

Section 1 - Adolescence

Changes that occur during adolescence are caused by sex hormones. These can be physical or emotional. E.g.:

- Public hair and underarm hair grows
- Body smell becomes stronger
- Emotional changes & Growth spurts

Physical changes are known as **puberty**.

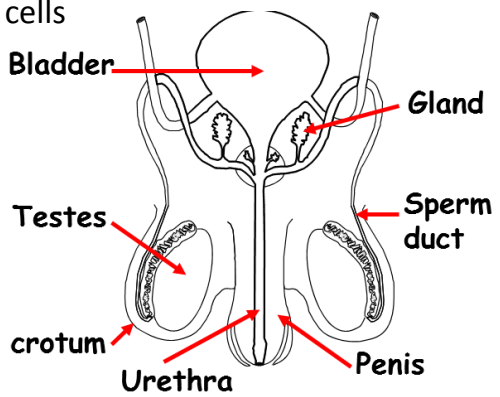
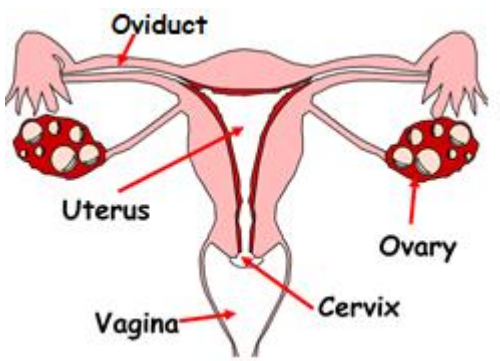
**Boys**

- Testes and penis get bigger
- Testes start to produce sperm
- Hair grows on face and chest.
- Shoulders widen

**Girls**

- Breasts develop
- Ovaries start to release egg cells
- Periods start
- Hips widen

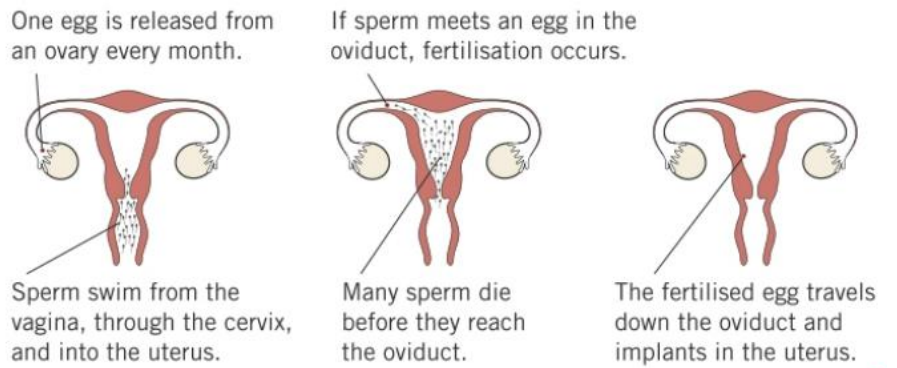
Section 2 - Reproductive systems



Section 3 - Fertilisation

**Fertilisation** is when the male and female **gametes** combine. In humans this is the **sperm** and **egg**.

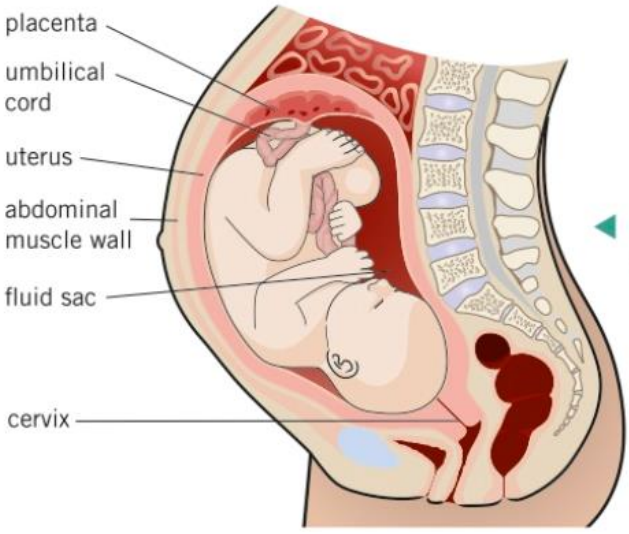
When a male becomes sexually aroused his penis becomes erect. A women's vagina will become moist. This allows the penis to enter the vagina. The male **ejaculates** and the sperm travels up the vagina. If a sperm successfully reaches the egg fertilisation takes place.



Section 4 - Development of the foetus

After **fertilisation** the egg divides to become a ball of cells called an **embryo**. The embryo implants into the uterus lining; this is called **implantation**.

In humans **gestation** lasts 9 months. During gestation the foetus grows within a **fluid sac** in the uterus. It is attached to the mothers **placenta** by an **umbilical cord** and receives oxygen and nutrients through this.



Section 5 - Birth

At the end of **gestation** the baby is born by passing through the vagina. The fluid sac breaks, the uterus contracts, the **cervix** relaxes and the vagina dilates allowing the baby to pass through. The baby is still attached to the **placenta** by the **umbilical cord**. This is cut and the mother then pushes the placenta out.

Section 6 - The menstrual cycle

The **menstrual cycle** takes place every 28 days and only occurs in women. An egg is released on the 14<sup>th</sup> day this is called **ovulation**. If the egg is **fertilised** the uterus lining continues to thicken and remains throughout **gestation**. If the egg is not fertilised the uterus lining breaks down and passes through the vagina; this is called a **period**. The cycle then restarts.

