

Year 11 Exam Revision 2022

The Child Development exam is on **6th June**

That means that there are **13 lessons** between now and then.

I have used your past papers and what I know has traditionally not been well done to work out a revision programme. If I have left anything obvious out, or there is something you think you need to revise, let me know.

You will need to take your folders home to use for revision.

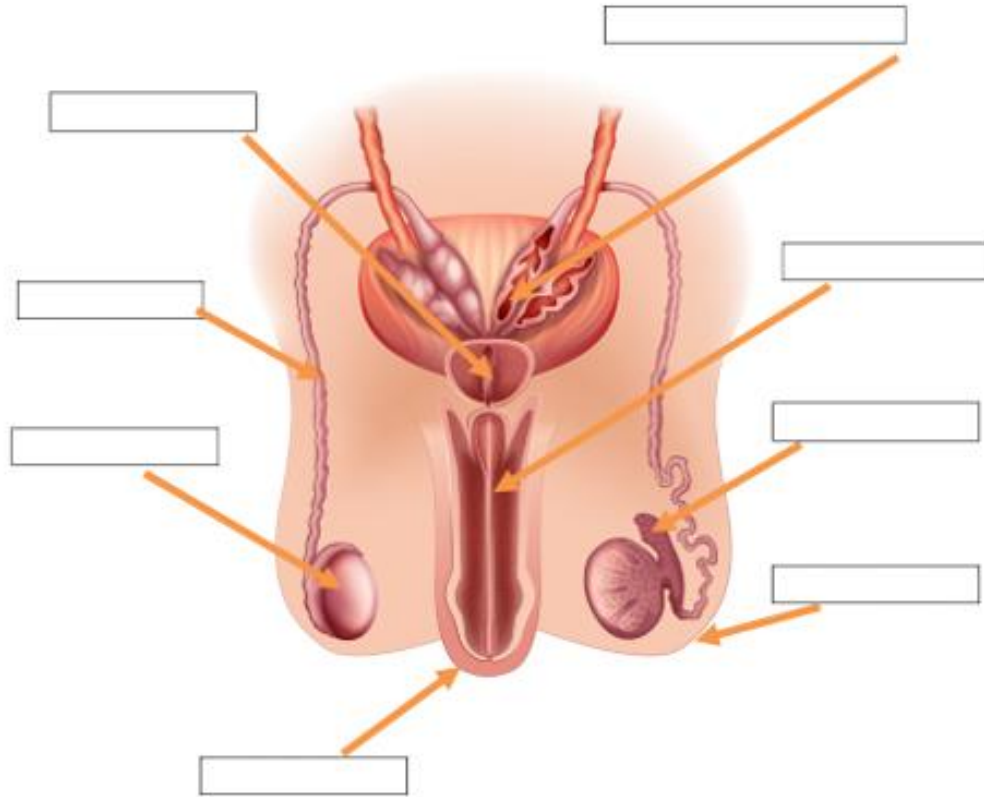
Revision will follow school policy:

- 10 knowledge-based questions which you will complete.
- We will mark and review the questions and identify areas for revision
- I will re-teach those areas
- You will do exam question practice under exam timing and conditions.
- We will look at exam technique and exemplar answers

Mon 25 th April	P1	LO1 Female and male reproductive systems Pre conception health – folic acid, genetic counselling How reproduction takes place Development of embryo and foetus
Friday 29 th April	P1	LO1 Methods of contraception pros and cons Roles and responsibilities of parenthood LO2 Health professionals Routine checks, specialist checks
Mon 2 nd May	Ps 1&2	Bank Holiday
Tuesday 3 rd May	P5	LO2 Choices for delivery – domino scheme Stages of labour Elective/emergency caesarean
Monday 9 th May	P1	LO2 Pain relief LO3 APGAR score Premature babies Primary needs/conditions for development
Friday 13 th May	P1	LO3 SIDS LO4 Immunity/vaccination programme Common childhood illnesses/signs and symptoms Diet related illnesses Caring for an ill child/their needs (PIES)
Monday 16 th May	Ps 1&2	LO4 Caring for an ill child/their needs (PIES) Preparing a child for a stay in hospital LO5 Safety labelling Common childhood accidents Social and internet safety
Tuesday 17 th May	P5	Past paper
Monday 23 rd May	P1	Past paper
Friday 27 th May	P1	RO20 Norms of development (PIES)
Monday 30 th May	Ps 1&2	RO20 Types of play Benefits of learning through play
Tuesday 31 st May	P5	
Monday 6 th June		Exam (am)

LO1 Revision

Label the diagrams with the following words



vas deferens
penis/foreskin
urethra
testis/testicle
prostate gland
scrotum
epididymis
seminal vesicle

Which hormone do the **testes** produce?

Which two parts make up the **sperm duct system**?

What are the two functions of the **urethra**?

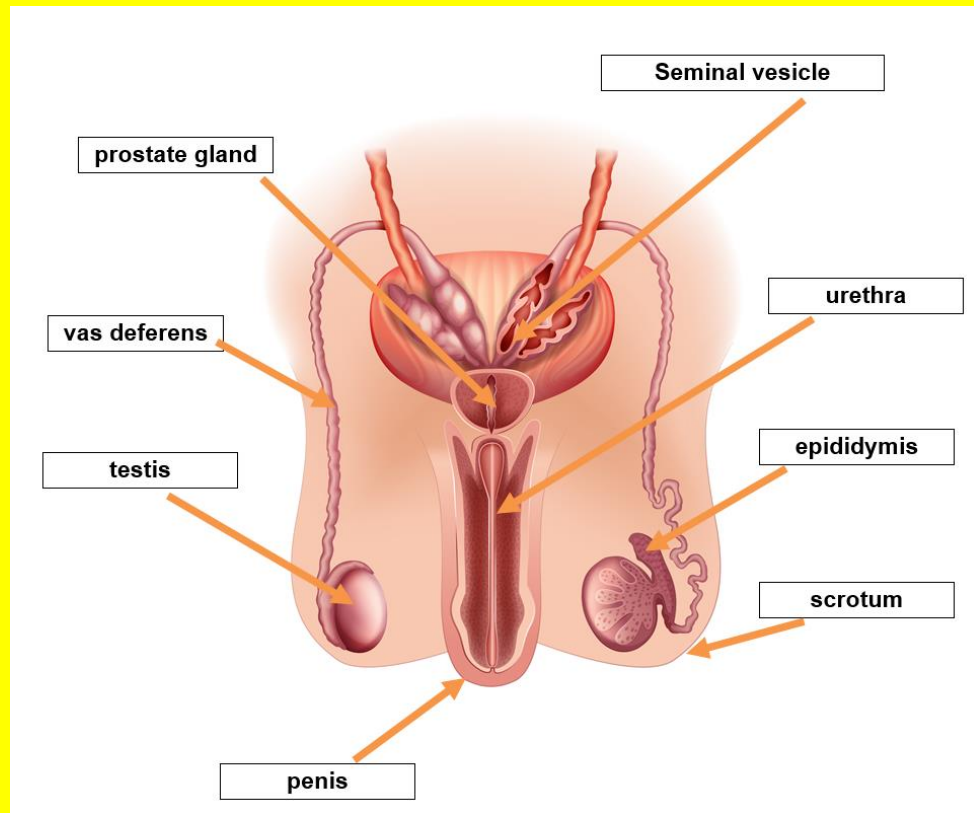
What is the mixture of sperm cells and fluids called?

What does **pre conception** mean?

Why is it important to take **folic acid**?

When should a woman take **folic acid**?

Which foods contain **folic acid**?



The testes produce **testosterone** (the male hormone)

Sperm duct system

The sperm duct system links the testes to the urethra. It is made up of two parts, the epididymis and a muscular tube called the vas deferens. Function is to transport the sperm from the testes to the urethra. It stores the sperm in the epididymis. It produces fluids that provide the sperm cells with nutrients.

Extra facts:

- The mixture of sperm cells and fluids is known as 'semen'.
- The vas deferens is sometimes called the 'sperm tube'.
- The prostate gland and the seminal vesicle help to produce the fluid for the sperm cells.

Penis (and Urethra)

Positioned above and in front of the testes.

Two functions:

- 1 – to pass urine out of the body.
 - 2 – to pass semen into the vagina during sexual intercourse.
- The urethra is used for both functions.

Extra facts:

- The exit from the bladder is closed during intercourse so that no urine is passed.
- Penis becomes erect (rigid) before and during intercourse.
- Penis 'ejaculates' (discharges) sperm into the vagina.

The mixture of sperm cells and fluids from the prostate gland is called **semen**.

Pre conception means **before** conception.

Conception means **an egg being fertilised by a sperm** (verb: to conceive)

Folic acid is one of the B vitamins. **It can help prevent spina bifida in babies** – abnormal development of the spine which causes life long problems.

A woman should take folic acid for **at least a month before conception** and then for **the first 12 weeks of pregnancy**.

You can buy folic acid tablets at a pharmacy or get a prescription from your G.P, but it also occurs naturally in leafy green vegetables, avocados and eggs



Genetic counselling for hereditary diseases

Genetic disorders are inherited. Some can only be passed on by the mother, and some only by the father. They are most commonly passed on through either the egg or the sperm. Genetic disorders include:

- Down's syndrome
- cystic fibrosis
- sickle cell anaemia
- muscular dystrophy.

Parents at risk of having a child with a genetic disorder will be offered genetic counselling (genetic tests). Examples of when tests might be offered include the following:

- if parents already have a child who has a genetic disorder or congenital defect such as club foot
- if there is family history of birth defects, genetic disorders or some forms of cancer
- if there have been repeated miscarriages or problems getting pregnant
- if there is a blood relationship between the partners (for example cousins)
- if a parent's ethnic background is one in which genetic disorders are more likely.

1.2 Pre-conception health

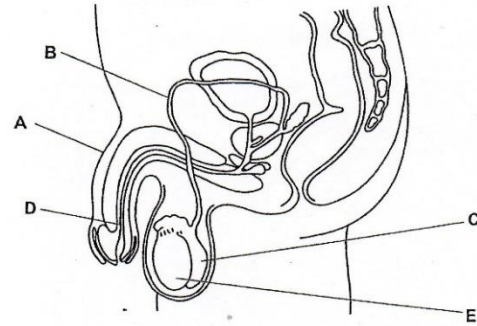
When a couple decide that they want a baby, they should consider their pre-conception health, because this can have a significant impact on the health of the baby they conceive. In some circumstances, this can affect a baby throughout its whole life.

It is best to address any health concerns before starting to try for a baby. This might require a change of lifestyle, but it will help to give the baby the healthiest start possible. This is because in the first trimester (the first 12 weeks of pregnancy), the liver, lungs, heart and brain are forming, and by the end of this period they will be working. A mother might be pregnant for several weeks before she finds out, so even if there are good intentions to address health concerns – such as giving up smoking once she knows she is pregnant – the damage might already have been done. It can also take time for the effects of a lifestyle change to have an impact.

Areas for consideration include:

- diet
- exercise
- healthy weight
- smoking/alcohol/recreational drugs
- up-to-date immunisations.

(b) The diagram below shows the male reproductive system.



(i) Identify the names of A, B, D and E, from those given below, to complete the table. C has been done for you.

testes	urethra	cervix	vas deferens
fallopian tubes	penis	epididymis	

	Name
A	
B	
C	epididymis
D	
E	

[4]

(ii) Name the system that consists of the epididymis and vas deferens.

..... [1]

Do it Now:

Complete the exam questions that we started last lesson.

There is a question about pre conceptual health – it is a QWC question and needs a PLAN before you start writing the answer (it's worth 8 marks, so a maximum of 10 minutes, including the planning)

The second question is about the process of reproduction. Make sure you have learnt the definitions of each of the key words.

Make a revision card about reproduction with the key vocabulary, the timescale, and learn it – I'll test you on it again next lesson.

Emma and Liam want to start a family together.

Identify three factors they should consider before starting a family

- 1.
- 2.
- 3.

(3 marks)

Emma and Liam want to make sure that their pre conception health is the best it can be, before Emma becomes pregnant.

Explain what they could do to ensure good pre conception health. (* = QWC)

(Jan 2019, 8 marks)

How reproduction takes place

Reproduction happens at a point in the menstrual cycle, which ends with conception if a baby is to be born, or else with the woman's body flushing out an unfertilised egg.

Ovulation

This occurs when an egg is released from one of the ovaries and travels along the fallopian tube, around day 14 of the menstrual cycle. A jelly-like coating ensures that it does not stick to the sides of the tubes, and is moved along by the cilia.

Conception/fertilisation

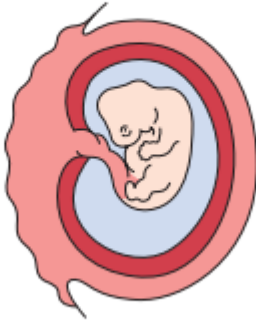
This occurs when a sperm penetrates an egg following ejaculation of sperm from the penis into the vagina. On passing through the cervix and uterus, the sperm meets the egg in the fallopian tubes and loses its tail, which is no longer needed. The egg and sperm then fuse as one cell. The fertilised egg continues along the fallopian tubes. Between four and five days later, there is a mass of around 16 cells. This forms a ball of tissue (the blastocyst).

Implantation

After around another seven days, the fertilised egg arrives in the uterus and implants itself in the enriched lining. Once it is attached firmly, conception has been achieved and the egg is called an embryo. Its outer cells link with the mother's blood supply, forming the baby's support system – the umbilical cord, amnion and placenta (via which it will receive nutrients from the mother).

Development of the embryo

The development of the embryo is shown on the following diagram. Study this carefully.



Embryo 6–7 weeks

Figure 1.5: Development of the embryo.

Development of the fetus

The development of the fetus is shown on the following diagram. Study this carefully.



Foetus 8–9 weeks



Foetus 10–14 weeks



Foetus 15–22 weeks



Foetus 23–30 weeks



Foetus 31–40 weeks

Figure 1.6: Development of the fetus.

Draw a reproduction timeline:

Ovulation

Conception

Implantation

Embryo

Foetus

Full term baby


- 00

01
02

- 01
-
- 02

00

Revision Questions 2

1. Name the two barrier methods of contraception.
2. What advantage do barrier methods have that hormonal methods of contraception don't have?
3. Finish this sentence: Contraceptives are only effective if _ _ _ _  _ _ _ _ _
4. Explain how the diaphragm works
5. What might prevent the contraceptive pill working effectively?
6. There is only one method of contraception that is 100% effective. What is it?

1.4 To recognise and evaluate methods of contraception, their efficiency and reliability

There are many factors to consider for any couple when it comes to choosing an appropriate method of contraception, from a range of options, that will suit their preferences and needs.

Barrier methods

The term **barrier method** means that a device is used to prevent semen (containing sperm) from passing through the cervix and coming into contact with the egg, thereby preventing conception. Barrier prevention methods are:

- male and female condoms
- diaphragm or cap.

Male and female condoms

A male condom is a sheath made from latex. (Polyurethane condoms are also available for those with a latex sensitivity or allergy.) It is put onto the erect penis before it comes into contact with the vagina, which does mean interrupting sex in order to put one on. A condom is 98 per cent effective if used correctly, and it also helps to protect against many sexually transmitted infections (STIs). If used incorrectly, however, a condom can come off or split open, making it ineffective. Condoms are widely available from chemists, supermarkets, pubs, clubs and garages. They are also provided free by family planning clinics. They must be discarded after one use. An advantage of condoms is that they allow the man to take responsibility for contraception.

A female condom is a sheath made from polyurethane. It is put inside the vagina before it comes into contact with the penis, again meaning that sex is interrupted in order to put one in. It is 95 per cent effective if used correctly, and it also helps to protect against many STIs. A disadvantage is that it is possible for the condom to be pushed too far into the vagina. Female condoms are widely available in chemists and supermarkets, but they are more expensive than male condoms. They are often free from family planning clinics.

Contraceptive pill

The contraceptive pill is a **hormonal method** of contraception, and comes in two forms:

- combined pill
- progestogen-only pill (sometimes referred to as the 'mini pill').

Combined pill

The combined pill is a tablet containing hormones (oestrogen and progestogen) that prevent ovulation, therefore reducing the likelihood of sperm reaching an egg and of the egg becoming implanted in the womb lining. The woman takes the pill for 21 days, then has a break for 7 days, in which time she will have a period. She then resumes taking the pill for another 21 days, and so on. The pill needs to be taken regularly at the same time of day. It is 99 per cent effective if used correctly, but a woman can still become pregnant if she forgets to take it, vomits after taking it or has severe diarrhoea. While it can

help women with heavy/painful periods and may help to protect against cancer of the womb, ovaries and colon, it can also cause side effects such as weight gain, headaches, mood swings or depression, raised blood pressure and, uncommonly, blood clots. Using this method does not interrupt sex.

Progestogen-only pill

This pill contains the progestogen hormone only. It is taken every day, and this needs to be done within a specified three-hour period. It works by causing the mucus in the cervix to thicken so that sperm cannot come into contact with an egg. It thins the womb lining too, stopping a fertilised egg from becoming implanted. (Some women actually stop ovulating altogether when taking this pill.) It is 99 per cent effective if used correctly, but a woman can still become pregnant if she forgets to take it, vomits after taking it, has severe diarrhoea or takes certain medication. Women who cannot take oestrogen may be able to take this pill. Side effects can include spot-prone skin and tender breasts, and periods may be irregular. Using this method does not interrupt sex.

Contraceptive injection

A woman receives an injection every few weeks – the most common type is given every 12 weeks. This might be a suitable choice for women who find it difficult to take a tablet at the same time each day. It works by causing the mucus in the cervix to thicken so that sperm cannot come into contact with an egg. It thins the womb lining too, stopping a fertilised egg from becoming implanted. (Some women actually stop ovulating altogether.) It is 99 per cent effective if used correctly, and can protect against some cancers and infections. Side effects can include headaches, tender breasts, weight gain and mood swings, and there may be irregular periods. After stopping the injections, it can take up to a year to get fertility levels back to normal, so this is not a good choice for those planning to start a family in the near future. Using this method does not interrupt sex.

Contraceptive patch

This is worn on the skin and it introduces hormones to the body (oestrogen and progestogen). It works by causing the mucus in the cervix to thicken so that sperm cannot come into contact with an egg. It also thins the womb lining, stopping a fertilised egg from becoming implanted. It is 99 per cent effective if used correctly, and may protect against some cancers and infections. It is still effective if the woman vomits or has severe diarrhoea (unlike the pill). Side effects can include headaches and raised blood pressure, and uncommonly, blood clots. The patch must be changed each week for three weeks, then there is a week off. Using this method does not interrupt sex.

Contraceptive implant

A health professional will insert this small flexible tube into the skin of a woman's upper arm. It releases the progestogen hormone into the body to stop the ovaries from releasing an egg, and thickens the mucus in the cervix, preventing sperm from reaching an egg. It also makes the womb less likely to accept a fertilised egg. It is 99 per cent effective if used correctly for three years, after which time it is removed, therefore the couple do not need to think about contraception every day or whenever they have sex. Some medicines may make it ineffective, however. Possible side effects include swelling, tenderness or bruising after it is inserted, and periods may change to become lighter, or heavier and longer. It does not protect against STIs.

7. Name the five primary needs of a baby.
8. Name another responsibility that parents have to their baby
9. Name the specialist doctor who looks after babies and children
10. What responsibilities do midwives have?

1.3 Roles and responsibilities of parenthood

Meeting primary needs

Providing for a child's primary needs (the basic needs necessary for survival) is a crucial part of a parent's roles and responsibilities, as shown on the table below. Can you think of any additional ways in which parents can meet a child's primary needs?

Primary need	Parental roles/responsibilities
Food	Children must be provided with food and water – their very survival depends on it and it is one of their most basic needs. Parents must supply food that is sufficient and that contains the right nutrients for a baby/child at each stage of their development (see page 115). Children also need to be provided with regular mealtimes and snacks if they are to thrive and have the energy they need to learn, grow, develop and play. It is a big undertaking to be responsible for food and drink, because there are a lot of guidelines to consider, and healthy food must be shopped for (sufficient money is required for this), prepared and cooked. The responsibility to provide food is there every single day, for many years.
Clothing	A parent must provide sufficient clothing throughout childhood. Children grow out of clothes rapidly, especially when they are young, so this is a considerable expense. Children also need parents to ensure that they have clothing for all weathers. Parents must also see to the laundering and ironing of clothes, which can add considerably to a parent's workload.
Shelter	Parents must provide somewhere safe for children to live. The home in which a child grows up has a huge impact on their childhood. For example, a child who lives in damp conditions may develop asthma and/or frequent chest infections. It is important to a child's wellbeing that they feel sufficiently settled, safe and secure in their home. Paying rent or a mortgage is a big ongoing expense for most families, and typically takes up a significant chunk of the parental income.
Warmth	Children need their parents to provide them with warmth. Heating a home is a significant expense, and parents will need to plan to pay for this. If heating breaks down, it can cost a lot of money to get it fixed. Parents also need to provide sufficient clothing and bedding to keep their child warm.
Rest/sleep	Sufficient rest and sleep is crucial to a child's wellbeing, learning, growth and development. Ensuring children get enough rest and sleep is therefore a very important parental responsibility. New parents can underestimate how much they might need to reduce their own social life to ensure that their child gets enough good-quality rest and sleep. It is unrealistic to expect to provide sufficient rest and sleep if a child has to accompany a parent as they go about their life as before.

Table 1.1: Roles and responsibilities of parenthood.

In addition, it is within a parent's roles and responsibilities to provide:

- love and nurture – all children need and deserve to be loved and brought up in a supportive, nurturing environment. A child who does not receive love and nurture may fail to thrive. They may also be unhappy and experience social and emotional difficulties both at home and in the wider world –

when interacting with their peers at playgroup, for example. A lack of love and nurture in the early years can continue to impact on a child as they grow up, and the effects may even continue to be felt into adulthood. Some adults who lacked a loving and nurturing role model in their own childhood can find it more challenging to adjust to the role of being parent themselves, and may need additional support at this time in their lives.

- **socialisation, customs and values including patterns of behaviour, social interaction and role models** – as they grow up, children need to come to understand socially acceptable behaviour. They need to be supported in learning how to experience and manage their feelings, and parents have a responsibility to guide children in this area. An important part of the

parental role is to be an appropriate role model – this means demonstrating how to behave by example. Parents will also want to give their child an understanding of their family's customs and values. Customs and values may be influenced by a family's religion or ethical beliefs. For example, these may include what and how a family celebrates, whether and how a family prays, what and how a family eats and the activities in which a family participates. The customs and values of a family are very personal, and they tend to influence a child's sense of identity.

Together, these things enable a child to successfully interact socially. Parents need to plan opportunities for their child to socialise with their peers to ensure that they are confident around others, and to be able to make friends and enjoy social times.

Do it Now:

Complete the **contraceptives chart** that we started last lesson.

I have had a look at the **revision questions** we have done so far You need to identify those areas that you might not have been able to answer easily, for example:

1. Which hormone do the testes produce?
2. Why do women who are considering having a baby need to take folic acid?
3. When does an embryo become a foetus?
4. What is a midwife's main role?
5. Explain exactly what happens during intercourse.

Complete the past paper questions on contraception (8 minutes)

Complete the past paper questions on primary needs and warmth (13 minutes)

Next topic

- **Routine checks** carried out during pregnancy
- **Specialist checks** carried out during pregnancy

Revision Questions 3

1. Why is a pregnant woman's blood tested at her antenatal appointment? (at least five reasons)
2. What might protein in the urine indicate?
3. What might sugar in the urine indicate?
4. When does a woman have her first ultrasound scan?
5. What is the purpose of the first scan?

Do it Now: If you were absent last lesson (or even if you were), make sure you have completed these questions.

Next topic: routine and specialist checks carried out on pregnant women.

2.3 Routine checks carried out at an antenatal clinic, including scans

At week eight of the pregnancy, a mother will have her first antenatal appointment, usually with a midwife. During the appointment, the midwife will carry out some routine checks (see below). These checks will be repeated on later visits, to monitor the health of mother and baby. The midwife will ask lots of questions to build up a picture of the mother's medical history, and an appointment for the first scan will also be organised.

Weight check

Women are weighed when they are first booked in to record a baseline weight. The weight of the mother can then be tracked and monitored against this throughout the pregnancy. If a woman gains more weight than expected, it could be a sign of a medical condition called pre-eclampsia, and treatment will be necessary. Weight loss could indicate that the baby has stopped growing, and can also be a sign of illness in the mother.

Blood tests

Blood tests are taken when booking in, to check for the following and reveal possible problems:

- Anaemia – this condition can cause tiredness and listlessness, due to a lack of iron. Folic acid and iron tablets may be needed.
- High blood sugar – this will reveal if the mother has diabetes. It is possible for diabetes to develop during the pregnancy and pass afterwards.
- Blood group – this information is required in case a blood transfusion is needed during pregnancy or birth. This can occur if the mother bleeds excessively.
- German measles (rubella) – this will reveal whether the woman is immune to German measles, a very dangerous disease for the developing unborn baby. It can cause brain damage, deafness and blindness.
- Hepatitis B and C – without treatment, these conditions can cause liver disease.
- HIV – this can be passed from mother to baby via the placenta in pregnancy or via breastfeeding after birth.

Urine test

A urine test can also reveal potential problems during pregnancy. Protein in the urine might be the result of an infection. It can also indicate the onset of a serious condition such as pre-eclampsia further along in the pregnancy. Glucose (sugar) in the urine can indicate diabetes, which will need to be controlled by diet and sometimes also insulin. Ketones might be present if a mother has been vomiting

excessively (known as hyperemesis). In this case, hospitalisation is needed, and fluids and glucose might need to be replaced via a drip. Without treatment, a condition called ketosis can occur, which can lead to a coma and even death, so this test is very important.

Ultrasound dating scan

Around 8–14 weeks into pregnancy, an ultrasound dating scan is offered to the mother, with a professional called a sonographer. It is usually carried out in a hospital ultrasound department.

This scan checks:

- how far along the pregnancy is, enabling the sonographer to work out the baby's due date
- the baby's development
- whether more than one baby is expected
- that the baby is growing in the right place.

Some abnormalities may also be detected, such as neural tube defects (for example spina bifida).

Revision Questions 4

1. What is the difference between the ultrasound dating scan and the ultrasound anomaly scan?
2. When is the anomaly scan carried out?
3. What does "congenital" mean?
4. What happens if a baby has spina bifida?
5. Which tests might show that a baby has Down's syndrome?

Ultrasound dating scan

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Ultrasound anomaly scan/ mid-pregnancy scan

This is a more detailed scan, generally carried out between 18 and 21 weeks of pregnancy. It checks for major physical abnormalities in the baby, but cannot find everything that might be wrong. The scan looks at the baby's:

- bones
- heart
- brain
- spinal cord
- face
- kidneys
- abdomen.

Nuchal translucency (NT) test

Nuchal translucency refers to a fluid under the skin at the back of the unborn baby's neck. The amount of fluid present can be measured using ultrasound; babies with Down's syndrome often have an increased amount (Snijders et al 1998: 351, 343–6) of this fluid. All mothers are offered a test to look for this at around week 11–13 of pregnancy, to assess whether their baby is likely to have Down's syndrome. Screening can only estimate the level of risk – it cannot determine whether or not the baby definitely has Down's syndrome. Other tests (see below) can accurately diagnose Down's syndrome, but as these carry a small risk of miscarriage, the obstetrician will carry out a screening test first to see whether a diagnostic test should be offered. A blood test may also be carried out alongside the NT test. Not all mothers will choose to have the NT test, and not all mothers who are given a high likelihood of Down's syndrome result will go on to have a diagnostic test. This is the mother's decision.

Alpha fetoprotein (AFP) test

AFP is a substance made in the liver of an unborn baby. An AFP blood test checks the level of AFP in the mother's blood. This can reveal whether a baby might have a condition such as spina bifida or anencephaly.

Chorionic villus sampling (CVS)

This test checks if a baby has a genetic disorder, such as Down's syndrome, through the removal and testing of a small sample of cells from the placenta. The test is only offered if there is a high risk of a baby having a genetic condition – if:

- an earlier antenatal screening test has indicated a problem
- the mother has had a previous pregnancy with these problems
- there is family history of a genetic condition.

CVS is usually carried out between weeks 11 and 14 of pregnancy. Cells are removed from the placenta via:

- transabdominal CVS – a needle is inserted through the mother's abdomen, or
- transcervical CVS – a tube (or small forceps) is inserted through the cervix.

Amniocentesis

This procedure also tests for genetic disorders and may be offered as an alternative to the CVS test (and in the same circumstances as the CVS test). It is generally carried out between weeks 15 and 18 of pregnancy, when a small sample of amniotic fluid (the fluid that surrounds the baby in the womb) is removed for testing.

Non-invasive prenatal testing (NIPT) blood test

NIPT is a screening test that assesses the likelihood of having a baby with Down's syndrome, Edwards' syndrome or Patau's syndrome. It can be carried out from week ten of pregnancy, which is earlier than alternative tests. It is also more accurate and does not carry a risk of miscarriage. A blood sample is taken from the mother's arm, and fragments of the baby's DNA within this are analysed for possible chromosomal abnormalities. If the risk of chromosomal abnormality is found to be high, a diagnostic test such as CVS or amniocentesis will be offered.

NHS hospitals do not generally offer NIPT, therefore most parents wanting the test will need to pay to have it done privately. Some choose to have NIPT before deciding to have a diagnostic test that carries a risk of miscarriage, because when a high-risk NIPT result is given, it is likely that the diagnostic test will also be positive. If the NIPT is negative, the parents may decide against a diagnostic test.

4

- 2 (a) Amy is pregnant with her first child.

How soon after becoming pregnant will she attend her first antenatal appointment?

Look at the table below and **tick (✓)** the correct answer.

Timing of first antenatal appointment	Tick (✓) one only
3–7 weeks	
8–12 weeks	
13–17 weeks	

[1]

- (b) Identify **one** health professional Amy will usually see at her first antenatal appointment.

[1]

- (c) Weight check and urine test are two **routine** checks that will be carried out on Amy at the antenatal clinic.

Identify **three** other routine checks.

1

2

3

[3]

- (d) Specialist diagnostic tests may also be carried out at the antenatal clinic. Amy is asked if she would like to have a nuchal fold translucency test when she is 11–13 weeks pregnant.

Name the condition the nuchal fold translucency test screens for.

[1]

(c) A urine test is routinely carried out at the antenatal clinic.

Give **two** reasons why a urine test is carried out.

1

.....

2

.....

[2]

(d) Specialised diagnostic tests are also carried out at the antenatal clinic.

The names of some specialised diagnostic tests are shown in the box below.

- Amniocentesis
- CVS (chorionic villus sampling)
- Nuchal fold translucency scan
- AFP (alpha fetoprotein test)

Three of the tests in the box are described in the table below.

Complete the table to show the correct name of each test.

Description of the test:	Name of the test:
A small sample of blood is taken. The blood is screened for spina bifida and Down's Syndrome.	
An ultrasound scan is carried out. A hollow needle is used to remove some amniotic fluid from the uterus. Screens for Down's syndrome after 15 weeks of pregnancy.	
A hollow needle is used to take a small sample of placenta tissue. Screens for Down's syndrome after 10 weeks of pregnancy.	

[3]

(e) State at how many weeks of pregnancy the **ultrasound dating scan** is carried out.

..... [1]

Revision Questions 5

1. What are the four choices women have for the delivery of their baby?
2. Give two advantages of giving birth in a hospital.
3. Who is the ideal candidate to have a home birth?
4. Name two disadvantages of home birth
5. Explain what a domino scheme is

Hospital birth

Types of hospital provision vary locally and can include:

- consultant-led units
- midwife or GP-led units
- birthing centres (this environment is generally the most homely).

Delivery rooms in hospitals are becoming increasingly home-like and comfortable, with furniture such as soft chairs and beanbags. These enable mothers to change position, which can help with pain management. Warm baths and showers may also be available (most commonly in birthing centres), and these can also soothe and ease pain during early labour.

Maternity units increasingly offer birthing pools, which as well as comfort and pain relief, also enables a water birth if labour progresses normally. A water birth will need to be arranged ahead of time as part of the birthing plan, because of the limited number of pools available.

Advantages of hospital births include the following:

- Highly trained staff and equipment are available should an emergency arise – this could save a baby's life and is reassuring for parents.

- Some types of pain relief can only be given in hospital.
- Forceps, ventouse and Caesarean section deliveries can only be carried out in hospital (see below).
- Midwives are on hand after the birth to help with concerns and issues such as feeding, and can let a mother rest by taking a baby into the nursery.
- The demands of the mother's home life are left behind.

Home birth

Home birth is an option when the pregnancy is normal and mother and baby are both well. Support is given by a midwife, who attends during labour. If the labour does not progress normally or the mother needs help, the midwife's role is then to arrange a transfer to hospital. Advantages of a home birth include the following:

- The mother is in familiar, relaxing surroundings.
- Labour is not interrupted by travelling to hospital.
- If the new baby has older siblings, they will not need to be separated from the mother as she gives birth, and they can be involved in the labour/birth.
- The mother is more likely to be looked after by a midwife she has seen throughout the pregnancy.
- An intervention such as forceps or ventouse is less likely than when giving birth in hospital.

Other considerations with home birth:

- A transfer to a hospital may be needed if there are complications.
- The NHS report that for women having their second or subsequent baby, a planned home birth is as safe as having a baby in hospital or a midwife-led unit. However, for women having their first baby, home birth slightly increases the risk of a poor outcome for the baby (from 5 in 1,000 for a hospital birth to 9 in 1,000 – almost 1 per cent – for a home birth). Poor outcomes include death of the baby and problems that might affect the baby's quality of life.
- Epidurals (for pain relief) are not given at home.
- A midwife or doctor might advise that a hospital birth is safer for a mother and baby in some circumstances.

Domino scheme

The Domino scheme is operated by some hospitals. It involves community midwives providing antenatal care and then meeting the mother at the hospital for the delivery. In many cases, the midwife is able to assess the mother closely during labour, so the move to hospital will not be made until close to the delivery. If all is well, the mother and baby will be able to leave hospital after six hours. This means that the hospital stay can be shortened.

Private hospital/independent midwife

Some parents pay for a private hospital or independent midwife, rather than accessing free NHS provision. This decision might be made by some parents who can afford it because they feel that the standard of the provision is higher than that of the NHS. A private hospital is also a popular choice for families who are in the public eye. As they are not public buildings, it is easier for their privacy to be protected.

You were introduced to independent midwives on page 19. An independent midwife might not undertake all of the responsibilities of NHS midwives, so mothers may in fact use both services. For example, post birth and with support given soon after, an independent midwife may have fulfilled their role. If advice on feeding is needed after a few weeks, the mother might then contact an NHS midwife for advice.

- (f) A pregnant woman's weight is checked at every antenatal clinic appointment.

Identify **three** reasons why a pregnant woman's weight is checked at the antenatal clinic.

- 1
- 2
- 3

[3]

- (g) Give **four** reasons why some women choose to have a **domino scheme** delivery.

- 1
- 2
- 3
- 4

[4]

- (h) Some fathers attend antenatal appointments with their partner.

State two reasons why this can help to make the birth an **emotionally** satisfying experience.

- 1
- 2

[2]

Question	Answer/Indicative content	Mark	Guidance
5 (g)	<p>Four marks for a description.</p> <p>Domino scheme delivery:</p> <ul style="list-style-type: none"> Can stay at home for as long as possible before the delivery – have labour at home, only transferring to hospital to actually deliver the baby. Get to know the community midwife – provides continuity of care. Midwife goes to the hospital with you – so baby is delivered by the midwife you know. Greater feeling of control – as mother is at home and is not in the hospital environment for long, mother more comfortable / relaxed at home. Reduces the chance of assisted deliveries – statistics show there is less likely to be forceps or ventouse delivery. Can go back home as soon as possible – community midwife goes home with you. <p>Accept other appropriate points.</p>	4 (4x1)	<p>The number of ticks must match the number of marks awarded. For incorrect answers use the cross or appropriate annotation from the following:</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> <input type="checkbox"/> A <input type="checkbox"/> TV <input type="checkbox"/> REP <input type="checkbox"/> SEEN </div> <p>Any four points.</p>



Revision Questions 6

1. What is a birth plan, and what does it contain?
2. What happens during stage one of labour?
3. The vagina and open cervix form what?
4. What is crowning?
5. At what stage does the baby become separate from the mother?
6. What happens during stage three of labour?

2.6 The stages of labour and the methods of delivery, including pain relief

Every labour is different, but all pass through three common stages. These are divided into:

- stage one – labour
- stage two – birth
- stage three – delivery of placenta and membranes.

Read on to learn more.

Stage one – neck of the uterus opens

Signs that labour is beginning include the following:

- Contractions – the uterus muscles start to contract and release. Contractions gradually become stronger and occur increasingly closer together.
- The waters break – the bag of amniotic fluid around the baby bursts, causing anything from a trickle to a gush of liquid from the vagina. It is now time to go to hospital (or chosen birth option) because there is a risk of infection for the baby.
- Show – not all women experience a show, but it can occur when a plug of mucus that has sealed off the uterus during pregnancy comes away from the cervix as it dilates (gets wider). This will be stained with blood, but no blood should be lost.

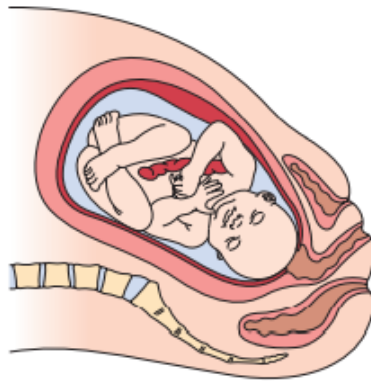


Figure 2.5: The first stage of labour.

As the neck of the uterus continues to open:

- More pain relief is required as the contractions become stronger, more regular and longer lasting. A warm bath can help.
- Mothers are encouraged to actively move around in an upright position.
- The cervix gradually dilates to 8–10 cm wide.
- If the head of the baby is not already engaged in the mother's pelvis, it will move into position.
- As the end of this stage approaches, intense contractions can cause the mother to feel agitated, and to vomit, sweat or shiver. Due to pressure from the baby's head, she may lose bladder and/or bowel control.
- When contractions get even closer together, stronger and more intense, the mother enters the **transition stage** that leads into the second stage of labour.

Stage two – the birth of the baby

This stage starts when the cervix becomes fully dilated at 10 cm, and ends when the baby has been born.

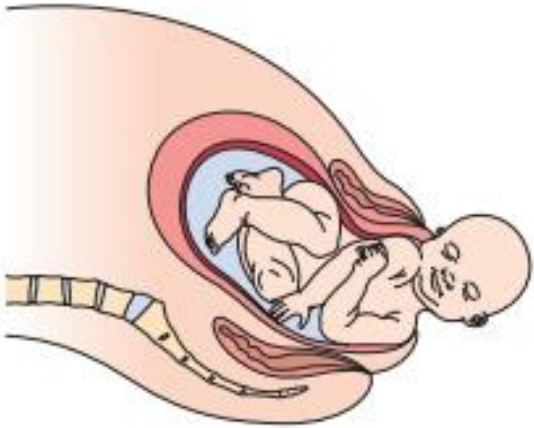


Figure 2.7: The second stage of labour.

- The vagina and the open cervix now form a single passage known as the birth canal. The head of the baby moves into the birth canal.
- The mother begins to push with each contraction, to help move the baby down the birth canal. This can be exhausting, and she will need to rest between contractions.
- When the baby's head can be seen (crowning), it is time to stop pushing so that the head is born gradually and safely. Instead, the mother will pant or blow out, to control her breathing. The head must be born slowly to avoid the mother's skin tearing between the vagina and rectum (the perineum). A cut (an episiotomy) may need to be made if the perineum does not stretch enough.
- The hard work of labour is over once the head has been born, as the body can be turned so that the shoulders are delivered one at a time. This will be followed by the rest of the baby's body, which slides out easily. If the baby needs mucus removing from its airways or to be given oxygen, this can be done as soon as the head is born, before the rest of the body is delivered.
- Finally, the umbilical cord will be clamped and cut. The father/partner might cut the cord themselves. The baby is likely to be placed on the mother for skin-to-skin contact. Some blood from the birth and a protective layer of oily vernix (see page 35) are likely to be present on the baby's skin.

Stage three – delivery of placenta and membranes

In the shortest stage of labour which follows the birth:

- contractions begin again and these push the placenta out
- an injection of syntocinon may be given to stimulate contractions and speed up the process. This helps to prevent the loss of blood and is helpful if the mother is exhausted
- if a tear occurred in the perineum or a cut was made, it will be sewed up under local anaesthetic.

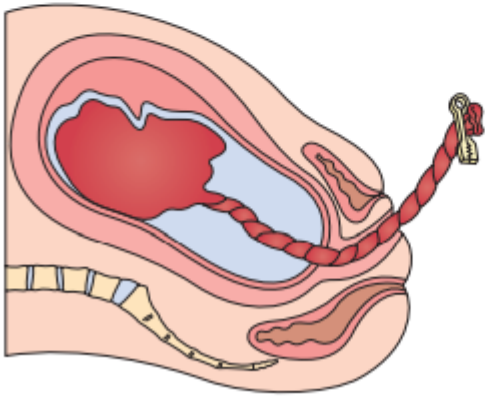
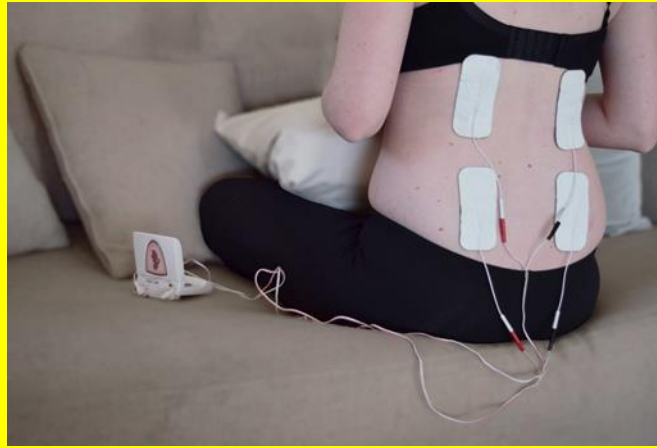


Figure 2.8: The third stage of labour.

TENS

TENS stands for 'transcutaneous electrical nerve stimulation'. A TENS machine is a small device that has leads connected to sticky pads called electrodes. These are attached to the mother's skin. Small electrical impulses are delivered—these give a tingling sensation. They reduce the pain signals going to the spinal cord and brain, relieving pain and relaxing muscles. It is possible that they also stimulate the production of endorphins – the body's 'natural painkillers'. For most people, TENS carries no side effects (there are special pads for people with allergies), but it should not be used:

- if the mother has a pacemaker or another type of electrical or metal implant
- if the mother has epilepsy or a heart problem
- in some cases early in pregnancy.



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(c) When Emma goes into labour she will usually pass through three stages.

The passage below describes the **second** stage of labour.

Complete the passage by adding the most appropriate words from the list below. A word should only be used once.

amniotic fluid	arms	breeching	crowning
dilated	engaged	mucus	pants
pushes	shoulders	uterus	vagina

The second stage of labour begins when the cervix becomes fully
at 10 cm and ends when the baby is born. The open cervix and the
now form a continuous passage called the birth canal. The mother
with each contraction to help move the baby down the birth canal. When the baby's head
can be seen this is called When the head has been born any
..... can be cleared from the baby's nose and mouth. The baby's
..... are now eased through the birth canal and the rest of the body
will slide out easily.

[6]

Section B

Answer **all** the questions.

4 (a) Give **three** advantages of having a home birth.

- 1
 - 2
 - 3
- [3]

(b) Give **three** reasons why a woman might be advised to have a hospital birth.

- 1
 - 2
 - 3
- [3]

(c) Give **three** reasons why TENS would be used for pain relief during labour.

- 1
 - 2
 - 3
- [3]

Caesarean Section

A Caesarean section involves making a cut in the abdomen, below the bikini line, into the uterus and lifting the baby out.

Some Caesarean sections are planned – this is called an **elective** Caesarean, but some may be done as an **emergency**.

They may be done under general anaesthetic, but more often, an epidural is used which makes the mother numb from the waist down. An **anaesthetist** needs to be present.

Elective/emergency caesarean section

A caesarean section is an operation to deliver a baby through a cut made in the abdomen and womb. A caesarean may be recommended as an elective (planned) procedure or done in an emergency if a vaginal birth becomes unsafe. Reasons for a caesarean include:

- the baby being in the breech position (feet first)
- a low-lying placenta (placenta praevia)
- pre-eclampsia
- infections such as STIs and untreated HIV
- the baby not getting enough oxygen and nutrients so needs to be delivered immediately
- labour is not progressing
- excessive vaginal bleeding.

Caesareans are a major operation and there are risks, so they are not suitable for every mother.

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Section A

Answer all the questions.

- 1 Seema is 6 months pregnant. She is attending an antenatal appointment with her midwife to discuss arrangements for the birth of her baby. Seema wants to know what happens during the first stage of labour.

(a) Give the meaning of the term 'antenatal'.

..... [1]

(b) Identify four features of the first stage of labour so that Seema knows what to expect.

1

.....

2

.....

3

.....

4

.....

[4]

(d) Identify **two** situations when an emergency Caesarean section would be carried out.

1

.....

2

.....

[2]

(e) Identify the term used to describe a baby born before 37 weeks.

..... [1]

(f) Babies are born with reflexes.

Complete the chart below to describe **two different** reflexes that babies are born with.
An example has been done for you.

Name of reflex	Description
startle (Moro)	When startled by noise / bright light the arms move outwards

[4]

