

FACTFILE: GCSE HOME ECONOMICS: Child Development



Antenatal Care

Learning Outcomes

Students should be able to:

- Know what antenatal care is
- Discuss how antenatal care benefits the mother
- Identify the following tests and checks carried out at antenatal appointments and explain the importance of each:

Urine test

Blood test

Blood pressure test

Weight check

Baby's heartbeat check

Screening tests

- Explain the role of hormones



What is Antenatal Care?

Antenatal (**before birth**) care is provided during pregnancy and involves regular check-ups and tests. These are carried out to ensure that the baby is developing normally and that the pregnancy is going well. They will also give you useful information about being pregnant and what to expect as well as answering any questions that you might have.

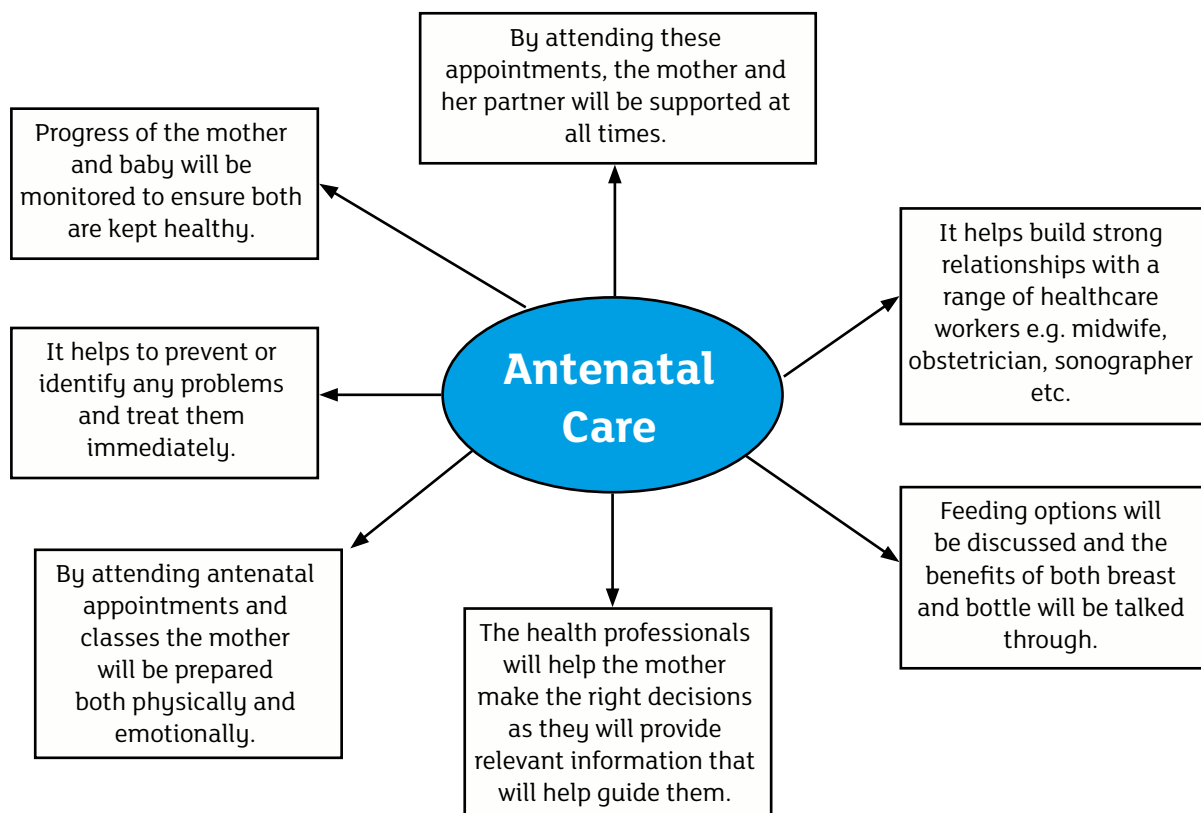
Antenatal appointments will allow your GP, midwife and other people to help both you and your baby stay healthy. It is so important that you attend these appointments even if everything is ok as it can help to prevent or reduce any risks that might happen.

Once your pregnancy has been confirmed by your GP they will arrange your booking appointment. The booking appointment can happen at the hospital or in your GP surgery. It is generally carried out by a midwife. The midwife will ask a lot of questions at this initial visit and it's her role to gather as much information as she can be regarding the mother and any medical history. The midwife will encourage new parents to attend Parent craft classes.

Suggested Activity

Find out what happens during Parent craft classes in your local area.

How does antenatal care benefit the mother?



When pregnant there are a range of tests that are carried out at your antenatal appointment. These tests are very important and are administered by your midwife. These tests are:

- Urine test
- Blood test
- Blood pressure test
- Weight check
- Baby's heartbeat check
- Screening test

Urine Test

A small sample of urine is tested by your midwife. They will look for the following things:

Glucose – this may indicate that the mother has developed gestational diabetes. This is controlled by diet and possibly insulin.



Suggested Activity

Watch the video that gives advice about gestational diabetes and how Kimberly talks about her pregnancy after being diagnosed.

<https://www.nhs.uk/conditions/gestational-diabetes/treatment>

Protein – this is a sign that there could be an infection that needs to be treated. It may also be a sign of hyper-tension, which could lead to pre-eclampsia.

Ketones – this can happen when the woman has hyperemesis which is excessive vomiting. The woman may be dehydrated requiring a drip to replace fluids and glucose. If left untreated the woman could go into a coma and die.

Blood Test

A routine blood test is carried out to check for anything that may cause a problem during your pregnancy or after the birth, or to check that your baby is healthy. The blood test will look at the following:



Blood group – This is to establish what blood group you are. This is useful to know in case you need to be given blood (transfusion) for example if you have heavy bleeding (haemorrhage) during pregnancy or birth.

Rhesus Negative – Your blood will also tell you if your blood is positive or negative. This is your 'Rhesus' factor which indicates if you have a substance known as 'D Antigen' on the surface of your red blood cells. If you do, you are RhD positive and if you don't you are RhD negative. If the mother's blood is Rhesus negative, it isn't usually a problem unless your baby is RhD positive, if it is, there's a risk that the mother's rhesus antibodies will attack her foetus blood cells. This usually won't cause a problem for your first pregnancy, but could impact future pregnancies. If you are Rhesus negative, you will need an injection at 26 to 28 weeks and at 34 to 36 weeks to protect the baby.

Anaemia – It is very common for women to develop anaemia, which is an iron deficiency during pregnancy. This is because your body needs extra iron so your baby has a sufficient blood supply and receives necessary oxygen and nutrients. Anaemia

makes you feel tired and listless. Your midwife or doctor can tell if you need iron tablets to prevent or treat anaemia. Your iron levels will be checked throughout your pregnancy.

Blood sugar – This indicates if a woman has gestational diabetes which can develop in pregnancy but generally disappear after baby has been born.

Infections – Your blood is also checked for a number of infections that may affect your pregnancy or your unborn baby. They will look at the following:

- **Rubella (German Measles)** – If the woman is immune to this disease, Rubella could be very dangerous to the unborn baby causing brain damage, blindness and deafness. If your test results show that you have low or no immunity, you will be offered the Measles, Mumps, Rubella (MMR) vaccination after your baby is born.
- **Hepatitis B and C** – This virus can cause liver disease. Both are treatable if the woman is found to have the infection.
- **Syphilis** – This sexually transmitted disease can be treated to prevent a miscarriage and stillbirth from happening.
- **HIV (Human Immunodeficiency Virus)** – This virus can cause aids. If the woman has HIV they can pass this to the baby via the placenta or through breastfeeding. Both the mother and baby can have treatment and care that reduces the risk of your baby becoming infected.

Blood Pressure Check

Your blood pressure will be taken at every antenatal appointment. A rise in blood pressure later in pregnancy could be a sign of pre-eclampsia. Symptoms of pre-eclampsia include:

- Bad headaches
- Problems with vision
- Pain below the ribs
- Vomiting
- Sudden swelling of face, hands and feet



It's very common for your blood pressure to be lower in the middle of your pregnancy than at other times. This isn't a problem, but it may make you feel lightheaded if you get up too quickly.

Suggested Activity

Watch the video on Pre-eclampsia. It explains what it is and the warning signs. <https://www.nhs.uk/conditions/pre-eclampsia/>

Weight Check

Weight is checked at your booking appointment, but you probably won't be weighed regularly during your pregnancy. Your height will be measured along with your weight so that your midwife can calculate your BMI (Body Mass Index). Most women will gain 10 - 12.5kg in pregnancy, most of it after the 20th week. This extra weight is the baby growing but your body will also be storing fat to start making the breastmilk after the birth.

Baby's heartbeat check

You will hear your baby's heartbeat for the first time during your booking appointment. This usually happens when you're between 10 weeks and 14 weeks of pregnancy.

Some midwives use a pinard horn, which looks like a small trumpet, to listen. Some use a fetoscope which is a cross between a Pinard horn and a traditional stethoscope. But most midwives use a handheld Doppler device or Sonicaid fetal heart monitor, which amplifies your baby's heartbeat so you can also hear it.

Your baby's heart rate is between 110 beats and 160 beats per minute compared to your own 60-100 beats per minute.

Screening & Diagnostic Tests

A range of screening tests are carried out during the pregnancy. A screening test is carried out on

a large number of people to find those individuals who have a particular disease. They are:

- Ultra sound scan
- Nuchal Translucency scan
- Quadruple Test
- Amniocentesis
- Chronic Villus Sampling

Ultra sound scan

Ultrasound scans use sound waves to create a picture of your baby in your womb. The picture will be displayed on a screen that you will be able to see. Most scans are performed by a trained healthcare professional called a sonographer. Most ultrasound scans are done after 10 weeks of pregnancy and are performed abdominally. The sonographer will place some gel on your abdomen and will rub a hand held device called a transducer across your belly to obtain a picture of your unborn baby. This scan will estimate the age of the unborn baby and find out whether twins or more are present. A further scan will be carried out at 18-21 weeks of pregnancy, to check for any physical abnormalities of the unborn baby.



Nuchal Translucency scan

This might be offered to help you work out the risk of your baby having a chromosomal abnormality. It might be done as part of a dating scan, or it can be done separately. This is a collection of fluid under the skin at the nape of the neck and it can be measured on an ultrasound scan between 11-14 weeks of pregnancy. The greater the amount of fluid, the higher the risk of an inherited condition such as down syndrome.

Quadruple Test

This is a special blood test that is administered between 15-22 weeks. It measures the amount of four chromosomes in the mother's blood. It is a screening test for Down Syndrome and Spina Bifida. It can't tell whether the baby does or doesn't have these conditions but it can tell which women are most at risk.

Amniocentesis

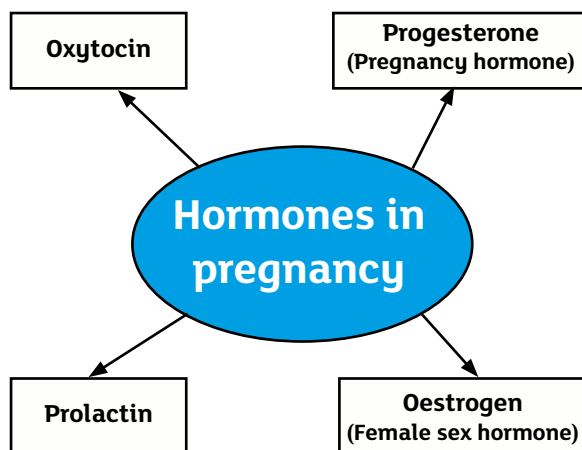
This test can be offered between 15-20 weeks of pregnancy. It may be offered if the mother received the quadruple test or the ultra-sound scan and it indicated that there could be a problem with the baby's development. To carry out this test a hollow needle is inserted through the abdominal wall and into the uterus where a small amount of the amniotic fluid is collected to test if the baby has a chromosome problem or other abnormality. By carrying out this test it can possibly detect the following:

- Down Syndrome
- Spina Bifida
- Inherited disorders e.g. sickle-cell anaemia
- Muscular dystrophy

Chronic Villus Sampling

This test is administered between 11 and 14 weeks. A sample of cells is removed from the mother's placenta and examined to test for chromosomal abnormalities such as Down syndrome as well as other genetic conditions such as Cystic Fibrosis.

Hormones in pregnancy



Hormones play a pivotal role in controlling the menstrual cycle, during pregnancy, giving birth and if you decide to breastfeed. Throughout pregnancy your hormone levels change. There are different hormones and they help the body control the way it works.

Hormone	Function
Progesterone – Pregnancy hormone	<ul style="list-style-type: none"> • This helps to prepare the uterus to receive the fertilised egg. • It helps to maintain the state of pregnancy. • This hormone will help with the embedding of the fertilised egg into the uterus lining. • Helps to relax the muscles in the uterus to provide room for the baby to grow. • It controls the menstrual cycle.
Oestrogen – female sex hormone	<ul style="list-style-type: none"> • Responsible for the development of female sex organs. • Responsible for the functioning of the female sex organs/produces eggs. • It strengthens the uterus. • Controls the uterus.
Oxytocin	<ul style="list-style-type: none"> • Oxytocin is used to induce labour and it also stimulates the uterus to contract during labour. • It is responsible for the enlargement of the uterus and breasts during pregnancy. • It helps to relax the pelvis joints to allow for easier birth of baby.
Prolactin	<ul style="list-style-type: none"> • This is produced in the pituitary gland to promote milk production. • It also helps to regulate the immune system. • The baby's sucking reflex stimulates the milk after birth. • Also acts on reproductive system to regulate the immune system.

Suggested Activities

1. In pairs carry out a role play of the first appointment at the antenatal clinic. One person will play the role of the pregnant woman and the other will be the midwife.
2. Produce a leaflet for a first time mum. The leaflet should include all the information she needs to know when attending antenatal appointments and antenatal classes.

Useful Links

What is antenatal care all about?

https://www.youtube.com/watch?v=NFB_sDvbDuo

Reference Material

Brennand Heather, *Child Development, A Comprehensive Text for GCSE*

Minett Pamela, *Child Care Development*, Hodder Education 2017

<https://www.pregnancybirthbaby.org.au/>

