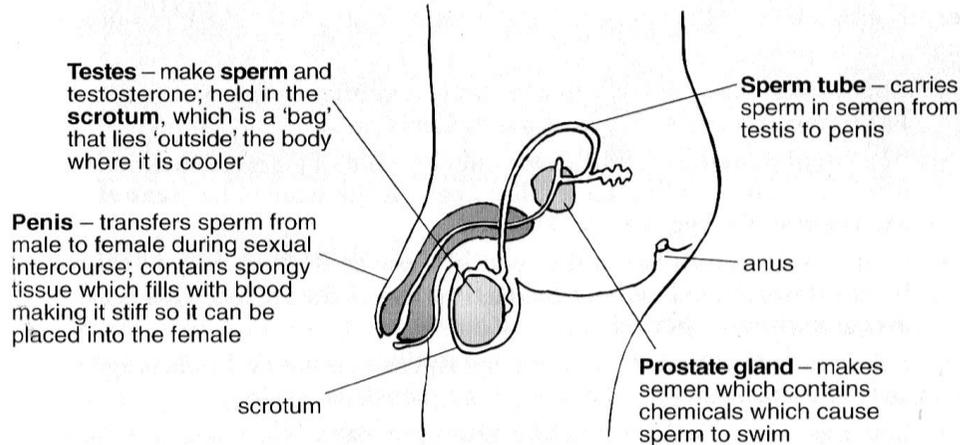


HUMAN REPRODUCTIVE SYSTEM

1. Male reproductive system

Learn Outcomes: -Draw and label male reproductive system.

Male sex organs

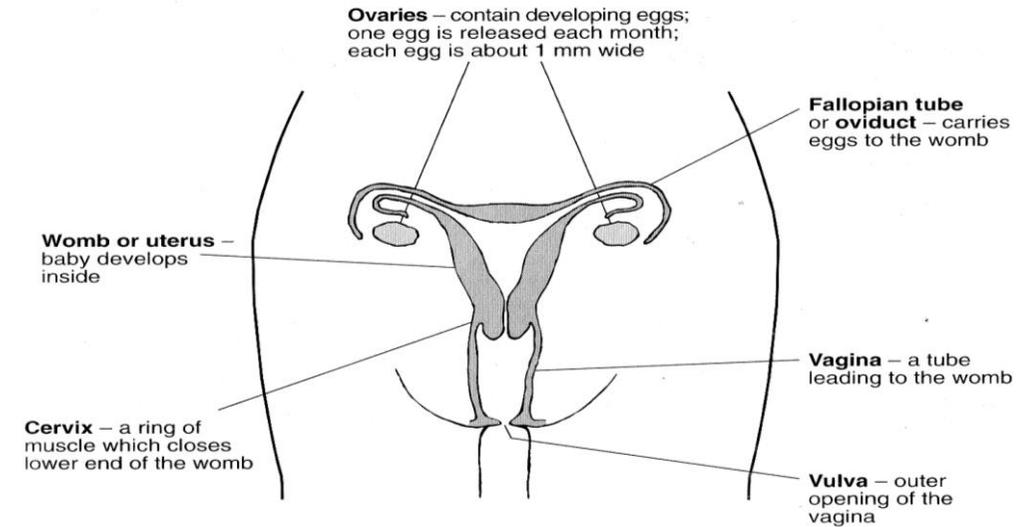


2. Female reproductive system

Learn Outcomes: -Draw and label female reproductive system.

-Explain why menstrual cycle occurs.

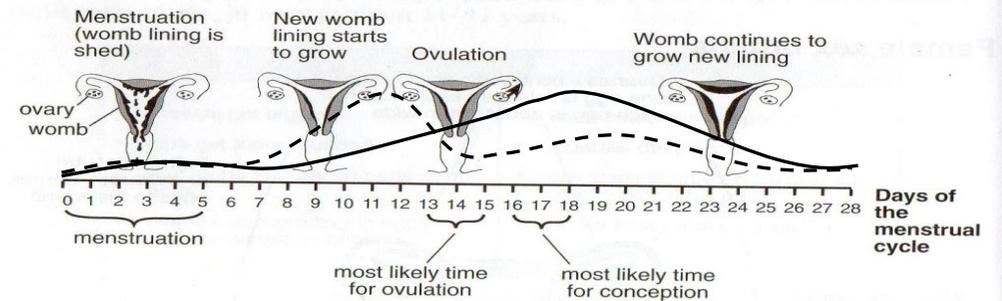
Female sex organs



The Menstrual Cycle

Every month a series of changes called the **menstrual cycle** take place in a woman's body.

- About once every 28 days an egg is released from an ovary into the **Fallopian tube**. This is called **ovulation**.
- After ovulation the womb grows a thick lining of glands and blood vessels, ready to protect and feed a fertilised egg. If the woman has **sexual intercourse** the egg may be fertilised.
- If an egg is not fertilised it dies within a few days. The lining of the womb breaks down. Blood and dead cells flow out of the vagina. This is called **menstruation or period**.
- Following menstruation another egg ripens and the cycle starts again. The start of menstruation is day one of the menstrual cycle.
- If an egg is fertilised a woman becomes pregnant. Normally, no periods occur until after a baby is born.



- When Oestrogen (.....) increase its level in the blood cause Ovulation.
- Increasing Progesterone (~) level supplying extra blood on the uterus. It also makes the woman to feel tense, clumsy, tearful and unable to concentrate.

3. Gamete production and puberty

Learn Outcomes: -Describe the changes occur at puberty for both male and female.

Puberty

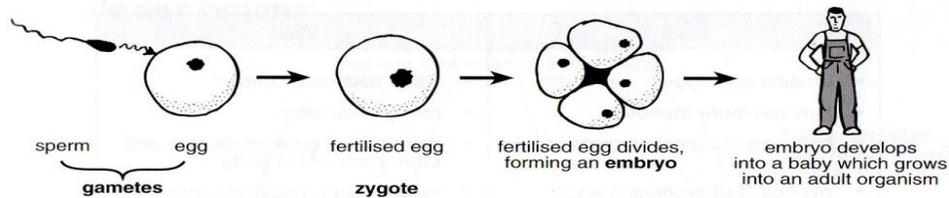
Young children cannot do reproduction until they are in puberty state. Puberty is when human sex organs start producing gametes (sex cell). These changes in state are caused by hormones known as Testosterone for boys at age 9-10 years, and Oestrogen and Progesterone for girls at age 11-12 years. Male gametes are sperm and Female gametes are eggs.

Girls	Boys
<ul style="list-style-type: none"> • breasts get bigger • hips get more rounded • hair starts to grow on parts of her body • ovaries start producing eggs and menstruation begins 	<ul style="list-style-type: none"> • voice becomes deeper • muscles develop • hair starts to grow on his face and other parts of his body • testes start producing sperm

4. Conception to birth

Learn Outcomes: -Describe the processes from conception to birth.

Sexual reproduction involves two parents. The parents produce gametes (sex cells) from **sex organs**. Male gametes are called **sperm**. They are produced in **testes**. Female gametes are called **eggs**. They are produced in **ovaries**.



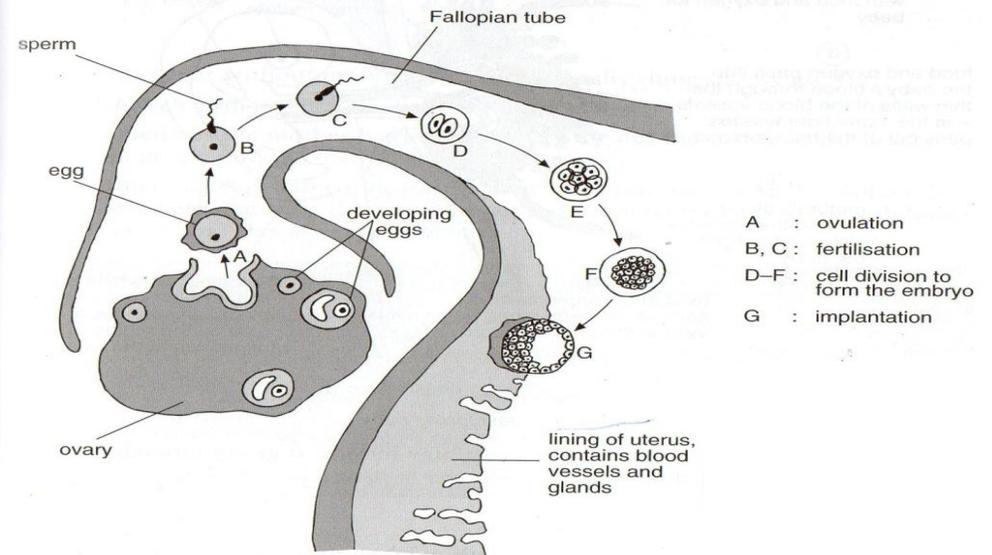
Sperm are much smaller than egg cells. Sperm have a tail to swim towards an egg. The 'head' of the sperm is made up of the nucleus, which contains the genetic information from the male parent. The egg cell contains genetic information from the female parent. Only one sperm can join with each egg. The process of a sperm fusing with an egg is fertilisation. The new organism formed contains genetic information from two parents. Organisms produced from sexual reproduction show variation.

A few simple animals reproduce using **asexual reproduction**. Asexual reproduction is generally a rapid process. New organisms that are formed by asexual reproduction are genetically identical to their parent. There is no variation.

The Start of a New Life

During sexual intercourse millions of sperm pass from a man's penis into a woman's **vagina**. Sperm swim up through the womb and into the Fallopian tube where fertilisation may take place. Fertilisation is also called **conception**.

The fertilised egg divides to make a ball of about a hundred cells called an **embryo**. The embryo travels down the Fallopian tube and sinks into the thick lining of the womb. This is called **implantation**.



How the Baby Develops

It takes about 38 weeks for a human baby to grow and develop in the womb until ready for birth. During that time the mother's blood supplies the baby with food and oxygen and takes the baby's wastes away. The mother's blood does not mix with the baby's blood. Food, oxygen and wastes are exchanged through a special structure called the **placenta**.

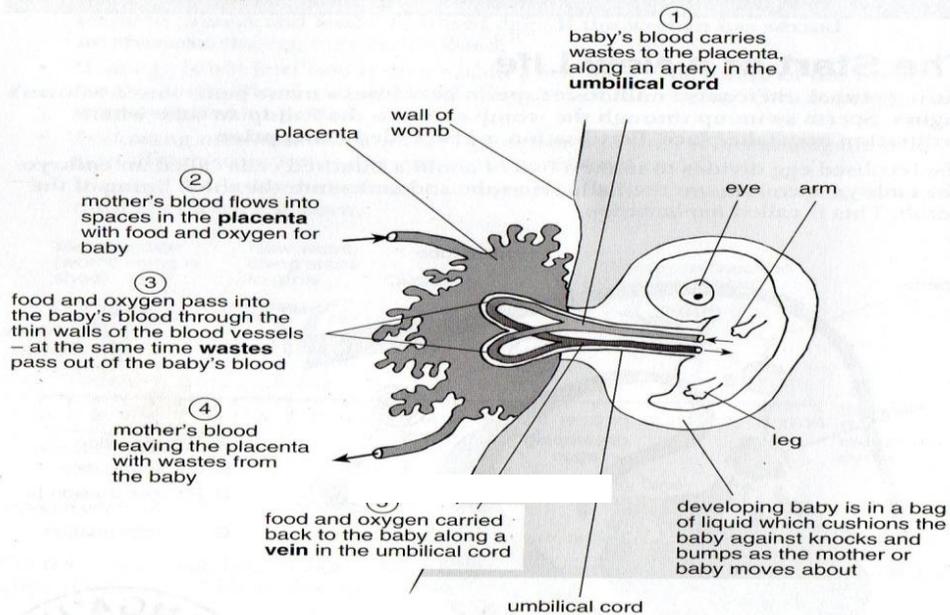


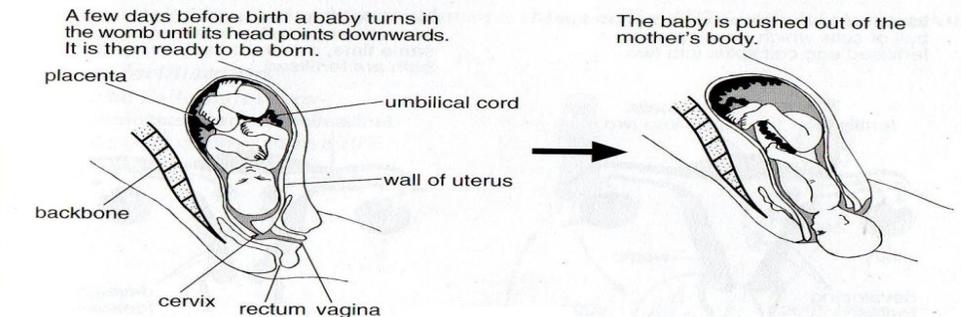
Fig. 3.7: developing baby

A fertilised egg is smaller than a pinhead. In nine months it grows into a baby weighing around three kilograms.

Birth

Birth begins with **labour**. The average length of labour is about eight hours. During labour, **contractions** gradually widen the mouth of the **cervix**. Contractions

become stronger and stronger until the baby is pushed out of the mother's body. The **umbilical cord** is cut, leaving a **navel** or 'belly button' on the child. A short time later more contractions push the placenta and rest of the umbilical cord out of the womb. These are called the *afterbirth*.



Most births occur without problems, but occasionally things go wrong:

- A *breech birth* is when the baby is born feet first.
- Sometimes the mother has difficulty pushing out the baby and the doctor will gently pull the baby's head with forceps.
- Sometimes it is impossible for the baby to be pushed out by the mother. In these cases the baby is removed in an operation where the mother's abdomen is cut open. This is a *caesarean birth*.

5. Family Planning & birth control

Learn Outcomes: -Explain in general some family planning and birth control methods.

Family Planning and Birth Control is a ways of avoiding pregnancy during a period of time while the couple has not stopping sexual intercourse. This happens when the couples do not wish to have children at a particular time or wish to space their children out over a number of years. They can rely on these methods below:

- Ovulation method or Rhythm method:** This method is based on the knowledge of fertile (period of fertilization) to stop sex, and infertile (period of no fertilization) to allow sex.
- Contraception method:** Pills that take by female, that contain hormone which prevent her from being pregnant.
- Injection Progesterone method:** Injection of progesterone hormone to the body female to avoid ovulation which leads to no fertilization (no pregnancy) over a period of time (a month up to many months).

iv) **Other device method:** There are some useful device use by male (condoms) and female (condom, loop, etc) to stop the sperm from fertilizing the egg.

6. Venereal Disease & AIDS

Learn Outcomes: -Discuss the causes, symptoms and ways to prevent venereal diseases such as AIDS, herpes and gonorrhoea.

Venereal diseases: a disease typically contracted by sexual intercourse with a person already infected; a sexually transmitted disease (STD).

Causes	Symptoms	Prevent
<p>i) <u>AID:</u> -causes by the human immune deficiency virus. -Contact with infected blood, semen, or vaginal fluids. - having unprotected sex with someone who has HIV. -by sharing drug needles with someone who is infected with HIV</p>	<p>-fever (raised temperature) -sore throat -body rash -tiredness -joint & muscle pain -swollen glands (nodes) Once the immune system becomes severely damaged symptoms can include: -weight loss -serious life-threatening illnesses</p>	<p>- Get your partner test for HIV. -Have less risky sex. -Use condoms -Get tested and treated for STDs (sexually transmitted disease) -Don't inject drugs</p>
<p>ii) <u>Herpes:</u> <i>-causes by herpes simplex virus (HSV).</i> Sexual contact is the primary way that the virus spreads. After the initial infection, the virus lies dormant in your body and can reactivate several times a year.</p>	<p>-Feeling generally unwell with flu-like symptoms such as fever, tiredness, headache, swollen glands, aches and pains in the lower back and down the legs or in the groin. -Stinging, tingling or itching in the genital or anal area. -Small, fluid-filled blisters anywhere in the genital or anal area, on the buttocks and the tops of the thighs. These burst</p>	<p>-Use, or have your partner use, a latex condom during every sexual contact -Avoid intercourse if either partner has an outbreak of herpes in the genital area or anywhere else</p>

	<p>within a day or two leaving small, red sores which can be very painful. -Pain when passing urine (peeing) caused by the urine flowing over the sores.</p>	
<p>iii) <u>Gonorrhoea:</u> -caused by <i>Neisseria gonorrhoeae</i> bacteria that can grow multiply in the mucus membranes of the body. -Gonorrhoea bacteria can grow in the warm, moist areas of the reproductive tract, of the cervix, uterus and fallopian tubes in women, and in the urethra (tube carries urine from the bladder to outside) in women and men. -The bacteria can also grow in the mouth, throat and anus.</p>	<p>symptoms in women -Greenish yellow or whitish discharge from the vagina -Lower abdominal or pelvic pain -Burning when urinating -Conjunctivitis (red, itchy eyes) -Bleeding between periods -Spotting after intercourse -Swelling of the vulva -Swollen glands in the throat</p> <p>symptoms in men -Greenish yellow or whitish discharge from the penis -Burning when urinating -Painful or swollen testicles</p>	<p>-Use a condom if you choose to have sex -Ask your partner to be tested for sexually transmitted infections -Don't have sex with someone who has any unusual symptoms -Consider regular gonorrhoea screening if you have an increased risk</p>