



Objective : Recognize the main parts of the human reproductive system.

Resources : Power point

<https://www.youtube.com/watch?v=Nw2yHKxrj7o> ( part 1)

<https://www.youtube.com/watch?v=TIfsGKDoVIQ> ( part 2)

<https://www.youtube.com/watch?v=IIngkUwD3tE> ( menstrual cycle )

# Adolescence

The teenage years are also called adolescence.

This is a time for growth spurts and **puberty changes** . A teen may grow several inches in several months, followed by a time of very slow growth. Then they may have another growth spurt. Puberty changes may happen slowly. Or several changes may occur at the same time.

It's important to remember that these changes will happen differently for each teen. Each child goes through puberty at their own pace.

Sexual and other physical maturation that happens during puberty is due to **hormonal changes**.

**Hormones:** the **body's** chemical messengers. The **human body** secretes and circulates some 50 different **hormones**. A wide variety of these chemical substances are **produced by** endocrine cells, most of which are in glands. The **hormones** then enter the blood system to circulate throughout the **body** and activate target cells.

## Reproduction:

Is the process by which new organisms are generated. It is the mechanism of species continuation. There are two means of reproducing: asexual and sexual reproduction.

- ▶ **Asexual reproduction** : In this form of reproduction, a single organism or cell makes a copy of itself.
- ▶ **Sexual reproduction** : is a way of reproduction of some animals and plants. Organisms that reproduce sexually have two different sexes: male and female, so a male gamete ( SPERM CELLS ) is needed with a female gamete ( EGG CELLS ).

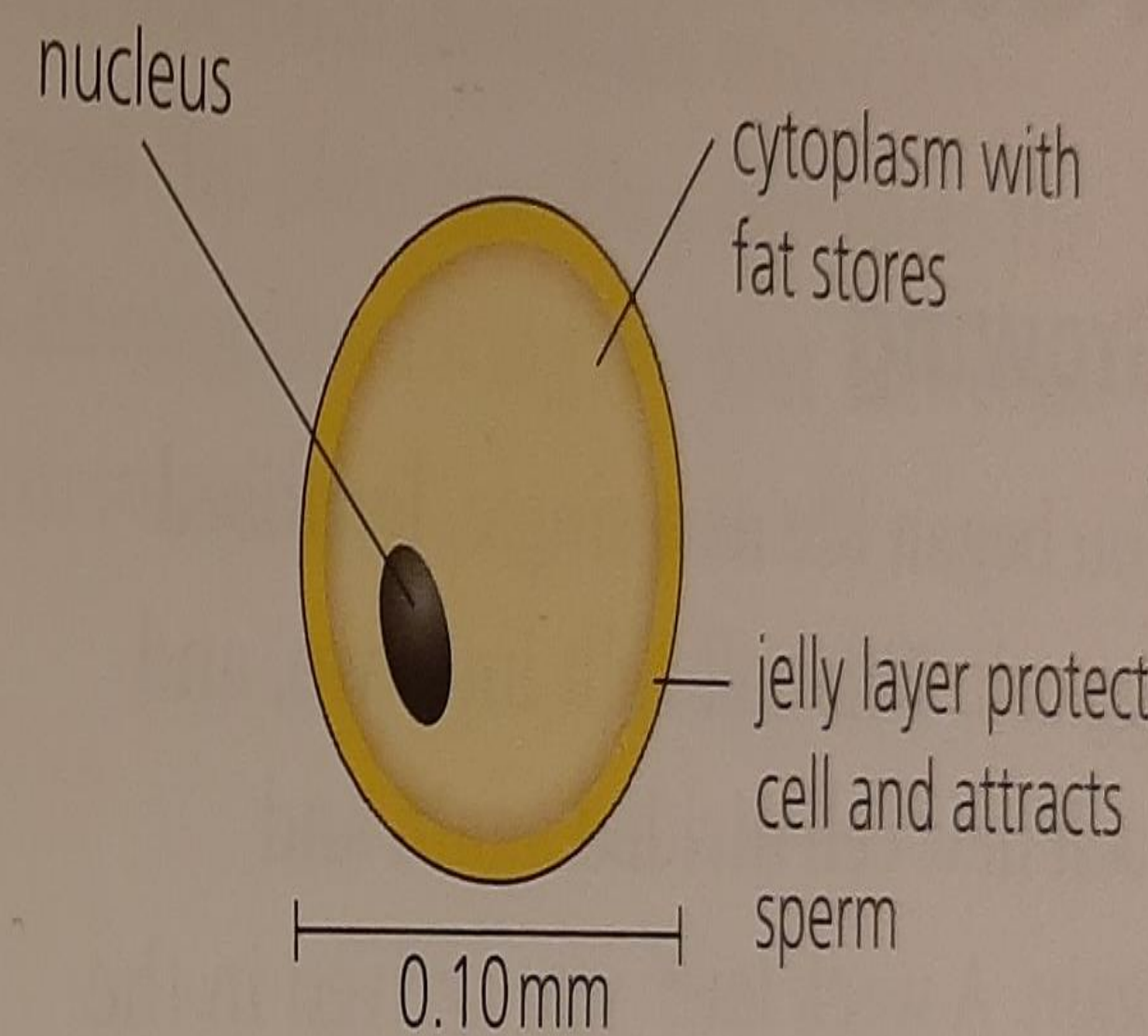
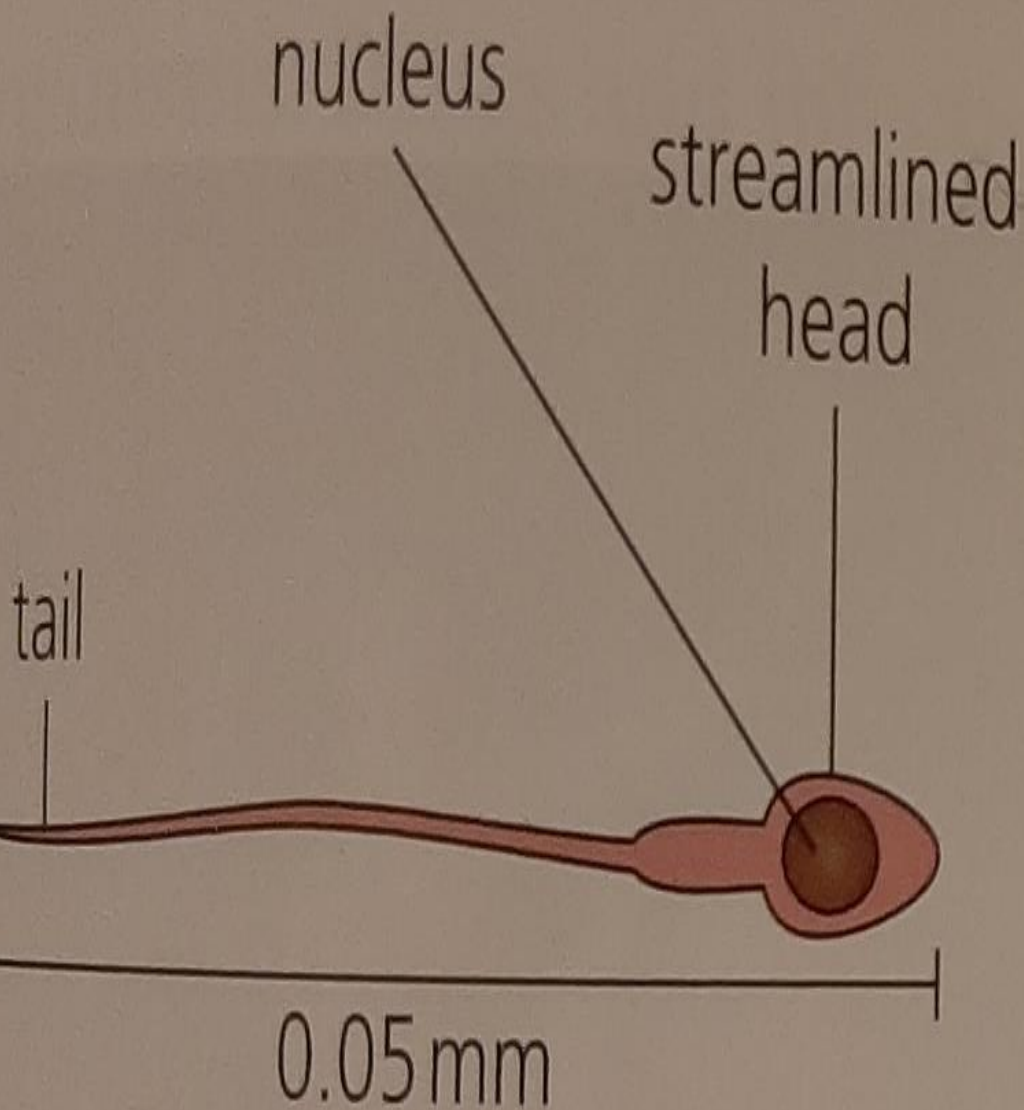
## The male reproductive organs :

Sperm cells are made in the **testes** , they travel along the **sperm duct** , into the **urethra**

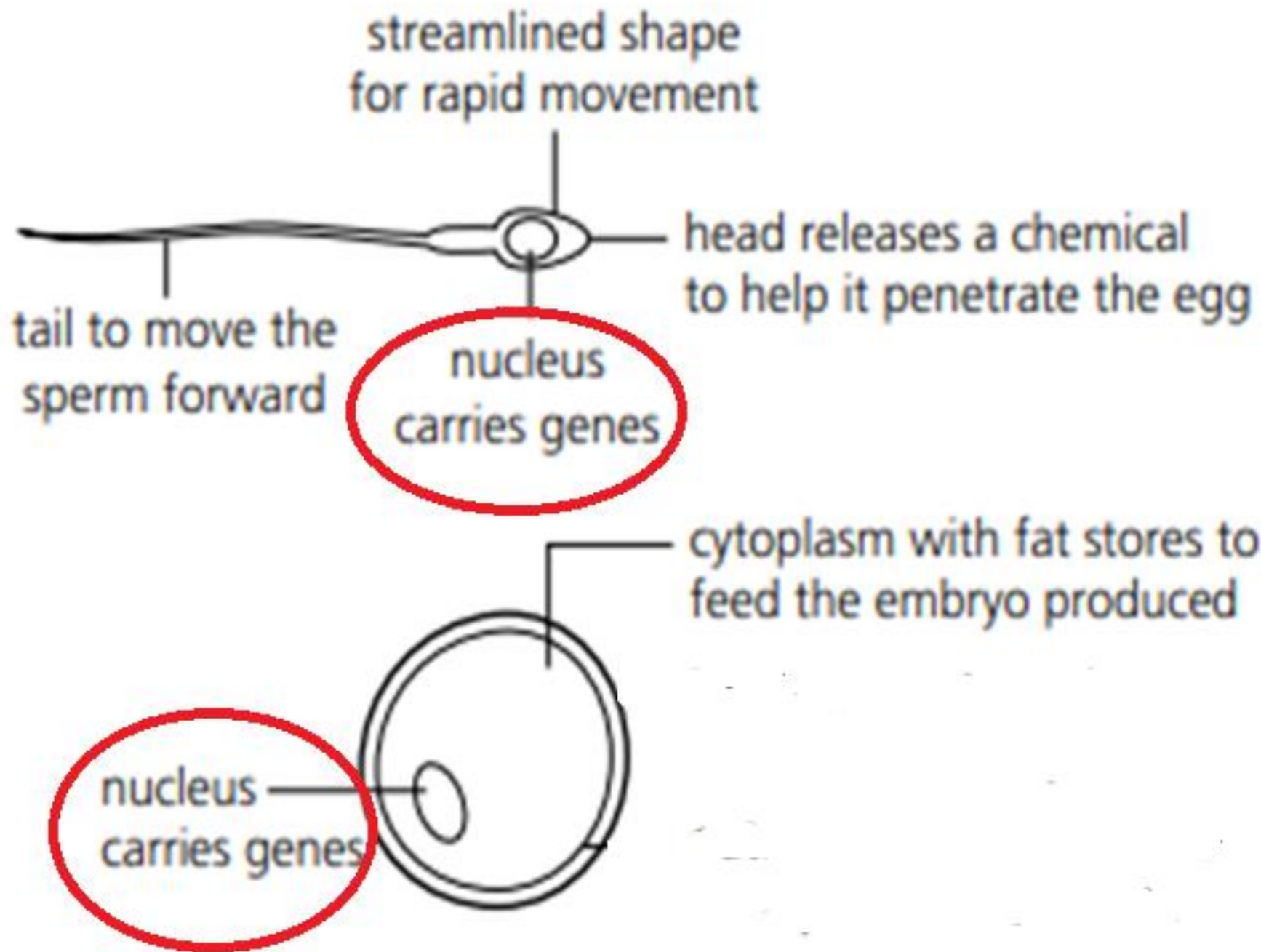
## Female reproductive organs :

- ▶ Egg cells are made in the **ovaries** . In an adult woman one egg cell leave the ovaries approximately each month . This is called ovulation .
- ▶ The egg cell goes into the **oviduct** . Tiny hair like structures on the oviduct called cilia , move the egg cell slowly along the oviduct .This is where fertilization can happen , if there are any sperm cells there .
- ▶ The zygote that is formed by fertilization travels down to the **uterus** , this is where it will develop and grow into a baby.





Sperm and egg cells are specialised to suit their functions.

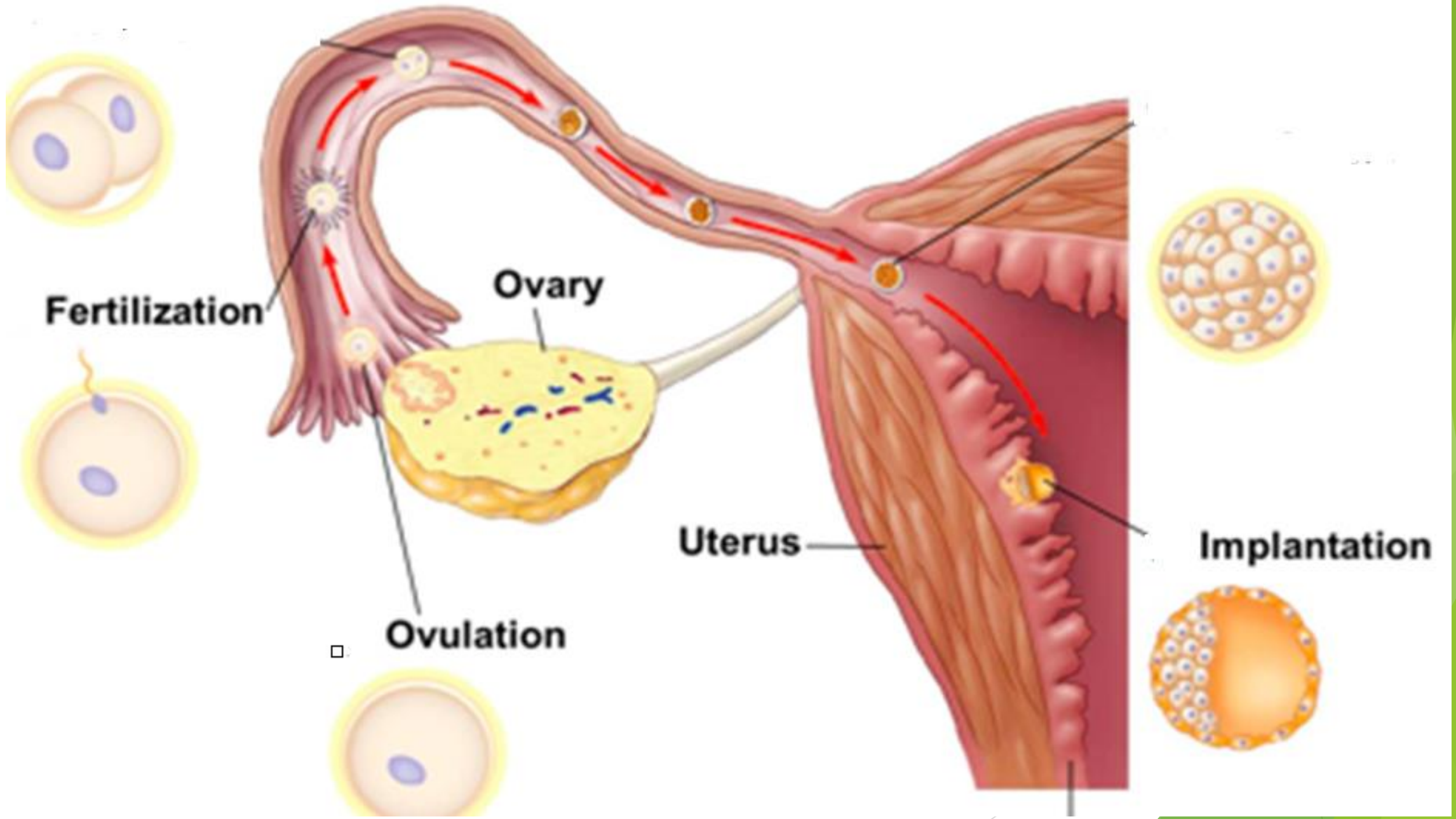




## What happens if an egg is fertilized :

When a sperm cell meets an egg cell the head of the sperm cell goes into the egg cell , the nucleus of the sperm cell and the nucleus of the egg cell join together , this is called fertilization

The new cell that is produced is called zygote .



**I**t takes several days for the zygote to become an embryo, and to travel into the uterus.

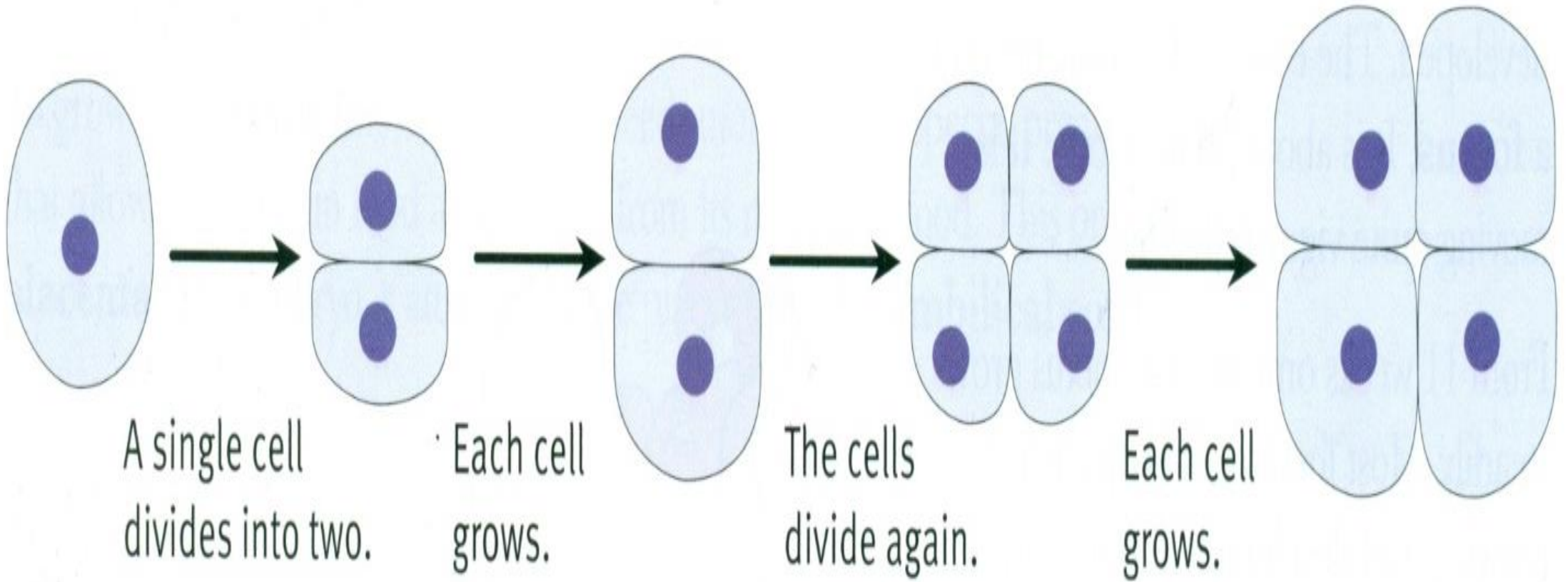
When the embryo has sunk into the wall of the uterus, the woman is pregnant.

It **takes about nine months** for the tiny embryo to develop into a fetus and then a baby.

## **Growth**

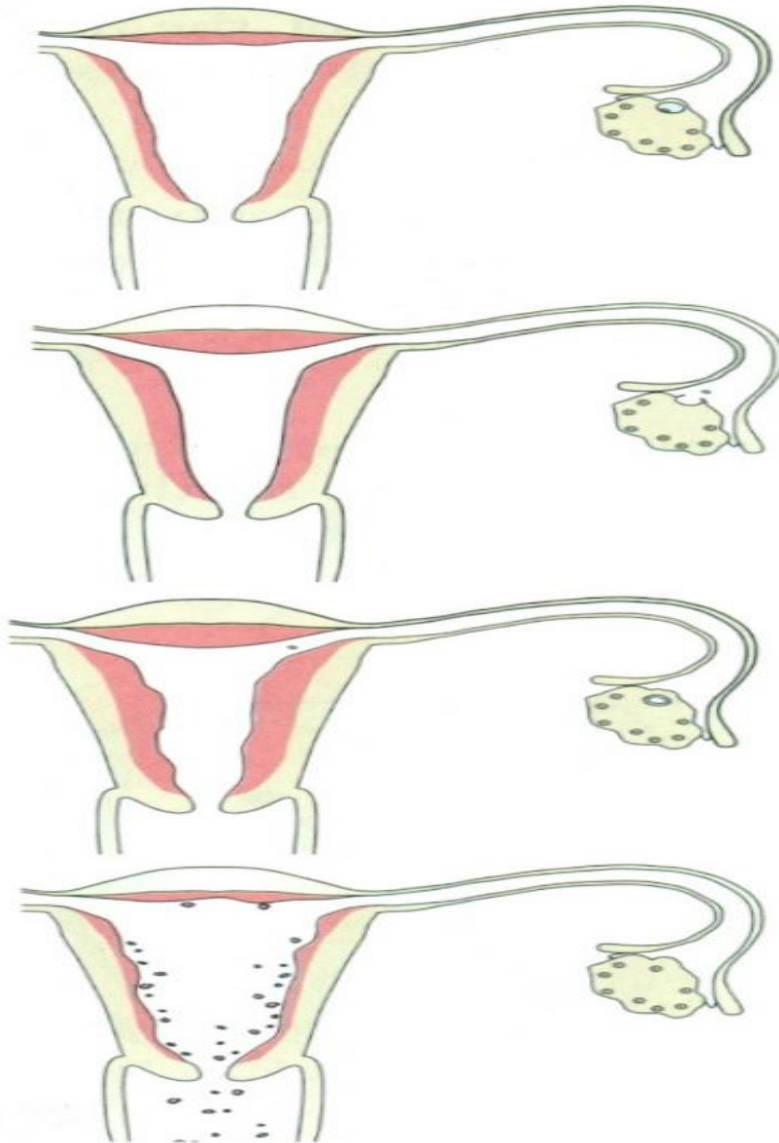
Soon after fertilization, the zygote begins to divide. The single cell divides to form two cells, then four and so on.

As the embryo grows into a fetus, and the fetus grows into a baby: this cell division continues. Each cell grows, then divides, grows, then divides - over and over again. This carries on all through childhood, until a person has reached adulthood and stops growing.



Growth takes place as cells grow and divide.

# The menstrual cycle :



The menstrual cycle.

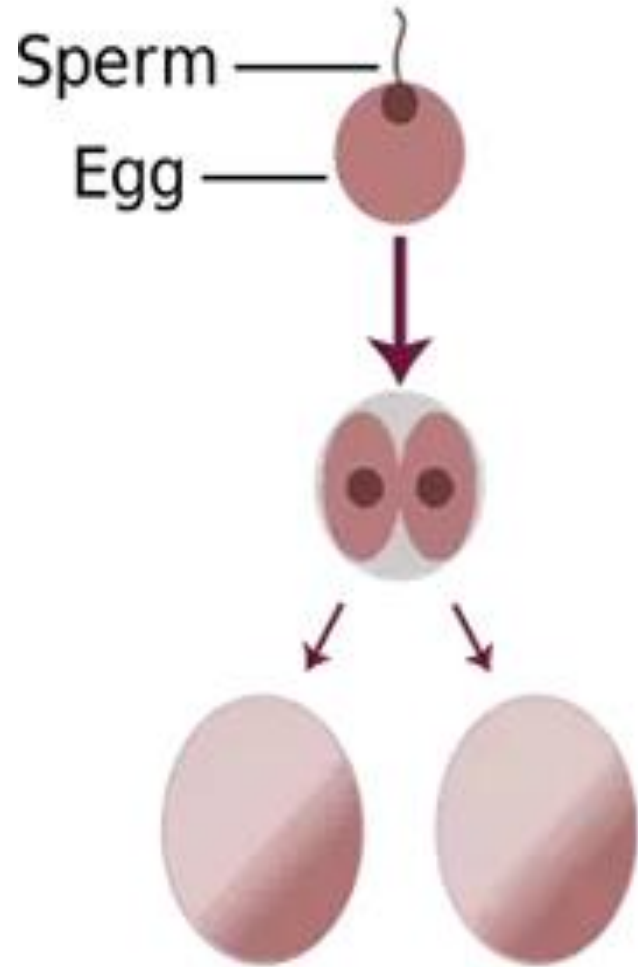
- 1** An egg cell develops in an ovary. The lining of the uterus starts to grow thicker.
- 2** The egg cell is released from the ovary. The lining of the uterus becomes thick and spongy.
- 3** The egg cell was not fertilised, so it just travels on into the uterus and dies.
- 4** The thick, spongy lining of the uterus breaks down and is lost through the vagina.



# Twins :

- ▶ **Identical twins** form from the same fertilized egg.
- ▶ **Non identical twins** form from two eggs which were released into the oviduct at the same time .

## Identical twins



## Non identical twins

