

Reproductive system

New life begins when an egg from a woman is fertilised by sperm from a man. Eggs (ova) are made in the ovaries, and sperm in the testicles. The ovaries and testicles (gonads) also make sex hormones.

The female reproductive system

The female reproductive system is made up of the vagina, womb (uterus), fallopian tubes and ovaries.

- **Vagina** - a muscular canal around 7.5 cm long that extends from the neck of the womb to the genitals, or vulva.
- **Uterus(womb)** - a muscular organ, shaped like an upside down pear. Its lining is called the endometrium. The neck, or entrance to the womb is the cervix, which has a small hole in its centre, called the os.
- **Fallopian (uterine) tubes** - these tubes extend from the womb, one on each side. They both open near an ovary. These tubes carry the egg (ovum) from the ovary to the womb.
- **Ovaries** - two small almond shaped glands that contain eggs (ova). Sex hormones are also made by the ovaries.

The menstrual cycle

Hormones secreted by the ovaries and a small gland in the brain called the pituitary gland control the menstrual cycle. The average cycle is around 28 days. After a period, rising levels of the hormone oestrogen help to thicken the lining of the womb (the endometrium). At mid-cycle, an egg is released from one of the ovaries (ovulation). If the egg is fertilised on its journey down the fallopian tube, it lodges in the womb lining. If the egg is unfertilised, falling levels of the hormone progesterone make the womb lining come away. This is called a period, or menstruation. The cycle then repeats.

The ovum (egg)

A female's entire egg supply is developed when she is still an unborn baby. At the start of puberty, the eggs or ova are ripened inside the ovary and released every month. Each egg contains genetic material. At menopause, the ovaries stop making hormones and eggs are no longer ripened or released.

The male reproductive system

The male reproductive system is made up of the penis, the testicles, the epididymis, the vas deferens and the prostate gland.

- **Penis** - has special erectile tissue that can fill with blood and make the penis stiffen. Sperm leaves the penis through the urethra, the same tube used for urination.
- **The testicles (testes)** - small oval sex glands located in a skin sack called the scrotum. Sperm and sex hormones are made by the testicles. Keeping the testicles outside of the body means they have a lower temperature, which is important for sperm production.
- **Epididymis** - a series of small tubes attached to the back of each testicle. The epididymis collects and stores sperm.
- **Vas deferens** - the epididymis tubes connect to make the vas deferens, a larger tube.
- **Prostate gland** - along with the seminal vesicles, adds fluid to the sperm.

The sperm

The sperm is the male reproductive cell. Its role is to fertilise an egg (ovum) and it contains genetic material. A sperm is tadpole shaped and around 60 microns in length (one micron is a millionth of a metre). It has a lashing tail, which helps it to 'swim' towards a waiting egg.

Common problems

Some common problems of the reproductive system include:

For women:

- **Endometriosis** - problems with the womb lining.
- **Fibroids** - non-malignant tumours of the womb.
- **Infertility** - many causes, including a failure to ovulate.
- **Painful periods** - a number of different causes, such as inflammation.
- **Premenstrual tension** - symptoms include bloating, breast tenderness and mood swings.
- **Sexually transmitted disease** - can be caused by bacteria or viruses.

For men:

- **Impotence** - a problem with getting or keeping an erection
- **Infertility** - many causes, including low sperm production
- **Prostate problems** - can make urination difficult
- **Sexually transmitted disease** - caused by bacteria or viruses.

Things to remember

- Ova are made in the ovaries, and sperm in the testicles.
- The genetic material of the ova and sperm combine to make the characteristics of the child.
- If the ovum is unfertilised, the lining of the womb comes away (menstruation).

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