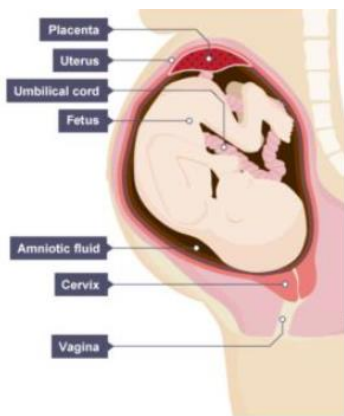


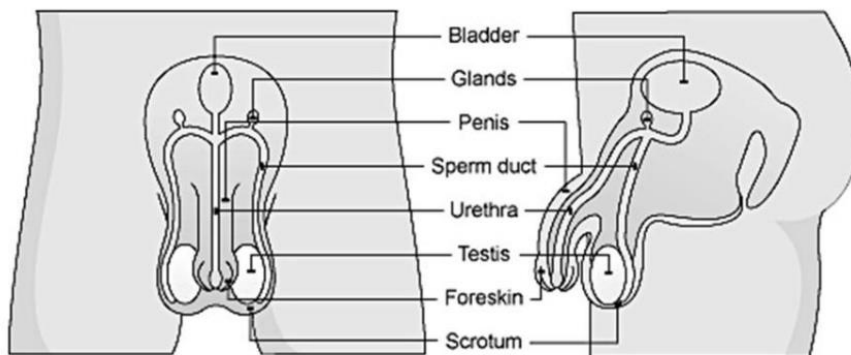
Female reproductive organs

Ovary matures and releases an egg every month.
The fallopian tube is where fertilisation takes place and connects the ovary to the uterus.



The uterus is where a baby develops until its birth.
The cervix is a ring of muscle at the lower end of the uterus. It keeps the baby in place while the woman is pregnant.
The vagina is a muscular tube that leads from the cervix to the outside of the woman's body.

The testes produce millions of male gamete sperm. The sperm pass through sperm duct fluids produced by the glands. The penis passes out of the male's body. The urethra is the tube for urine or semen.



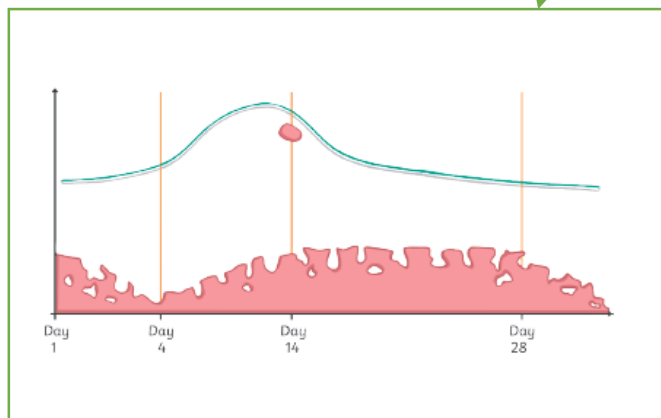
Male reproductive organs

Organ	Function
Testes	Produce sperm.
Urethra	Tube that runs through the penis that carries urine or semen out of the penis.
Sperm duct	Sperm mixes with a fluid here produced in the glands to form semen.
Gland	Produces the fluid that mixes with sperm
Scrotum	Bag of skin that contains the testes

The menstrual cycle prepares the female body for pregnancy by causing eggs (ova) to mature and be released. The process lasts for 28 days.

Gestation

Menstrual Cycle



- Days 1-5: 'period' happens (menstruation), where uterus lining breaks down.
- Days 6-13: Uterus lining builds up (thickens) to prepare for pregnancy. The egg (ovum) matures in the ovary.
- Day 14: Egg (ovum) released from the ovary and travels down the oviduct.
- Days 15-28: Uterus lining stays thick, in case the egg is fertilised.

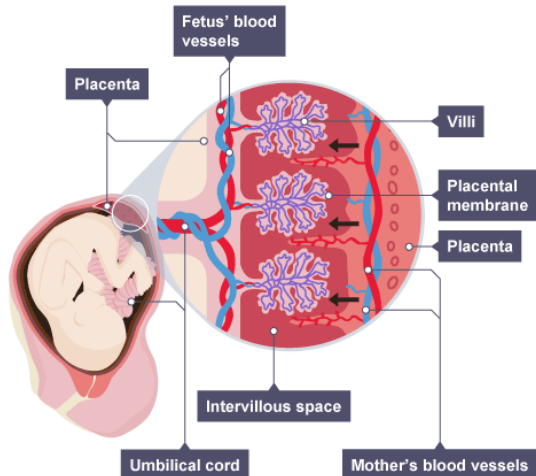
Medicine

Normal body cells contain 46 chromosomes in 23 pairs in Humans. A gamete (sperm & egg) contains 23 chromosomes. You inherit half from each parent to make 46.

Fertilisation is when "an egg cells nuclei fuses together with the nuclei of sperm cell."
The fertilised egg divides to form a ball of cells called an embryo. The embryo attaches to the lining of the uterus. It begins to develop into a foetus and finally into a baby.

The placenta is an organ responsible for providing oxygen and nutrients, and removing waste substances. It grows into the wall of the uterus and is joined by the foetus by the umbilical cord.

- Oxygen and nutrients diffuse from mother to foetus.
- Carbon dioxide and other waste substances diffuse across the placenta from foetus to mother.



The amniotic sac is the bag the foetus (baby) grows in and amniotic fluid surrounds the baby. It cushions and protects the baby as the mother moves.

Infertility is "when a women has difficulty becoming pregnant."

Some women have difficulty becoming pregnant because they don't produce enough FSH to allow their eggs to mature. Fertility drugs contain **FSH** and **LH**, which stimulate eggs to mature in the ovary.

Fertility treatments increase a woman's chance of becoming pregnant, although the treatment may not always work. On the other hand, because the treatment boosts the production of mature eggs, it increases the chance of twins or triplets. Multiple pregnancies carry a risk of complications, and may lead to premature or underweight babies.

- **follicle stimulating hormone (FSH)** causes the maturation of an egg in the ovary
- **luteinising hormone (LH)** stimulates the release of the egg



If a couple are having difficulty conceiving a child because there are issues with the quality of the man's sperm, or a woman has blocked oviducts, then **IVF** can be used.

IVF (in vitro fertilization) involves giving a mother FSH and LH to stimulate the maturation of several eggs. The eggs are collected from the mother and fertilised by sperm from the father in a dish in the laboratory. The fertilised eggs dUsually only one or two embryos are placed into the uterus to give a balance between ensuring success and avoiding multiple births. Before placing the embryos into the uterus, it is possible to genetically screen them for abnormalities or check their gender.

Fertilisation

Infertility

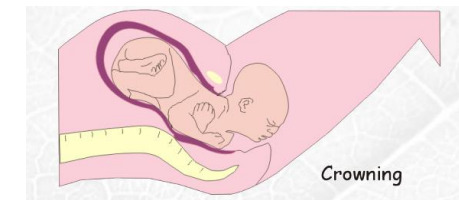
Medicine

IVF

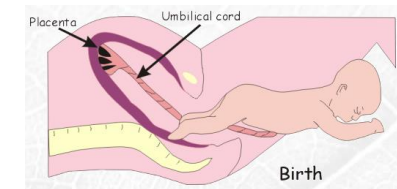
Birth



Opening of the birth canal



Crowning

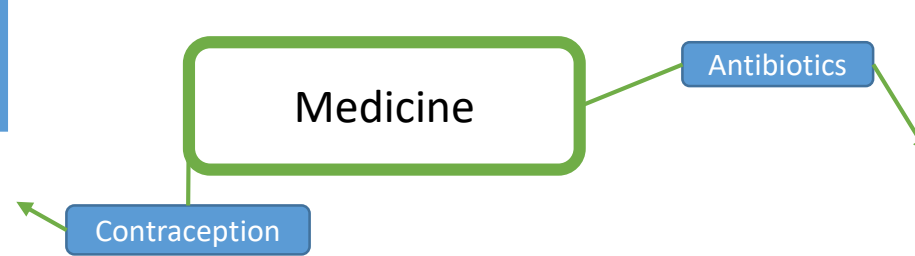


Birth

It takes about 40 weeks for a baby to develop in the uterus. This time is called **gestation**. After this, the baby is ready to be born. The cervix relaxes and muscles in the wall of the uterus contract. Waves of muscle contraction push the baby out of the mother's body through the vagina.

Contraception

Something used to prevent pregnancy.

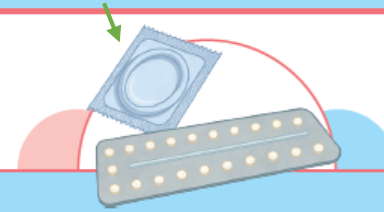


Antibiotics kill the bacteria causing the problem, but do not work on viruses. Viruses are very difficult to kill because they live inside the body cells.



Contraception

There are many different types of **contraceptive** (or birth control) methods. They are categorised as **hormonal** methods and **non-hormonal** methods.



Method	Hormonal or Non-Hormonal	How It Works	Pros and Cons
oral contraceptives ('the pill')	hormonal	Pill taken which contains hormones to inhibit FSH so that an egg does not mature.	<ul style="list-style-type: none"> ☺ Easily self-administered. Short-term effects. Can easily be reversed. Very reliable. ☹ May have mild side-effects associated. Could lead to pregnancy if missed. Does not protect from STIs.
injection, implant or skin patch	hormonal	Contains progesterone which is slowly released to inhibit the release of eggs for months or even years.	<ul style="list-style-type: none"> ☺ Administered through routine appointment at GP surgery. Requires little to no aftercare or maintenance. Very reliable. ☹ May take some time for effects to be reversed once removed. Does not protect from STIs.
condoms or diaphragm (female condom)	non-hormonal	Creates a physical barrier to prevent the sperm from reaching the egg.	<ul style="list-style-type: none"> ☺ Easy to use. Short-term effects. Very reliable. Provides protection from most STIs. ☹ Can fail.
intrauterine devices (coil)	hormonal	The device is attached to the lining of the uterus and releases hormones or prevents the implantation of an embryo.	<ul style="list-style-type: none"> ☺ Requires little to no aftercare or maintenance. Very reliable. ☹ May take some time for effects to be reversed once removed. Does not protect from STIs.
spermicidal agents	non-hormonal	Contains chemicals to kill or immobilise sperm cells.	<ul style="list-style-type: none"> ☺ Easy to use. Short-term effects. ☹ Does not protect from STIs. Less effective when used as the only method.
abstaining from intercourse (around the time of ovulation)	non-hormonal	Avoiding sexual intercourse when there is a likelihood of an egg being present in the oviduct.	<ul style="list-style-type: none"> ☺ inexpensive ☹ Not always reliable.
surgery	non-hormonal	A surgical procedure carried out in men or women. In males, the vas deferens tubes are sealed or blocked to prevent the passage of sperm from the testes. In females, the fallopian tubes (oviducts) are sealed or blocked to prevent the passage of the egg from the ovaries.	<ul style="list-style-type: none"> ☹ Risks associated with surgery (such as infection). ☹ Difficult to reverse (if at all possible). Can take several months to be reliable.

WARNING:

Hormonal methods of contraception do not prevent the spread of STI's.

STI (Sexually transmitted infection)

An infection spread through sexual intercourse.

Gonorrhoea is a sexually transmitted bacterial disease, passed on by sexual contact. Symptoms include pain when urinating and thick yellow/green discharge from the vagina or penis. To prevent the spread, people should be treated with antibiotics and use a condom.

HIV stands for human immunodeficiency virus. This infection is transmitted by body fluids, often during unprotected sex, but also through cuts and injecting drugs using unsterilized needles. Immediately after infection, people often suffer mild flu-like symptoms. These pass and for a period of time infected people might not know they are infected.

Chlamydia is a sexually transmitted infection caused by a **bacterium**. It is a common infection, especially amongst people under 25. The NHS recommends that people who are under 25 and sexually active have a Chlamydia test every year or if they change partner.

Chlamydia causes a burning pain when urinating and often forms a thick yellow or green **discharge** from an infected person's penis or vagina. In women it can also cause bleeding between periods and men can develop swollen testicles.

If untreated, infection with Chlamydia can result in **infertility**. Like other bacterial infections, Chlamydia is treated by **antibiotics**.



Boys only	Boys and girls	Girls only
Voice breaks	Pubic hair grows	Voice deepens gradually
Hair grows on face and body	Underarm hair grows	Hips get wider
Body becomes more muscular	Sexual organs grow and develop	Breasts develop
Testes start to produce sperm cells		Ovaries start to release egg cells - menstruation starts

