for your ante-natal appointment).

Your views will be treat with the utmost respect at all times and there will be no attempt made to persuade you to accept anything that clashes with your preferences or beliefs.
The placenta develops along with the baby in the uterus (womb) during pregnancy. It connects the baby with the mother's blood system and provides the baby with its source of oxygen and nourishment. The placenta is delivered after the baby, and is also called the afterbirth.

In some women the placenta attaches low in the uterus and may cover a part or all of the cervix (entrance to the womb). This attachment often shows up in early ultrasound scans, when it is called a low-lying placenta. In most cases, the placenta moves upwards as the uterus enlarges. If the placenta continues to lie in the lower part of the uterus in the last months of pregnancy this is known as placenta praevia. If the placenta covers the cervix, this is known as major placenta praevia.

What are the risks to me and my baby?
Because the placenta is in the lower part of the womb, there is a risk that you may bleed in the second half of pregnancy. Bleeding from placenta praevia can be heavy, and so put the life of the mother and baby at risk. However deaths from placenta praevia are rare. You are more likely to need a caesarean section because the placenta is in the way of your baby being born.

How is placenta praevia diagnosed?
A low-lying placenta may be suspected during the routine 20-week ultrasound scan. 90 in every 100 women who have a low-lying placenta at this time will not go on to have a low-lying placenta later in the pregnancy. So that overall a low-placenta is uncommon.

If you have had a caesarean section before, the placenta is less likely to move upwards, and half of women who have had a caesarean section and have a low-lying placenta at the routine 20 week scan will go on to have placenta praevia. The best way to confirm whether or not you have placenta praevia is with a transvaginal ultrasound scan (where the probe is placed inside the vagina). This is safe for you and your baby.

Placenta praevia may be suspected if you have bleeding in the second half of pregnancy. The bleeding is usually painless and may occur after sexual intercourse.
Occasionally, placenta praevia may be suspected later in pregnancy if the baby is found to be lying in an unusual position, for example bottom first (breech) or lying across the womb (transverse).

What extra antenatal care can I expect if I have a low-lying placenta?
If your placenta remains low-lying in the second half of pregnancy, we will arrange at least one more scan to check whether the position of the placenta has moved with the development and stretching of the uterus.

If your placenta does not cover the cervix and you have no bleeding during your pregnancy, your repeat ultrasound scan should be at 36 weeks. However, a repeat ultrasound is recommended at 32 weeks if:
- your placenta covers the cervix at the 20-week scan
- you have had a caesarean section before and your placenta is low-lying at the front part of the uterus.

Additional care will be given based on your individual circumstances. If you have major placenta praevia (the placenta covers the cervix) you may be offered admission to hospital after 34 weeks of pregnancy. Even if you have had no symptoms before, there is a small risk that you could bleed suddenly and severely, which may mean that you need an urgent caesarean section.

You should always contact the Maternity Assessment Unit (0191 2825748) if you have a low-lying placenta and you have any bleeding, contractions or pain.

If your placenta praevia is confirmed, you and your partner should have the opportunity to discuss the options for delivery with your doctor. Depending on your circumstances, you may be advised to have a planned caesarean section.

In a few instances, a blood transfusion is essential to save your life and the life of your baby. If you feel that you could never accept a blood transfusion, then you should explain this to your obstetrician and midwife as early as possible. You can then discuss any objections or particular questions that you may have.

What will happen at the birth?
If you have a placenta praevia at the time of delivery, your baby will need to be delivered by caesarean section. A consultant obstetrician and anaesthetist will be in attendance at the time of your delivery. This is particularly important if you have previously had a caesarean section.

Unless there is severe bleeding or another indication, delivery by caesarean section should be performed after 38 weeks. You will usually have a course of antenatal corticosteroids to help your baby.

Your anaesthetist will discuss the options for anaesthesia if you need a caesarean section. You may need to have a general anaesthetic, especially in an emergency situation.

As you are more likely to need a blood transfusion, blood supplies will be available, as necessary, for your individual circumstances.
In extreme cases, if the bleeding continues and cannot be controlled, a hysterectomy (removal of the womb) may be the only means of controlling the bleeding.

If there is bleeding you may have to be delivered earlier than planned.

What is placenta accreta?
Rarely, placenta praevia may be complicated by a problem known as placenta accreta. This is when the placenta grows into the muscle of the uterus, making separation at the time of birth difficult. Placenta accreta is more commonly found in women with placenta praevia who have previously had a caesarean section.

Placenta accreta may be suspected during an ultrasound scan, but while additional tests such as magnetic resonance imaging (MRI) scans may help with the diagnosis, your doctor will only be able to tell for sure if you have this condition at the time of your caesarean section.

Placenta accreta causes bleeding when an attempt is made to remove your placenta. The bleeding may be severe and you may require a hysterectomy (removal of the womb) to stop the bleeding. It may be possible to leave the placenta in place after birth, to allow it to absorb over a few weeks and months. Unfortunately this latter type of treatment is not always successful and some women will still need a hysterectomy.

If placenta accreta is suspected before your baby is born, your doctor will discuss your options and the extra care that you will need at delivery. Delivery may be planned earlier, for example between 35 and 36 weeks, the best time will depend on individual circumstances. To make the delivery as safe as possible we aim to plan the timing of delivery so that we can make best use of the additional facilities available such as interventional radiology, your consultant will discuss this with you.

Is there anything else I should know?
You may be advised to avoid having sexual intercourse during pregnancy, particularly if you have been bleeding. You may be offered an examination with a speculum (a plastic or metal instrument used to separate the walls of the vagina) to see how much and where your bleeding is coming from. This is an entirely safe examination. If you have a low-lying placenta you should eat a healthy diet rich in iron to reduce the risk of anaemia.
Assessing the growth of your baby

Accurate assessment of the baby's growth inside the uterus is one of the key aims of good antenatal care. Problems such as the placenta not working as well as it should can develop unexpectedly and are linked with an increased risk to your baby. It is therefore essential that your baby's growth is monitored carefully.

Fundal height
A fundal height measurement from 24-26 weeks onwards is taken at each antenatal visit and is the best first line assessment of your baby's growth.

The measurement is recorded in centimetres from the top of the uterus to the top of the symphysis (pubic bone). This is then plotted on the chart in your hand held notes and over time these marks will form a curve. The slope of the curve should be similar to the slope of the curves already printed on your chart, which predict how your baby should be growing.

Growth problems
Slow growth is one of the most common problems that can affect a baby in the uterus. If the fundal height measurements suggest that there might be a problem we will arrange for an ultrasound scan to estimate the size of the baby. These measurements are then plotted on a chart to identify whether the baby is small for the gestational age (SGA). SGA babies may be small and healthy (because not all babies are destined to be the same size) or may be small because they are growth restricted (their normal growth is being hindered in some way). Growth problems are usually a result of the placenta not working properly and using doppler ultrasound we are able to demonstrate how well the placenta is managing the blood supply to the baby. Although more accurate than fundal height measurements, ultrasound scan can still over-estimate or under-estimate the size of your baby. It is still, however, the best way to provide an approximate weight of your baby before birth.

Large for dates
Sometimes the fundal height measurements indicate that the growth curve is steep and the baby is thought to be larger than expected. If this is the case your midwife will arrange a check of your glucose (sugar) level. If this is normal then no further action is needed until 39 weeks when, if the baby is still thought to be large a growth scan is arranged to help plan the final stage of the pregnancy.
Gestational Diabetes

Diabetes that develops during pregnancy is known as gestational diabetes. It may occur because your body cannot produce enough insulin (a hormone important in controlling blood glucose) to meet its extra needs in pregnancy. Without treatment gestational diabetics results in high blood glucose levels.

Gestational diabetes usually starts in the middle or late pregnancy.

How common is gestational diabetes?
Gestational diabetes is very common, affecting 18 in every 100 pregnant women.

You are more likely to develop gestational diabetes if:
- your body mass index (BMI) is 30 or more
- you have previously given birth to a large baby, weighing 4.5 kg (10 lbs) or more
- you have had gestational diabetes before
- you have a parent, brother or sister with diabetes
- you have had a stillborn baby or a baby who died in the first 4 weeks after birth
- your family origin is South Asian, Chinese, African-Caribbean or Middle Eastern

How will I be checked for gestational diabetes?
If you have any of the above risk factors, we offer a glucose tolerance test (GTT) between 24 and 28 weeks of pregnancy.

A GTT involves fasting overnight (not eating or drinking anything apart from water). In the morning, before breakfast, you will have a blood test. You are then given a glucose drink. The blood test is repeated 1–2 hours later to see how you body reacted to the glucose drink.

If you have had gestational diabetes in a previous pregnancy, you are offered a glucose test at around 16 weeks as well as a GTT at 24 to 28 weeks in pregnancy.

What does gestational diabetes mean for me and my baby?
Most women have a healthy pregnancy and healthy baby but occasionally gestational diabetes can cause serious problems. Diagnosing and treating gestational diabetes reduces these risks.

It is important to carefully control the amount of glucose in your blood. Too much glucose allows your baby to overfeed on this sugar and grow heavier than usual. This increases the risk of:
- recommending your labour is induced
- caesarean section
- serious birth problems and stillbirth.

To compensate for the extra glucose your baby makes extra insulin. After birth your baby has too much insulin in the blood stream which can lower the blood glucose levels too far. This can be serious for your baby and may need additional treatment in the neonatal unit.

Your baby may also be at greater risk of developing obesity and/or diabetes in later life.

Controlling your blood glucose levels during pregnancy and labour reduces the risks of all these complications for you and your baby.
What extra care will I need during pregnancy?
You will be under the care of a specialist healthcare team, a specialist diabetes midwife, an obstetrician, a doctor specialising in diabetes, a specialist diabetes nurse, and a dietician. Having gestational diabetes will mean more RVI clinic visits for this specialized care.

The most important treatment for gestational diabetes is a healthy eating plan and exercise. Gestational diabetes usually improves with these changes although some women despite their best efforts, need to take tablets or give themselves insulin injections.

After you have been diagnosed with gestational diabetes, you will be shown how to check your blood glucose levels and told what your ideal level should be. If it does not reach a satisfactory level after 1 or 2 weeks, or if an ultrasound scan shows that your baby is larger than expected, you may need to take tablets or give yourself insulin injections.

You will be offered extra ultrasound scans to monitor your baby’s growth more closely.

Will I need treatment?
2 in every 10 women with gestational diabetes will need to take tablets or insulin injections to control their blood glucose during pregnancy. If you do need insulin, your specialist diabetes nurse will explain exactly what you need to do. This will include showing you how to inject yourself with insulin, how often to do it and when you should check your blood glucose levels.

When is the best time for my baby to be born?
Ideally you should have your baby between at 38 and 40 weeks of pregnancy, depending on your individual circumstances.

What happens after my baby is born?
Your baby will stay with you unless he or she needs extra care.

Breastfeeding is best for babies, and there’s no reason why you shouldn’t breastfeed your baby. Whichever way you choose to feed your baby, you should start feeding him or her as soon as possible after birth, and then every 2–3 hours to help your baby’s blood glucose stay at a safe level.

Your baby should have a blood glucose level tested a few hours after birth to make sure that it is not too low. Your baby may need to be looked after in a neonatal unit if he or she is unwell, needs close monitoring or treatment, needs help with feeding or was born prematurely.

Gestational diabetes usually gets better after birth and therefore you are likely to be advised to stop taking all diabetes medications immediately after your baby is born. Before you go home, your blood glucose level will be tested to make sure that it has returned to normal.

What follow-up should I have?
You should have a test for diabetes at your postnatal check, which may be with your GP. If your blood glucose levels are still high you will be referred to a doctor specialising in diabetes.

Women who have had gestational diabetes have a 1 in 3 chance of developing Type 2 Diabetes within the following 5 years. You should be given information about your lifestyle, including diet, exercise and watching your weight, to reduce your chance of diabetes in the future. You will also be advised to have a fasting blood glucose test once a year.
Pre-eclampsia is a condition that typically occurs after 20 weeks of pregnancy. It is a combination of raised blood pressure (hypertension) and protein in your urine (proteinuria).

The exact cause is not understood. Often there are no symptoms and it may be picked up at your routine antenatal appointments when you have your blood pressure checked and urine tested. This is why you are asked to bring a urine sample to your appointments.

Why do I need to know if I have pre-eclampsia?
Pre-eclampsia is common in pregnancy, affecting between 2 and 8 in every 100 women. It is usually mild and normally has very little effect on pregnancy. However, it is important to know if you have the condition because, in a small number of cases, it can develop into a more serious illness. Around 1 in 200 women develop severe pre-eclampsia during pregnancy. The symptoms tend to occur later on in pregnancy but can also occur for the first time only after birth. Severe pre-eclampsia can be life-threatening for both mother and baby.

Symptoms of severe pre-eclampsia include:
- severe headache that doesn’t go away with simple painkillers
- problems with vision, such as blurring or flashing before the eyes
- severe pain just below the ribs
- heartburn that doesn’t go away with antacids
- rapidly increasing swelling of the face, hands or feet feeling very unwell.

These symptoms are serious and you should seek medical help immediately. If in doubt, contact the Maternity Assessment Unit at the RVI.

In severe pre-eclampsia, other organs, such as the liver or kidneys, can sometimes become affected and there can be problems with blood clotting. Severe pre-eclampsia may progress to convulsions or seizures before or just after the baby's birth. These seizures are called eclamptic fits and are rare, occurring in only 1 in every 4000 pregnancies.

How may pre-eclampsia affect my baby?
Pre-eclampsia affects the development of the placenta (afterbirth), which may prevent your baby growing as it should. There may also be less fluid around your baby in the womb. If the placenta is severely affected, your baby may become very unwell. In some cases, the baby may even die in the womb. Monitoring aims to pick up those babies who are most at risk.

Who is at risk of pre-eclampsia and can it be prevented?
Pre-eclampsia can occur in any pregnancy but you are at increased risk if:
- your blood pressure was high before you became pregnant or in a previous pregnancy
- you have a medical problem such
as kidney problems or diabetes or a condition that affects the immune system, such as lupus.

If any of these apply to you, you are advised to take low-dose aspirin (75 mg) once a day from 12 weeks of pregnancy, to reduce your risk.

The importance of other factors is less clear-cut, but you are more likely to develop pre-eclampsia if more than one of the following applies:
- this is your first pregnancy
- you are aged 40 or over
- your last pregnancy was more than 10 years ago
- you are very overweight – a BMI (body mass index) of 35 or more
- your mother or sister had pre-eclampsia during pregnancy
- you are carrying more than one baby

If you have more than one of these risk factors, you may also be advised to take low-dose aspirin once a day from 12 weeks of pregnancy.

How is pre-eclampsia monitored?
If you are suspected of having pre-eclampsia you should attend the Maternity assessment Unit (MAU) for assessment. While you are at the MAU, your blood pressure will be measured regularly and you may be offered medication to help lower it. Your urine will be tested to measure the amount of protein it contains and you will also have blood tests done. Your baby’s heart rate will be monitored and you may have ultrasound scans to measure your baby’s growth and wellbeing.

If you are diagnosed with pre-eclampsia you are offered antenatal admission to ward 34 for close monitoring until delivery.

What happens next?
You will continue to be monitored closely to check that you can safely carry on with your pregnancy. This may be done on an outpatient basis if you have mild pre-eclampsia. You are likely to be advised to have your baby at about 37 weeks of pregnancy, or earlier if there are concerns about you or your baby. This may mean you will need to have labour induced or, if you are having a caesarean section, to have it earlier than planned.

What happens if I develop severe pre-eclampsia?
If you develop severe pre-eclampsia, you will be cared for by a specialist team. The only way to prevent serious complications is for your baby to be born. Each pregnancy is unique and the exact timing will depend on your own particular situation. This should be discussed with you. There may be enough time to induce your labour. In some cases, the birth will need to be by caesarean section.

Treatment includes medication (either tablets or via a drip) to lower and control your blood pressure. You will also be given medication to prevent eclamptic fits if your baby is expected to be born within the next 24 hours or if you have experienced an eclamptic fit.

You will be closely monitored on the labour ward. In more serious cases, you may need to be admitted to our intensive care or high dependency unit.

What happens after the birth?
Pre-eclampsia usually goes away after birth. However, if you have severe pre-eclampsia, complications may still occur within the first few days and so
you will continue to be monitored closely. You may need to continue taking medication to lower your blood pressure.

If your baby has been born early or is smaller than expected, he or she may need to be monitored. There is no reason why you should not breastfeed should you wish to do so.

You may need to stay in hospital for several days. When you go home, you will be advised on how often to get your blood pressure checked and for how long to take your medication. You should have a follow-up with your GP 6–8 weeks after birth for a final blood pressure and urine check.

If you had severe pre-eclampsia or eclampsia, you should have a postnatal appointment with your obstetrician to discuss the condition and what happened. If you are still on medication to treat your blood pressure 6 weeks after the birth, or there is still protein in your urine on testing, you may be referred to a specialist.

15 in every 100 women who have had pre-eclampsia will get it again in a future pregnancy.

Of those women who had severe pre-eclampsia, or eclampsia:

- 50 in every 100 women will get pre-eclampsia in a future pregnancy if their baby needed to be born before 28 weeks of pregnancy.
- 25 in every 100 women will get pre-eclampsia in a future pregnancy if their baby needed to be born before 34 weeks of pregnancy.

You should be given information about the chance, in your individual situation, of getting pre-eclampsia in a future pregnancy and about any additional care that you may need. It is advisable to contact your midwife as early as possible once you know you are pregnant again.
We recommend antibiotics in labour either because we suspect that there might be an infection or to reduce the risk of developing an infection. Please let us know if you might be allergic to any particular antibiotics so we can arrange for one of the alternatives. We routinely recommend the use of intravenous (given through a drip) antibiotics during labour if:

- Your temperature in labour is above 38°C or above 37.5°C for more than 2 hours.
- You have had Group B Streptococcal infection (GBS) at any time in the current pregnancy or delivered a baby in the past who had a GBS infection.

**Group B Streptococcus (GBS)**

GBS infection is very common, can come and go, and is harmless to yourself. However, if GBS is present at the time of birth it can occasionally affect your baby (the chance is less than 1 in 100) and your baby may become seriously ill. Antibiotics can be life-saving if given as early as possible after labour starts or if the membranes break even if there are no contractions.

One in every 2000 newborn babies in the UK is diagnosed with a GBS infection. Although the infection can make the baby very unwell, with prompt treatment the majority (7 out of 10) recover fully. However, 2 in 10 babies with GBS infection will recover with some level of disability, and 1 in 10 infected babies will die. Overall the UK and Ireland risk of a newborn baby dying from GBS is 1 chance in 17,000.

**If I had GBS in a previous pregnancy should I be given antibiotics during labour?**

If you had GBS in a previous pregnancy but your baby was not affected, it is not currently recommended to have antibiotics during labour in this pregnancy.

**Why are all women not tested for GBS during pregnancy in the UK?**

There is no firm evidence that routine testing for GBS does more good than harm. Many women carry the bacteria and for the majority their babies are born safely and without developing an infection. Screening all women late in pregnancy cannot predict which babies will develop GBS infection. A negative swab test does not guarantee that you don’t have GBS. So you may be given a negative result when in fact you do carry GBS in your vagina. Also most babies who are severely affected from GBS infection are born unexpectedly and prematurely, before the suggested time for screening.

If all carriers of GBS had antibiotics then a very large number of women at very low risk would receive treatment they did not need. Research has linked antibiotics given to babies very early in their lives to a higher than normal risk of developing asthma and other allergies which can be serious and overusing antibiotics risks strains of bacteria becoming resistant.

So screening all pregnant women for GBS is not recommended in the UK.

Please remember that if you need antibiotics in labour you will not be able to deliver at the Newcastle Birthing Centre.
If your waters break early, before 37 weeks (always phone the MAU: 0191 282 5748)

Your unborn baby is surrounded by amniotic fluid or ‘waters’ contained within a membrane bag. Breaking of the waters is also known as rupture of the membranes. Normally your waters break shortly before or during labour. Please see the section on labour if you waters break after 37 weeks. If your waters break before labour at less than 37 weeks of pregnancy, this is known as preterm prelabour rupture of membranes (PPROM). Two out of every 100 pregnant women experience this.

How will I know if my waters have broken?
You may notice a ‘gush’ of fluid or you may feel damp. The fluid should be a clear or pinkish colour. Sometimes the fluid may be a green-brown colour or slightly blood-stained. The amount of fluid you lose may vary from a trickle to a gush.

What should I do?
Wear a pad (not a tampon) and note the colour and amount of the fluid. Leaking urine is common while you’re pregnant and therefore it is important to check that the fluid isn’t urine. Leaking amniotic fluid does not smell like urine. If you think the fluid is amniotic fluid, you should contact the Maternity Assessment Unit (MAU).

What happens at the hospital?
You will have a check-up which should include:
- a discussion with your doctor or midwife about whether you have experienced this in a previous pregnancy (if it has happened before, it is more likely to happen again)
- a check of your general health, including an examination and a check of your temperature, pulse and blood pressure
- a check of your baby’s heartbeat

How is PPROM diagnosed?
PPROM is best diagnosed by a vaginal inspection. With your permission, on the Maternity Assessment Unit we will use a speculum (an instrument used to separate the walls of the vagina) to look at your cervix (entrance to the womb) and see if the leaking fluid is amniotic fluid and if the cervix is changing in preparation for labour. If there is discharge then a swab will be taken at the same time. If no amniotic fluid leak is seen then an ultrasound scan to estimate the amount of fluid around your baby is sometimes helpful. A swab test of the fluid may also help to decide if your waters have broken.

What happens next?
If your waters have not broken, you should be able to go home. If only a very small amount of amniotic fluid leaks at first, it is not always easy to confirm that your waters have broken. If you continue to leak fluid at home, you should return to the hospital for a further check-up.

If it is not clear whether your waters have broken, you may be advised to wear a pad and stay in hospital for a few hours. If your waters have broken, your pad will be wet. If your waters
If your waters break early, before 37 weeks (always phone the MAU: 0191 282 5748)

What could PPROM mean for me and for my baby?
- Premature birth
  Most women will go into labour themselves within the first week after their waters break.
- Infection
  The membranes form a protective barrier around the baby and, after these have broken, there is a risk of infection getting into the womb. This can trigger a premature birth. The symptoms of infection include a raised temperature, an unusual vaginal discharge with an unpleasant smell, a fast pulse rate and/or pain in your lower abdomen. Your baby’s heart rate may also be faster than normal. If you have an infection, your baby may need to be born soon to prevent a more serious infection.
- Problems of prematurity
  Premature babies (born before 37 weeks) can have an increased risk of health problems, particularly with breathing, feeding and infection. The earlier your baby is born, the more likely that this is the case. If your waters have broken early and you give birth before 23–24 weeks of pregnancy, sadly, it is unlikely that your baby will survive. Babies who do survive are likely to have serious health problems. The possible treatment and outcomes for your baby in your individual situation will be discussed with you.

Are there any treatments for PPROM?
It is not possible to replace the fluid or repair the hole in the membranes of the amniotic sac. The baby’s kidneys will continue to produce amniotic fluid even if the waters are broken. You may leak fluid for the rest of the pregnancy. However, treatment may be offered to reduce the risk of infection and to help reduce the risk of prematurity. This may include:
- A course of antibiotics to reduce both the risk of an infection getting into the uterus (womb) and the risk of the baby being born too early. Antibiotics also reduce the risks of infection in the baby.
- A course of two steroid injections (corticosteroids) to help with your baby’s development and reduce the chance of problems caused by being born early.
- Medication to stop contractions if you need to be transferred to a hospital where there is a neonatal intensive care unit.

Do I need to stay in hospital?
You will usually be advised to stay in hospital for 24 to 48 hours after your waters break to watch for signs of infection. Your doctor may discuss your option of going home after that. If you do go home, your doctor will discuss with you the signs of infection to look for. It is very important that you: Check that your temperature is normal every 4–8 hours (a normal temperature is 37.2 °C or less). Check the colour of the fluid does not change (see below). You should wear a pad rather than a tampon. Avoid vaginal intercourse.
When should I seek help if I go home?

Contact your doctor or midwife and return to the hospital immediately if you experience any of the following:

- raised temperature (more than 37.2°C)
- flu-like symptoms (feeling hot and shivery)
- vaginal bleeding
- if the leaking fluid becomes greenish or smelly
- contractions
- abdominal pain
- if you are worried that the baby is not moving as normal

What follow-up should I have?

You will be asked to return to the MAU for regular check-ups. During these check-ups, your baby’s heart rate will be monitored. You may also have an ultrasound scan to look at the amount of amniotic fluid around the baby and the blood flow to the baby. You will also have follow-up appointment with your consultant obstetrician, who will check that there are no problems with your pregnancy and discuss with you a plan for having your baby.

When is the right time to give birth?

Once your waters have broken, carrying on with the pregnancy reduces the risk of your baby having problems by being born prematurely but increases the risk of an infection getting into the uterus. Your obstetrician should discuss with you the benefits and risks of both early delivery and continuing with the pregnancy in your situation, but delivery will usually be between 34 and 37 weeks.

How will this affect a future pregnancy?

Having had your baby early means that you are at an increased risk of having a premature birth in a future pregnancy compared with women who have never had a premature baby. However, you are still more likely to have a baby born at more than 37 weeks next time. You will be advised to be under the care of a consultant obstetrician in your next pregnancy, who will discuss with you a plan for your pregnancy. This will depend on your individual situation and whether a cause for your early delivery, such as infection, was found.
Steroids prescribed in pregnancy

This information is for you if you have been recommended to have a type of steroid medication (corticosteroids) given to you to help your baby if there is a possibility that you may deliver your baby early.

Corticosteroids are of most help if the last dose is given to you between 24 hours and 1 week before you have your baby. There may still be benefit even if your baby is born within 24 hours of the first dose.

If you have diabetes or gestational diabetes, you may need to be in hospital for 2 or 3 days monitoring since corticosteroids increase the blood sugar level.

Corticosteroids help most if they are given to you between 24 weeks and 34 weeks plus 6 days of pregnancy. If you are having a caesarean section between 35 and 38 weeks plus 6 days, corticosteroids are usually recommended. They may be given earlier than 24 weeks, but the evidence that they will be helpful for your baby in that situation is less clear; a senior doctor will discuss this with you.

Can corticosteroids harm me or my baby?
A single course is considered to be safe for you and your baby. More evidence is needed to say whether two or more courses of corticosteroids during pregnancy are safe for your baby.

Why are corticosteroids helpful?
Corticosteroids have been used for many years in women who are thought to have a high chance of having their baby early (before 34 weeks). Although all premature babies (born before 37 weeks) have an increased risk of health problems, particularly with breathing, feeding and infection, these problems tend to be more severe the earlier the baby is born.

A single course of corticosteroids has been shown to help with a baby’s development and therefore will increase the chance of your baby surviving, once born. It also lessens the chance of your baby having serious complications after birth such as breathing problems owing to the lungs not being fully developed, bleeding into the brain, serious infection or bowel inflammation.

Corticosteroids are given by an injection into the muscle of your thigh or upper arm. At the RVI we give 2 doses each by injection 24 hours apart.

Steroids prescribed in pregnancy medical conditions

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We offer corticosteroids if there is an increased chance that your baby will be born before 35 weeks of pregnancy.

For example:
- if you are in premature labour
- if you are suspected to be in premature labour but this has not been confirmed yet
- if your waters break even if you are not having contractions
- if it may benefit your baby to be delivered early, for example if your baby is not growing
- if it may benefit you to have your baby early, for example if you are seriously unwell, are bleeding heavily or have severe pre-eclampsia
- If you are having a planned caesarean section before 39 weeks of pregnancy, corticosteroids are recommended to lessen the chance of breathing problems for your baby.

When are corticosteroids not necessary?
Giving treatment just in case an event occurs is known as prophylactic treatment. If you have previously had a baby born early, have a multiple pregnancy or have had treatment to your cervix (entrance to the womb), prophylactic treatment with corticosteroids early in pregnancy is not recommended because there is no evidence that it will help your baby.

Are there circumstances where corticosteroids are not advised?
If you or your baby are unwell, corticosteroids will usually be started but delivery of your baby will not be delayed to allow you to complete the course. Corticosteroids can suppress the mother’s immune system, but there is no evidence that a single course of corticosteroids will cause harm even if you have a severe infection.

Can I have more than one course of corticosteroids in this pregnancy?
If you have had one course of corticosteroids, you are unlikely to be recommended further courses later in the same pregnancy.
Glossary of unfamiliar words and terms

Amniocentesis A test in which a thin needle is inserted into the uterus through the abdominal wall to take a sample of the fluid surrounding the baby. This can be carried out from 15 weeks to test for certain chromosomal and genetic disorders.

Amniotic sac The bag of fluid that surrounds and cushions your baby in the uterus. Before or during labour the sac breaks and the fluid drains out. This is called the ‘waters breaking’.

Anaesthetics Medicines that reduce or take away pain.

Augmentation of labour The process of increasing the strength, length and frequency of your contractions and help your cervix to dilate.

Baby blues Feeling sad or mildly depressed a few days after your baby is born. The baby blues are very common – eight out of 10 new mothers feel like this. They can be caused by hormone changes, tiredness or discomfort and usually only last a week. More severe depression or anxiety that lasts longer than a week could be postnatal depression.

Bereavement The loss of a person. Coping with a bereavement can be particularly difficult if you are pregnant or have just had a baby, and even harder if it is your baby who has died.

Birth plan A written record of what you would like to happen during pregnancy, labour and childbirth.

Breech birth When a baby is born bottom rather than head first.

Caesarean section An operation to deliver a baby by cutting through the mother’s abdomen and then into her uterus. If you have a caesarean, you will be given an epidural or general anaesthetic.

Cardiotocograph ‘CTG’ A machine used to display measure your contraction frequency and baby’s heart beat before and during labour.

Catheter A thin, flexible, hollow plastic tube used to perform various diagnostic and/or therapeutic procedures. Catheters may be used for the injection of fluids or medications into an area of the body or for drainage, such as from a surgical site.

Cervix The neck of the uterus. It is normally almost closed, with just a small opening through which blood passes during monthly periods. During labour, your cervix will dilate (open up) to 10cm to let your baby move from your uterus into your vagina.

Chorionic villus sample A test to detect genetic disorders, particularly chromosomal disorders such as Down’s syndrome. It is usually carried out between 11-13 weeks.

Colostrum The milk that your breasts produce during the first few days after your baby is born. It is very concentrated and full of antibodies to protect your baby against infections. Colostrum has a rich, creamy appearance and is sometimes quite yellow in colour.

Cot death The sudden and unexpected death of an apparently healthy infant during their sleep.

Down’s syndrome A lifelong condition caused by an abnormal number of chromosomes. People with Down’s syndrome have some degree of learning disability and an increased risk of some health problems. It also affects their physical growth and facial appearance.

Ectopic pregnancy An ectopic pregnancy is when a fertilised egg begins to grow in the fallopian tube, cervix, ovaries or abdomen, not in the lining of the uterus. The fertilised egg cannot develop properly and has to be removed.

Elective caesarean A caesarean section which is planned for a specific date (usually after 39 weeks of pregnancy).

Embryo The term used for the developing baby in very early pregnancy.

Emergency caesarean A caesarean section that is not planned for that date but is needed because you have complications either before or during labour or started to labour before a planned elective caesarean.

Entonox A form of pain relief offered during labour breathed in through a mask or mouthpiece. Entonox is a mixture of oxygen and another gas called nitrous oxide.

Epidural An anaesthetic that numbs the lower half of the body. It can be very helpful for women who are having a long or particularly painful...
labour, or who are becoming very distressed. A thin catheter is placed between the vertebrae so that medicine can be delivered to the nerves in the spinal cord.

**Episiotomy** A cut made in the area between the vagina and anus (perineum). This is done during the last stages of labour and delivery to expand the opening of the vagina to prevent tearing during the birth of the baby.

**Fetal alcohol syndrome** A syndrome that can cause children to have restricted growth, heart defects and facial abnormalities as well as learning and behavioural disorders. It is caused by drinking too much alcohol during pregnancy.

**Fetus** The term used for the baby from week eight of pregnancy onwards.

**Folic acid** One of the B group of vitamins found naturally in foods, such as green leafy vegetables, fortified breakfast cereals and brown rice. Folic acid can help prevent birth defects known as neural tube defects. If you are pregnant or trying to get pregnant, you should take a 400 microgram folic acid tablet every day until you are 12 weeks pregnant.

**Fontanelle** A diamond-shaped soft spot on the front and top of a baby’s head where the skull bones have not yet fused together. During birth, the fontanelle allows the bony plates of the skull to flex, so that the baby’s head can pass through the birth canal. The bones usually fuse together and close over by the second birthday.

**Forceps** Smooth metal instruments used to assist delivery while cradling the baby’s head as the obstetrician gently pulls during a contraction.

**Formula milk** Cows’ milk that has been processed and treated so that babies can digest it.

**Fundus** The top of the uterus.

**Haemoglobin (Hb)** Haemoglobin is found in red blood cells and carries oxygen from the lungs to all parts of the body. Pregnant women need to produce more haemoglobin because they produce more blood. If you don’t produce enough, you can become anaemic, which will make you feel very tired. Your haemoglobin levels are tested during antenatal check-ups.

**Home birth** Giving birth at home, with care provided by a midwife. This is usually planned!

**Induction of labour** Having your labour artificially started either with a vaginal pessary (containing a drug called prostaglandin) or by a midwife or doctor breaking your waters followed by an intravenous drip (containing a drug called oxytocin).

**Jaundice** The development of a yellow colour on a baby’s skin and a yellowness in the whites of their eyes. It is caused by an excess of the pigment bilirubin in the blood. Jaundice is common in newborn babies and usually occurs approximately three days after birth. It can last for up to two weeks after birth or up to three weeks in premature babies. Severe jaundice can be treated by phototherapy, where a baby is placed under a very bright light. Babies who are jaundiced for longer than two weeks should be seen by a doctor as they may need urgent treatment.

**Mastitis** Inflammation sometimes with infection in the breasts caused by blocked milk ducts. Symptoms include hot and tender breasts and flu-like symptoms.

**Meconium** The first stools that your baby passes. Meconium is made up of what a baby has ingested during their time in the uterus, including mucus and bile. It is sticky like tar and has no smell.

**Midwifery care** Care for pregnant women where the midwife is the lead professional. Midwifery care is suitable for ‘low risk’ women with an uncomplicated pregnancy.

**Neonatal care** The care given to sick or premature babies. It takes place in the special care baby unit (ward 35), which is designed and equipped to care for them.

**Nuchal translucency scan** An ultrasound scan to help identify whether you are at increased risk of having a baby with Down’s syndrome. Carried out at 11 to 13 weeks it measures the amount of the fluid at the back of the baby’s neck (nuchal translucency). When combined with a blood test it is used to calculate the risk of Down’s syndrome.

**Obstetric cholestasis** A potentially dangerous liver disorder. Symptoms include severe itching without a rash particularly in the last four months of pregnancy.

**Obstetrician** A doctor specialising in the care of women during pregnancy, labour and after the birth.

**Oedema** Another word for swelling, most often of the feet and hands. It is usually nothing to worry about, but if it gets worse suddenly it can be a
sign of pre-eclampsia.

**Paediatrician** A doctor specialising in the care of babies and children.

**Perinatal** The time shortly before and after the birth of a baby.

**Perinatal mental health** Mental health problems that develop during pregnancy and that can last for up to one year after childbirth.

**Placenta** The organ attached to the lining of the uterus, which separates your baby's circulation from your circulation. Waste passes out and oxygen and food in to your baby's bloodstream through the placenta and along the umbilical cord.

**Placenta accreta** A placenta that is attached more deeply to the uterus and may be difficult to remove.

**Placenta praevia** A placenta that is low lying in the uterus.

**Postnatal** The first 6 weeks from the birth of a baby.

**Postnatal care** The professional care provided to you and your baby, from the birth until your baby is about six to eight weeks old. It usually involves home visits by midwives to check that both mother and baby are well.

**Postnatal depression** Feelings of depression and hopelessness after the birth of a baby. These feelings are more severe than the 'baby blues'. Postnatal depression affects one in every 10 women and can be serious if left untreated.

**Pre-eclampsia** A condition of high blood pressure and protein in the urine that only occurs during pregnancy. Symptoms include bad headaches, vision problems and the sudden swelling of the face, hands and feet. It usually develops after the 20th week of pregnancy and although usually mild, causing no trouble, it can be serious for both mother and baby.

**Premature birth** The birth of a baby before 37 completed weeks of pregnancy.

**Premature labour** When labour starts before 37 completed weeks of pregnancy.

**Rhesus disease** A woman who is rhesus negative can carry a baby who is rhesus positive if the baby's father is rhesus positive. This incompatibility can cause anaemia in the baby. If in a further pregnancy the incompatibility happens once more the immune responses with antibodies produced by the mother. These can cross the placenta and attach to the baby's red blood cells. This can be harmful to the baby as it may result in a condition called haemolytic disease of the newborn, which can lead to anaemia and jaundice.

**Rhesus negative** People with a certain blood type are known as rhesus negative. It means that they do not have a substance known as D antigen on the surface of their red blood cells. This can cause problems in second or later pregnancies (see above).

**Rhesus positive** People with a certain blood type are known as rhesus positive. This means that they have a substance known as D antigen on the surface of their red blood cells.

**Rubella** A virus that can seriously affect unborn babies if the mother gets it during the early weeks of pregnancy. Most women have been immunised against rubella, so they are not at risk.

**Ultrasound** An image produced with high-frequency sound waves. It shows your baby's body and organs as well as the surrounding tissues. Also called sonography, this test is widely used to estimate delivery dates and check that your developing baby is healthy and growing normally.

**Umbilical cord** The cord that attaches the baby to the placenta, linking the baby and mother. Blood circulates through the cord, carrying oxygen and food to the baby and carrying waste away.

**Uterus** The womb.

**VBAC** – **Vaginal Birth After Caesarean section**

**Ventouse** A soft suction cap that may be used to assist delivery

**Vernix** A sticky white coating that covers a baby in the uterus. It mostly disappears before birth but there may be some left on your baby when they are born.

**Vertebrae** Your spine is made up of 33 irregularly shaped bones called vertebrae. Each vertebra has a hole in the middle through which the spinal cord runs.
Further information

NHS Choices Website

For general information on pregnancy and birth we recommend the Department of Health NHS Choices website. This is a comprehensive site that includes photos as well as videos covering all aspects of care for you and your baby.

www.nhs.uk/conditions/pregnancy-and-baby/

The Day by Day Pregnancy Book
Edited by Dr Blott (former RVI Consultant), with chapters on labour by Dr Loughney (former RVI Consultant) and the development of the baby by Dr Moran (RVI Consultant).

The Pregnant Body Book
Edited by Dr Paul Moran (RVI Consultant in Obstetrics & Fetal Medicine).

British Medical Association award winner for Best Popular Medical Book 2012.

Dr Ayuk (RVI Consultant) has created an individualised pregnancy Care Plan App based on UK guidelines. Available for iOS and Android.

www.mycapl.com
Acknowledgements

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We gratefully acknowledge the Royal College of Obstetricians and Gynaecologists as many of the sections have been adapted from their current patient information leaflets. These can be downloaded at www.rcog.org.

We aim to keep the guide as up to date as possible but for the latest information see the RVI website on www.newcastle-hospitals.org.uk

This is the THIRD EDITION OF THE RVI PREGNANCY INFORMATION BOOK
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