
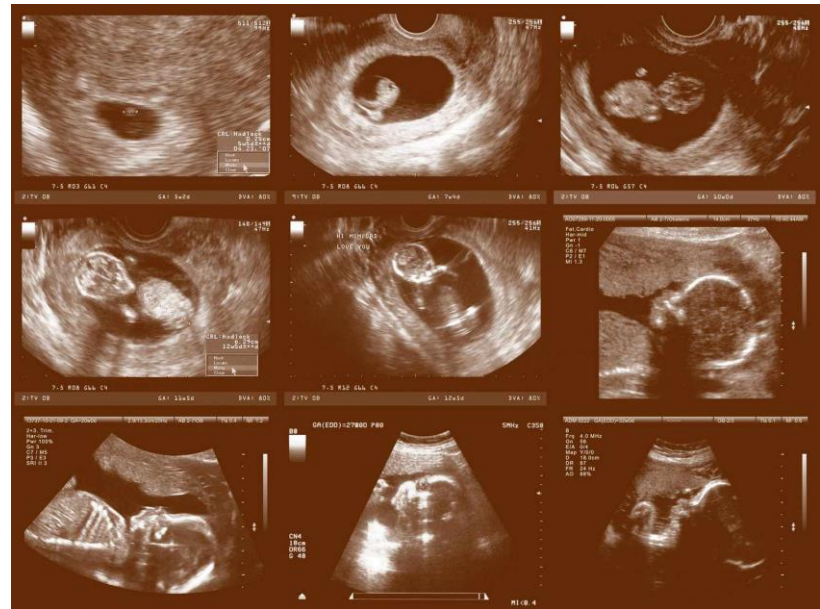


2.1. The purpose and importance of antenatal clinics		
	<b>The meaning of the term antenatal</b>	<b>The reasons for routine tests/checks and what conditions they can identify</b>
	The care given to a pregnant mother and her unborn baby during pregnancy and ahead of the birth. Antenatal clinics provide antenatal care. Through regular appointments, these clinics prepare the mother for a safe pregnancy and delivery by: <ul style="list-style-type: none"> <li>– Carrying out routine tests/checks</li> <li>– Carrying out screening and diagnostic checks</li> <li>– Providing antenatal (parenting) classes</li> </ul>	<b>Baby's heartbeat</b> This will be checked and monitored at each appointment to confirm that the baby is alive. The midwife will also listen to hear if the heartbeat is normal (110-160 beats per minute).
	<b>The timing of the first antenatal clinic appointment</b>	<b>Blood pressure</b> The baseline BP is taken at the first antenatal appointment, and measurements taken later will be compared to this. Healthy BP range for a mother under 35 is 110/70-120/80. BP above 140/90 can indicate pre-eclampsia.
	<b>The roles of the different health professionals</b>	<b>Blood tests</b> The following are checked for in the blood: <ul style="list-style-type: none"> <li>– <b>Anaemia:</b> Can cause tiredness and listlessness</li> <li>– <b>High blood sugar:</b> Indicates diabetes</li> <li>– <b>Blood group:</b> In case a blood transfusion is required</li> <li>– <b>German measles (rubella):</b> If the mother is immune</li> <li>– <b>Hepatitis B and C:</b> Without treatment, can develop liver disease</li> <li>– <b>HIV:</b> Can be passed from mother to baby via the placenta in pregnancy or via breastfeeding after birth</li> </ul>
<b>General Practitioner</b>	The GP is generally the first port of call following a positive home pregnancy test. The GP's role includes: <ul style="list-style-type: none"> <li>– Confirm the pregnancy</li> <li>– Book the mother into the 'maternity system' so that specific appointments for scans and check-ups are set up</li> <li>– Answer any initial questions the pregnant mother may have</li> <li>– Discuss any specific issues they think may be relevant to the pregnancy (e.g. existing medical conditions)</li> <li>– Treat the mother for any non-pregnancy related medical problems</li> <li>– Responding to emergency concerns relating to the pregnancy</li> <li>– Potentially being involved in the delivery of babies in GP-led units</li> <li>– Providing post-natal medical care.</li> </ul>	<b>Examination of the uterus</b> Performed throughout a pregnancy, by both doctors and midwives. They place a gloved index and middle finger into the vagina up to the cervix to assess: <ul style="list-style-type: none"> <li>– How soft the cervix is</li> <li>– Whether there is thinning or opening of the cervix</li> <li>– The position of the cervix, posterior or anterior</li> <li>– How far into the pelvis the baby has descended</li> <li>– Which way the baby is facing</li> </ul>
<b>Midwife</b>	Midwives are experts in normal pregnancy and birth. Their responsibilities include: <ul style="list-style-type: none"> <li>– Providing full antenatal care, including parenting classes, clinical examinations and screening</li> <li>– Identifying high-risk pregnancies</li> <li>– Monitoring women and supporting them during labour and the birthing process</li> <li>– Teaching new and expectant mothers how to feed, care for and bathe their babies.</li> </ul> Midwives fall into 3 categories: <b>1. Hospital midwives:</b> Based in a hospital, a birth centre or midwife-led unit <b>2. Community midwives:</b> They see pregnant women at home or at a specialised clinic <b>3. Independent midwives:</b> They work privately, outside the NHS.	<b>Urine test</b> The following are checked for in the urine: <ul style="list-style-type: none"> <li>– <b>Protein:</b> May indicate an infection</li> <li>– <b>Glucose:</b> May indicate diabetes</li> <li>– <b>Ketones:</b> Indicates hyperemesis</li> <li>– <b>STIs:</b> Harmful for the unborn baby</li> </ul>
<b>Obstetrician</b>	Obstetrician's take on more complex pregnancy cases. This can be in response to: <ul style="list-style-type: none"> <li>– A pre-existing acute or chronic medical condition in the mother that complicates the pregnancy and/or birth</li> <li>– A complication with the mother or baby identified during pregnancy that complicates the pregnancy and/or birth</li> <li>– A baby becoming distressed during labour</li> <li>– An obstetrician's role includes assisting delivery and performing Caesarean sections.</li> </ul>	<b>Weight check</b> The baseline weight is taken at the first antenatal appointment. If a woman gains more weight than expected, it can be a sign of pre-eclampsia. Weight loss could indicate that the baby has stopped growing or sickness in the mother. Weight gain of 10-12.5 kg is normal.

## 2.2. Screening and diagnostic tests

Screening tests identifies whether an unborn baby is more or less likely to have certain conditions at birth.		If a screening test reveals that there may be an issue, diagnostic tests are used to diagnose certain medical conditions in an unborn baby.	
<b>The reasons for screening tests and what conditions they can identify</b>		<b>The reasons for diagnostic tests and what conditions they can identify</b>	
<b>Ultrasound scan: Dating scan</b>	<p><b>Carried out:</b> Around week 8-14.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>– Checks how far along the pregnancy is to calculate the due date</li> <li>– Checks the baby's development</li> <li>– Checks whether more than one baby is expected</li> <li>– Checks that the baby is growing in the right place</li> <li>– Uses the ultrasound probe to build up an image of the baby.</li> </ul>	<b>Chronic villus sampling (CVS)</b>	<p><b>Tests for:</b> Genetic disorders, such as Down's Syndrome.</p> <p><b>How:</b> A small sample of cells from the placenta are removed and tested.</p> <p><b>When:</b> Between weeks 11-14.</p> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>– Miscarriage</li> <li>– Infection</li> </ul>
<b>Ultrasound scan: Anomaly scan</b>	<p><b>Carried out:</b> Between week 18-21.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>– Checks for major physical abnormalities in: bones, heart, brain, spinal cord, face, kidneys, abdomen</li> <li>– Look for the following conditions: anencephaly, open spina bifida, cleft lip, diaphragmatic hernia, gastroschisis, exomphalos, serious cardiac abnormalities, bilateral renal agenesis, lethal skeletal dysplasia, Edward's syndrome (Trisomy 18), Patau's syndrome (Trisomy 13)</li> <li>– A 2D black and white image, giving a side view of the baby.</li> </ul>	<b>Amniocentesis</b>	<p><b>Tests for:</b> Genetic disorders, such as Down's syndrome, Edward's syndrome, Patau's syndrome, cystic fibrosis, muscular dystrophy, sickle cell disease and thalassaemia.</p> <p><b>How:</b> A small sample of amniotic fluid is removed for testing.</p> <p><b>When:</b> Between weeks 15-18.</p> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>– Miscarriage (reduced compared to CVS)</li> <li>– Results cannot be given until a later stage of pregnancy</li> </ul>
<b>Nuchal fold translucency (NT) test</b>	<p><b>Carried out:</b> Between week 11-13.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>– Check the fluid under the skin at the back of the unborn baby's neck.</li> <li>– Babies with Down's syndrome have an increased amount of this fluid.</li> </ul>		
<b>Triple test</b>	<p><b>Carried out:</b> Between week 10-14.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>– Assess the chance of having a baby with Down's syndrome (Trisomy 21), Edward's syndrome (Trisomy 18), Patau's syndrome (Trisomy 13).</li> </ul>		
<b>Non-Invasive Prenatal Testing (NIPT)</b>	<p><b>Carried out:</b> From week 10.</p> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>– A screening blood test that assesses the chance of having a baby with Down's syndrome (Trisomy 21), Edward's syndrome (Trisomy 18), Patau's syndrome (Trisomy 13)</li> <li>– This method is more accurate and does not carry a risk of miscarriage.</li> </ul>		

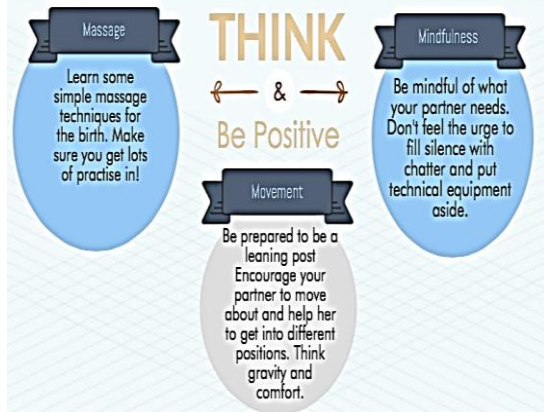
## 2.3. The purpose and importance of antenatal (parenting) classes

Prepares both parents for labour and parenthood	Promotes healthy lifestyle and diet	Provides advice on feeding and caring for the baby
<p>Antenatal classes help to prepare both parents for labour and parenthood by covering:</p> <ul style="list-style-type: none"> <li>– What happens during labour and birth, so parents know what to expect</li> <li>– How to cope with labour, including information about different types of pain relief and relaxation methods</li> <li>– Different types of labour and birth to help create a personal birth plan, and to discuss this with professionals</li> <li>– Different types of birth interventions</li> <li>– Caring for a baby</li> <li>– The mother's help after the birth</li> <li>– Giving the parents the chance to talk over any concerns, and perhaps meet key professionals who will care for the mother/baby during labour</li> <li>– Discussions of emotions and feelings during pregnancy, birth and after birth</li> <li>– How the father/partner can plan their participation in the birth and how to support the mother</li> <li>– Refresher classes for those who have already had a baby</li> <li>– Information about other sources of support.</li> </ul>	<p>Antenatal classes also provide advice on staying fit and healthy during pregnancy through:</p> <ul style="list-style-type: none"> <li>– Safe exercise</li> <li>– A healthy diet</li> <li>– Learning about the negative impacts of smoking, alcohol and recreational drugs during pregnancy and after birth</li> <li>– Learning about the benefits of breastfeeding.</li> </ul> <p><b>Foods to avoid during pregnancy:</b></p> <ul style="list-style-type: none"> <li>– Mould-ripened soft cheese with a white coating on the outside</li> <li>– Unpasteurised milk, or foods made from it</li> <li>– Soft blue cheeses</li> <li>– Pate</li> <li>– Game meats</li> <li>– Alcohol</li> <li>– Liquorice root</li> <li>– Raw or partially cooked eggs that are not stamped British Lion</li> <li>– Raw or partially cooked duck, goose or quail eggs</li> <li>– Raw or undercooked meat</li> <li>– Liver and liver products</li> <li>– Swordfish, marlin, shark, raw shellfish</li> <li>– Unclean/soiled fruit, vegetables and salad</li> </ul> <p><b>Foods to limit during pregnancy:</b></p> <ul style="list-style-type: none"> <li>– Oily fish    – Tuna    – Caffeine    – Herbal tea</li> <li>– High-dose multivitamin supplements and any supplements with Vitamin A in them must be avoided</li> </ul>	<p>A very important part of antenatal classes is learning to care for a baby. This will include:</p> <ul style="list-style-type: none"> <li>– Feeding    – Sleeping    – Bathing</li> </ul> <p><b>Breastfeeding</b></p> <p>In the first few days after birth, mothers produce a concentrated form of milk called colostrum which:</p> <ul style="list-style-type: none"> <li>– Is high in protein</li> <li>– Contains high level of antibodies and immunoglobulins, two immune factors that protect newborns from viruses and bacteria</li> <li>– Is thick and usually a golden yellow colour.</li> </ul> <p>A few days after birth, a mother will produce actual milk:</p> <ul style="list-style-type: none"> <li>– This contains the exact quantities of fat, protein, carbohydrates and nutrients needed by the baby</li> <li>– Also contains the immune factors (at lower concentration levels)</li> </ul> <p>Breastfeeding also helps the mother and baby to bond. Some mothers may continue breastfeeding after 2 weeks.</p>

## 2.4. The choices available for delivery

Hospital birth	Home birth
<ul style="list-style-type: none"> <li>– Consultant-led units    – Midwife- or GP-led units    – Birthing centres</li> </ul>	<ul style="list-style-type: none"> <li>– Domino scheme    – Private care    – Independent midwives</li> </ul>
Advantages	Advantages
<ul style="list-style-type: none"> <li>– Highly trained staff and equipment available should an emergency arise</li> <li>– Some types of pain relief can only be given in hospital</li> </ul>	<ul style="list-style-type: none"> <li>– The mother is in familiar, relaxing surroundings</li> <li>– Labour is not interrupted by travelling to hospital</li> </ul>
Disadvantages	Disadvantages
<ul style="list-style-type: none"> <li>– A mother is less likely to be looked after by a midwife she knows</li> <li>– Interventions such as forceps or ventouse are more likely in hospital</li> </ul>	<ul style="list-style-type: none"> <li>– For the first baby, home birth increases the risk of death and complications</li> <li>– A transfer to the hospital may be needed if there are complications</li> </ul>





### 2.5. The role of the birth partner in supporting the mother through pregnancy and birth

#### The benefits of having a birth partner

- Pregnancy and birth is a significant event in a woman's life and a time of many changes.
- Women go through and experience many changes, physically and emotionally.
- It is normal to feel apprehensive about birth and caring for a newborn.
- So, it's very important for a mother to have support from someone they can rely on.

#### Physical support

- Provide practical support with tasks if the mother is feeling tired.
- Help the mother during labour and birth – offer massages, drinks and snacks, help with timing contractions, sponge the mother down.
- Learning relaxation and breathing techniques alongside the mother and encourage the mother to use these techniques.

#### Emotional support

- Be emotionally supportive if the mother is feeling anxious.
- Help the mother during labour and birth – give encouragement, find ways to pass the time.
- Help with arrangements at home – arrange childcare for siblings when the mother goes into labour.

### 2.6. Methods of pain relief when in labour

#### Epidural anaesthetic

##### Advantages

- Can provide total pain relief
- Unlike with systemic narcotics, only a tiny amount of medication reaches your baby

##### Disadvantages

- Takes 10 minutes to administer and another 15 minutes to work
- Side effects: legs feel heavy, BP dropping, headache, sore back

#### Gas and air (Entonox)

##### Advantages

- Works within 20 seconds
- Mothers breathe in through a mask they hold – gives them a sense of control

##### Disadvantages

- Does not remove all the pain, just reduces it
- Side effects: Light-headed, sick, sleepy, unable to concentrate

#### Pethidine

##### Advantages

- Relaxes the muscles to make the pain more tolerable
- Used in early labour, helps the mother feel relaxed and settled

##### Disadvantages

- Does not take away the pain altogether
- Side effects: feel sick or disoriented

#### TENS

##### Advantages

- The impulses reduces the pain signals going to the spinal cord and brain, relieving pain and relaxing muscles

##### Disadvantages

- Should not be used if the mother has any electrical or metal implant, epilepsy, heart problem

### 2.7. The signs that labour has started

#### A show

It can occur when a plug of mucus that has sealed off the uterus during pregnancy comes away from the cervix as it dilates. This will be stained with blood, but no blood should be lost.

#### 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 to go to the hospital (or begin the birth plan) as there is a risk of infection for the baby.

#### Contractions

The uterus muscles start to contract and release. Contractions gradually become stronger and occur increasingly closer together.

**2.8. The 3 stages of labour and their physiological changes****Stage 1 – Labour (Neck of the uterus opens)**

As the neck of the uterus continues to grow:

- More pain relief is required as the contractions become stronger, regular and longer.
- 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, vomit, sweat, shiver and she may lose bladder/bowel control due to the pressure of the baby's head.
- When contractions become even closer together, stronger and more intense, the mother enters the transition stage leading into the second stage of labour.

**Stage 2 – Birth of the baby**

- Starts: When cervix becomes fully dilated at 10 cm.
- Ends: When the baby is born.
- The vagina and open cervix now form a single passage: 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.
- 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. This ensures that the mother's skin between the vagina and rectum (perineum) does not tear.
- The baby's body can be turned to deliver the shoulders one at a time. This will be followed by the rest of the body, which slides out easily.
- If the baby needs to have mucus removed from the 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.
- The umbilical cord will be clamped and cut.
- The baby is likely to be placed on the mother for skin-to-skin contact.

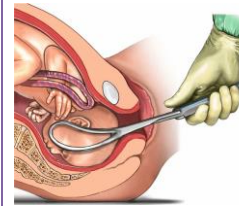
**Stage 3 – Delivery of placenta and membranes**

- Contractions begin again to push the placenta out.
- An injection of syntocinon may be given to stimulate contractions.
- If a tear occurred in the perineum or a cut was made, it will be sewn up under local anaesthetic

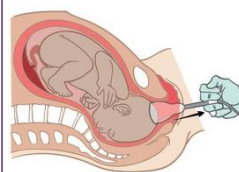
**2.9. The methods of assisted birth**

Some methods used will be planned in advance or used if it becomes necessary during labour. Forceps or ventouse may be used if:

- There are concerns about the baby's heart rate
- The baby is in an awkward position
- The mother is too exhausted.

**Forceps**

- A curved metal instrument which fits around the baby's head.
- As the mother pushes with a contraction, an obstetrician gently pulls to help deliver the baby.
- Some forceps are designed to help turn the baby to the right position to be born
- More successful than ventouse, but more likely to result in tearing.

**Ventouse**

- A plastic or metal cup that fits firmly on the baby's head and is attached by suction.
- As the mother pushes with a contraction, an obstetrician gently pulls to help deliver the baby.
- Leaves a small swelling on the baby's head (which will disappear quickly) and may leave a temporary bruise.

**Episiotomy**

- During the second stage of labour, an incision is made in the perineum to quickly enlarge the opening for the baby to pass through.

**Risks of assisted birth**

- Vaginal tearing or episiotomy.
- A higher chance of having a vaginal tear that involves the muscle or wall of the anus or rectum.
- Higher risk of blood clots, leaking urine and anal incontinence.
- A catheter may be used by a doctor to examine if an assisted birth is required. This can be uncomfortable when inserted and some women find it difficult to urinate once it is removed.

**Elective/ emergency Caesarean section**

- An operation to deliver a baby through a cut made in the abdomen and womb.
- May be recommended as an elective (planned) procedure, or done in an emergency if a vaginal birth becomes unsafe.
- Reasons for Caesarean include: excessive vaginal bleeding, labour not progressing, pre-eclampsia, a low-lying placenta, baby in the breech position (feet first), infections, baby not getting enough oxygen/ nutrients so needs to be delivered immediately.