

ANTENATAL CARE AND ROUTINE TESTS DURING PREGNANCY

Patient information to assist informed consent



The aim of antenatal care is to achieve the best outcome for the health and well-being of the mother and baby during pregnancy.

If you are planning a pregnancy, see your GP or obstetrician for a check-up. Such a consultation may determine whether you have any conditions or illnesses that could affect your health or the baby's health during pregnancy. Talk with your doctor about:

- preparation for pregnancy, for example, cervical screening test (CST, which has replaced the Pap smear), dietary supplements of folic acid, and vaccination against rubella, whooping cough and influenza
- risk factors such as alcohol, smoking, obesity, or any medicines or drugs.

Give your doctor a list of ALL medicines you take or have taken recently, including prescription, over the counter (without prescription), herbal and alter-

native medicines. If you are being treated for a medical condition (such as epilepsy, diabetes, acne, asthma, high blood pressure, a heart problem, anxiety or depression), talk to your doctor about the effect that medications may have on your pregnancy.

Genetic counselling: If you have a child with any illness or problem, or if you or your partner have a family history of a suspected or known health problem that might be inherited, then your doctor may recommend that you see a genetic specialist. An example of an inherited illness is cystic fibrosis.

Genetic counselling helps to assess potential risks and to make an informed choice about family planning. Genetic counselling requires a detailed family history and sometimes a physical examination and laboratory tests to determine the risk of having a baby with an inherited problem.



THE FIRST VISIT TO YOUR DOCTOR

Your first examination should ideally take place before 10 weeks of pregnancy or when your menstrual period is two to four weeks late.

Your doctor will take a full medical and pregnancy history, conduct a thorough physical examination, estimate the date the baby is due, and discuss with you any potential problems. An ultrasound examination may be undertaken to view the fetus.

Information from this initial consultation will influence the management of your pregnancy and care during and after

labour. For many women, this may be the first time they have had such a thorough examination and consultation.

A hospital or birth centre booking can be made, but you may wish to visit a number of centres before making a final decision about where you would like to have your baby.

First physical examination: This may include recording your height, weight, body mass index (BMI) and blood pressure, and examination of your legs for varicose veins.

Continued on page 2

TALK TO YOUR DOCTOR

This pamphlet is intended to provide you with general information. It is not a substitute for advice from your doctor and does not contain all known facts about antenatal care.

Use this pamphlet only in consultation with your doctor. Read it carefully, and save it for reference.

If you are not sure about the risks, benefits and limitations of antenatal tests, consequences of the tests, terms used in this pamphlet, or related issues, ask your doctor.

Terms are used in this pamphlet that may require further explanation by your doctor. Write down questions you want to ask. Your doctor will be pleased to answer them.

If you are uncertain about your doctor's advice, you may wish to seek the opinion of another doctor.

Your Doctor



This patient education has been reviewed by obstetricians and gynaecologists in Australia and New Zealand

IMPORTANT: FILL IN ALL DETAILS ON THE STICKER BELOW

DEAR DOCTOR: When you discuss this pamphlet with your patient, remove this sticker, and put it on the patient's medical history or card. This will remind you and the patient that this pamphlet has been provided. Some doctors ask their patients to sign the sticker to confirm receipt of the pamphlet.



Your teeth, gums, breasts and nipples may also be examined, and the health of your heart and lungs checked. A vaginal examination may be needed to check the size of your uterus (womb) or if you need a CST, but in many cases will be unnecessary (see page 3: Cervical Tests).

ANTENATAL TESTS

Some tests are required to detect specific problems in pregnancy. Most tests are routine. Other tests may be needed, depending on your medical history and family background.

Screening tests are ordered to determine if you, or your baby, are at an increased risk of certain conditions. Screening tests performed on blood, urine and the cervix do not give perfect results and do not necessarily detect all problems.

Occasionally, tests can raise concern that the fetus may have a certain condition when, in fact, the fetus does not have it. If the test result shows an increased risk, your doctor will discuss this with you and implement further testing if indicated. Alternatively, a fetus may have a physical condition that is missed by a screening test. A fetus may also have a problem that cannot be diagnosed during pregnancy, for example, intellectual impairment. All test results are recorded in your medical notes.

Blood tests

The following tests are routine.

Blood group and antibody screen: Your blood group will be determined. It could be A, B, AB or O. Blood is also tested for the Rhesus (or Rh) factor. If

your blood has the Rh(D) factor, it is Rh(D) positive. If not, it is Rh(D) negative. Problems may arise if the mother's blood is Rh(D) negative and the baby's blood is Rh(D) positive. Women who are Rh(D) negative need repeat testing for the presence of antibodies later in pregnancy. If you are found to be Rh(D) negative and experience any bleeding during pregnancy, then you should contact your doctor or hospital.

Blood count: This detects whether the amount of haemoglobin in red blood cells is normal. If blood cells have too little haemoglobin, the woman is anaemic and may need to take iron tablets and/or vitamins. A blood count will be performed again later in pregnancy to make sure that anaemia has not developed. Women whose ancestry is from a country near the equator may be tested for other genetic disorders of haemoglobin and red blood cells. A platelet count is also measured.

Human immunodeficiency virus (HIV): HIV is the virus that causes AIDS. Pregnant women may be offered testing for HIV even if they do not have a risk factor. If a woman is HIV positive, treatment during pregnancy can reduce the risk of the baby being infected with HIV.

Rubella (German measles): Your blood is tested for antibodies that indicate previous rubella infection or vaccination. If you have had rubella, you are not likely to get it again. If you have not had rubella, avoid anyone who has this infection while you are pregnant. Rubella can cause serious problems in a fetus. If the blood test shows that you are not immune or have low immunity to rubella, then it

is recommended that you have a rubella vaccine after the baby is born.

Hepatitis B: This is a viral infection of the liver. A woman can be a carrier of hepatitis B without having symptoms. The disease can be passed to the baby. If tests show that the woman has current or recent infection, or is a chronic carrier, then the baby should be vaccinated against hepatitis B soon after birth and receive an injection of hepatitis B immunoglobulin at birth. Additional treatment during pregnancy for you, or after birth for the baby, may be recommended.

Hepatitis C: Doctors may recommend a hepatitis C screening test. Hepatitis C is a common but often unrecognised infection, and may be transferred to the baby. Additional follow-up during pregnancy for the mother, or after birth for the baby, may be recommended.

Syphilis: Although syphilis is rare, it can be present without symptoms and may harm the fetus. Syphilis can be treated so it is not passed to the fetus.

Other blood tests: Your doctor may order tests for Varicella antibodies, thyroid function, and vitamin D levels.

Urine tests

Bacteria tests: On your first visit, a test for bacteria in the urine may be arranged. Tell your doctor if you have a history of recurrent urinary tract infections (UTIs).

Urinary screen: Your urine may be tested for protein, sugar and blood. This test may be repeated at other antenatal visits, but routine urine testing at every visit is rarely required.



VISITS TO YOUR DOCTOR AS PREGNANCY PROGRESSES

If you are healthy with no complicating risk factors, it is common to have an antenatal check every four to six weeks until week 24, then every two weeks until week 36, then once a week until delivery. Less frequent visits may be possible for some patients.

Blood pressure: At each visit, your blood pressure will be recorded. If it becomes elevated, the condition must be closely monitored. Your doctor will discuss monitoring and treatment with you if your blood pressure is elevated.

Abdominal measurement and palpation: As your pregnancy progresses, your doctor will examine your abdomen and may measure the growth of the uterus with a tape measure. The measurement is taken from the pubic bone to the top of the uterus. The baby's heart can be heard using a Doppler instrument or a special stethoscope. Later in the pregnancy, the doctor is usually able to feel the baby's position and whether the head is down in the pelvis. The doctor may use ultrasound to monitor the fetus, particularly in the third trimester.

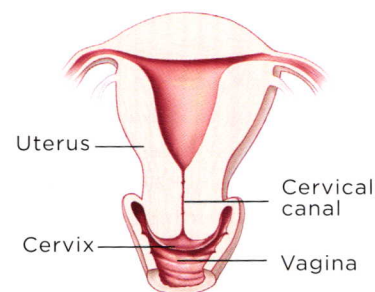
Fetal well-being tests in late pregnancy: In some cases, tests during late pregnancy may be needed if the sufficiency of the placenta is in question or if fetal growth is uncertain.

Cervical Tests

Cervical screening test: If your next CST is due during your pregnancy or is overdue, a CST should be performed at the first antenatal visit. A review of your CST and Pap smear history may be performed. If human papilloma virus is detected, your doctor will discuss it with you.

Most women can be safely screened during pregnancy, but some may be advised to defer testing until a post-natal visit.

Cervical swabs: A swab may be taken from your cervix to check for certain infections such as gonorrhoea, gardnerella and chlamydia, which can be treated. These tests do not cause miscarriage.



Other antenatal tests

Maternal serum screening: This is a blood test that screens for Down syndrome. It can be performed at 10 to 13 weeks of gestation (combined with a nuchal translucency ultrasound that is performed at 11 to 13 weeks). This test may not be available in your area.

Ultrasound examination: Ultrasound is used in virtually all pregnancies and is safe. Ultrasound checks the baby's size and growth, and may detect abnormalities in physical development. It allows measurements of the development of the baby, and position and function of the placenta.

NIPS: Non-invasive prenatal screening (NIPS) allows the baby's DNA to be collected from the mother's blood. Also called non-invasive prenatal testing (NIPT) or cell-free DNA testing (cfDNA), this is a rapidly advancing area,

so discuss it with your doctor.

Amniocentesis and chorionic villus sampling: In some cases, a woman may be offered specialised testing. This is usually because of concern about risk of a chromosomal anomaly. If there is concern, the doctor will discuss the options of tests such as amniocentesis or chorionic villus sampling. Further details on these tests are available in the patient education pamphlet "Amniocentesis and Chorionic Villus Sampling".

Screening for diabetes: Diabetes can be brought on by pregnancy (gestational diabetes). It can affect fetal growth and affects as many as one in 15 pregnancies. Routine testing for diabetes is performed between 24 and 28 weeks of gestation, but may be done earlier in cases of high risk. If diabetes is found, a management program will be established.

Screening for Group B streptococcus (GBS): GBS is one of the many types

of bacteria that live on our bodies. It rarely causes any problem in a healthy adult.

About one woman in five will have GBS growing in the birth canal, which can be passed to the baby during labour. If exposed to GBS, the baby may become infected, and this infection can sometimes be severe.

By looking for GBS and administering antibiotics to the mother during labour, the chances of harm to the baby are substantially reduced.

Swabs may be taken from the vagina (and surrounding areas) and tested for GBS three to five weeks before the due date. A positive result means that GBS is in the vagina or anal region but does not mean that you or the baby will become ill.

If GBS is present, antibiotics will be recommended as a preventive treatment during labour or when your waters break.

Your health during pregnancy

Pregnancy is an opportunity to make changes to improve your health. Looking after your health can make a big difference to you and your baby.

Smoking: Smoking has adverse effects on the baby. If you are a smoker, inquire about quit-smoking programs that may be available at the hospital where you will have your baby. State health departments and some general practices run "Quit" programs. Your doctor has details.

A healthy diet: A well-balanced diet that provides all daily nutrients should consist of servings of the following:

- vegetables
- grains and cereals
- fruit
- dairy
- meat, fish and poultry.

One to two servings of protein-rich foods (red and white meat, fish, eggs, dairy products, nuts and legumes) should be eaten daily. Calcium is found in dairy foods and vegetables such as kale and

broccoli. The best source of iron is red meat. In smaller amounts, iron is found in chicken, fish, green leafy vegetables, cereals, nuts and legumes.

Allowing for differences among women's tastes, the following daily diet serves as a general guide for adequate nutrition during pregnancy:

- four servings of vegetables
- three servings of fresh fruit
- three servings of milk or dairy products (low fat is better)
- several servings of rice, pasta, breads or cereals
- two or three servings of lean fish, meat, poultry, eggs, nuts or beans
- six to eight glasses of water.

Cleanliness and food preparation: To avoid bacteria in food that can pose risks to you and the baby, wash your hands carefully before and after preparing food. Refrigerate fresh and cooked foods. Pregnant women appear to be at particular risk of bacterial infection from contaminated food. Avoid foods that are

prone to bacterial contamination, such as pâté, prepared salads with mayonnaise, soft-serve ice cream, precooked and undercooked meats and chicken.

Kitty litter: Ask someone else in the household to clean the cat's tray. Cat droppings can transmit toxoplasmosis, an infection linked to birth defects. Toxoplasmosis can be contracted by eating raw or undercooked meats. Always wear gloves in the garden, and wash your hands when finished.

Prescription and over-the-counter medicines: Some medicines have been linked to birth defects, especially during the first three months of pregnancy. If you are taking any conventional, traditional or alternative medicine, tell your doctor.

Weight gain: While it is normal for a woman's weight to increase during pregnancy, excessive weight gain can have a negative impact on the health of you and your baby. If you are concerned about weight gain, discuss this with your doctor.

Oral health: The increase in hormone levels during pregnancy is associated with an increase in gum disease. Tooth decay can be a problem. Brush your teeth two to three times daily. Flossing once daily. This care helps to reduce the build-up of plaque on teeth and gums, and reduces the risk of tooth and gum disease. Some simple rules that can help with oral hygiene during pregnancy are:

- Always use a soft toothbrush.
- Immediately after morning sickness, rinse several times with water to help rid the mouth of stomach acid. This can prevent erosion of tooth enamel.
- Avoid sweet and sticky foods.

There is no reason to avoid dental treatment during pregnancy.

Exercise: An exercise program can be helpful. Swimming and walking are excellent exercises during pregnancy. If playing sports, use common sense, and do not take unnecessary risks. To reduce the risk of overheating while exercising:

- drink plenty of water
- eat nutritious and regular meals
- avoid exercise in the hottest or most humid times of the day
- indoor exercise spaces should be cool and well ventilated

- when playing a team sport, rest or substitute frequently
- during the last three months of pregnancy, limit participation in sport to three sessions or less each week
- reduce exercise intensity as the pregnancy progresses.

Sauna and spa: It is not advisable to use a sauna because of the potential increase in your core body temperature. Use a spa with care and common sense, being careful not to overheat.

Sex during pregnancy: Sexual activity may continue according to the wishes of you and your partner, unless you have complications and are advised otherwise. Sexual desire may change at different times during pregnancy.

Rest and sleep: Rest and sleep are important. Some women find that they feel more tired during certain stages of pregnancy. Your doctor may advise extra rest, for example, if you are carrying more than one baby or if you have a medical problem.

Common discomforts: Many women have one or more of the following discomforts during pregnancy. If any are persistent or cause particular distress or illness, discuss them with your doctor:

- morning sickness (nausea and vomiting)
- constipation
- heartburn
- anxiety or depression
- bleeding gums
- urinary frequency
- haemorrhoids
- leg cramps
- sore joints
- stuffy nose and nose bleeds
- swelling (oedema) of the legs
- tiredness
- varicose veins
- vaginal thrush infection.

Vaginal bleeding: A small amount of vaginal spotting or bleeding in the first trimester is common. This causes worry for most women, but a little "spotting" is unlikely to be a sign of impending miscarriage. If bleeding is persistent or becomes painful, contact your doctor at once. Heavy bleeding must be investigated but does not mean that a miscarriage is likely or that the fetus has an abnormality.

Fetal movements: The woman usually starts to feel the baby's movements at 16 to 22 weeks. The nature of the movements (such as kicking, rolling and hiccups) will change as the baby grows.

PREPARATION AND PLANNING FOR YOUR NEW BABY

As well as looking after your baby's health during pregnancy, you need to plan for the physical and emotional needs of the baby and yourself after birth.

Consider the changes in lifestyle that the birth means for you and other family members. In particular, your partner may need to make adjustments to prepare for the changes that will inevitably occur in your relationship and family life.

Antenatal classes: Antenatal classes can be helpful, especially with a first pregnancy. Your doctor can advise you about classes that are available for you and your partner. Classes help you to know more about your body during pregnancy.

Mental health and pregnancy: A woman's emotional wellbeing is important for both her and her baby. If you have any concerns about how you are feeling, discuss them with your doctor.

Information and education: It is important to get as much reliable information as possible about health and well-being during pregnancy.

Many excellent resources in various media are available on pregnancy, labour and parenting skills. However, some sources can be very misleading and unreliable. Your doctor and antenatal teacher can recommend high-quality and proven resources.

Costs

Your doctor can advise you about obstetric services, visit frequency and the models of care that are available. If you are seeing a private doctor, she or he will discuss private health insurance and out-of-pocket costs. You may want to ask for an estimate that lists the likely costs. This includes medical and hospital fees, and other items. Ask which costs can be claimed on private health insurance. Due to unexpected tests, treatments or events during pregnancy, the final account may vary from the estimate. It is best to discuss costs with your doctor before tests, treatment and labour rather than afterwards.

Report to Your Doctor

Tell your doctor at once if you have any of the following complications of pregnancy:

- Persistent or severe nausea and vomiting
- Blood or fluid coming from the vagina (a little, infrequent spotting is common in the first trimester; bleeding late in pregnancy must be reported promptly to your doctor or the hospital you will be attending)
- Pain or cramps in the abdomen, if they are persistent or severe
- Decreased fetal movements; a noticeable decrease in normal, daily fetal activity, especially after 26 weeks (third trimester)
- Any blow to your abdomen
- Burning when passing urine
- Sudden or excessive swelling of the fingers, face or legs
- Persistent and severe headache
- Dizziness; blurred or poor vision
- Any concern that your "waters have broken"
- Fever or chills
- Any illness or infection.