The Reproductive System

The Male Reproductive System

The Male Reproductive System

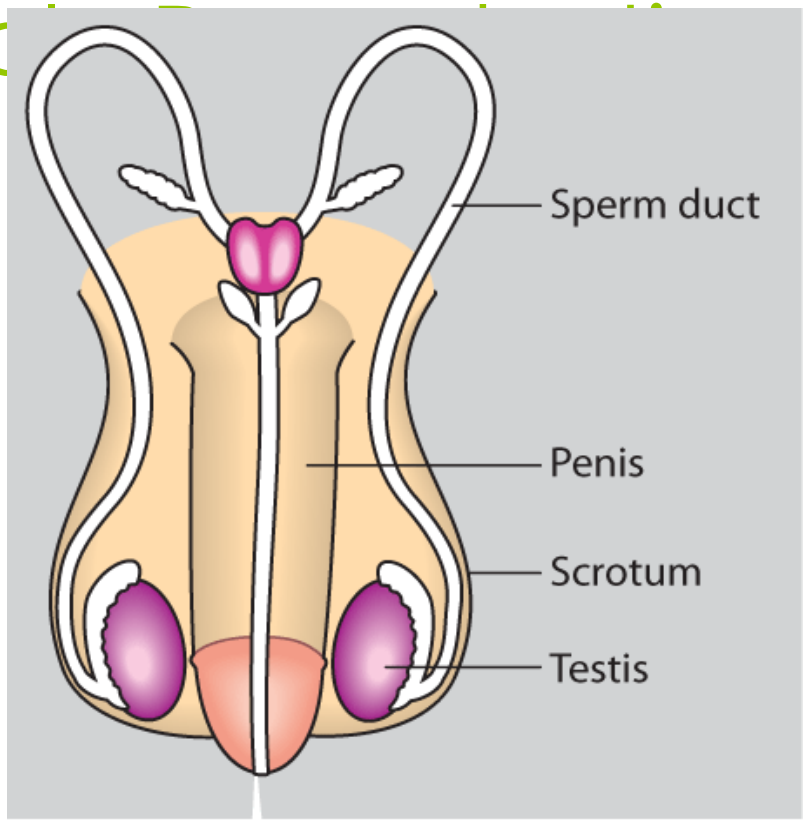


Fig 10.2 The male reproductive system

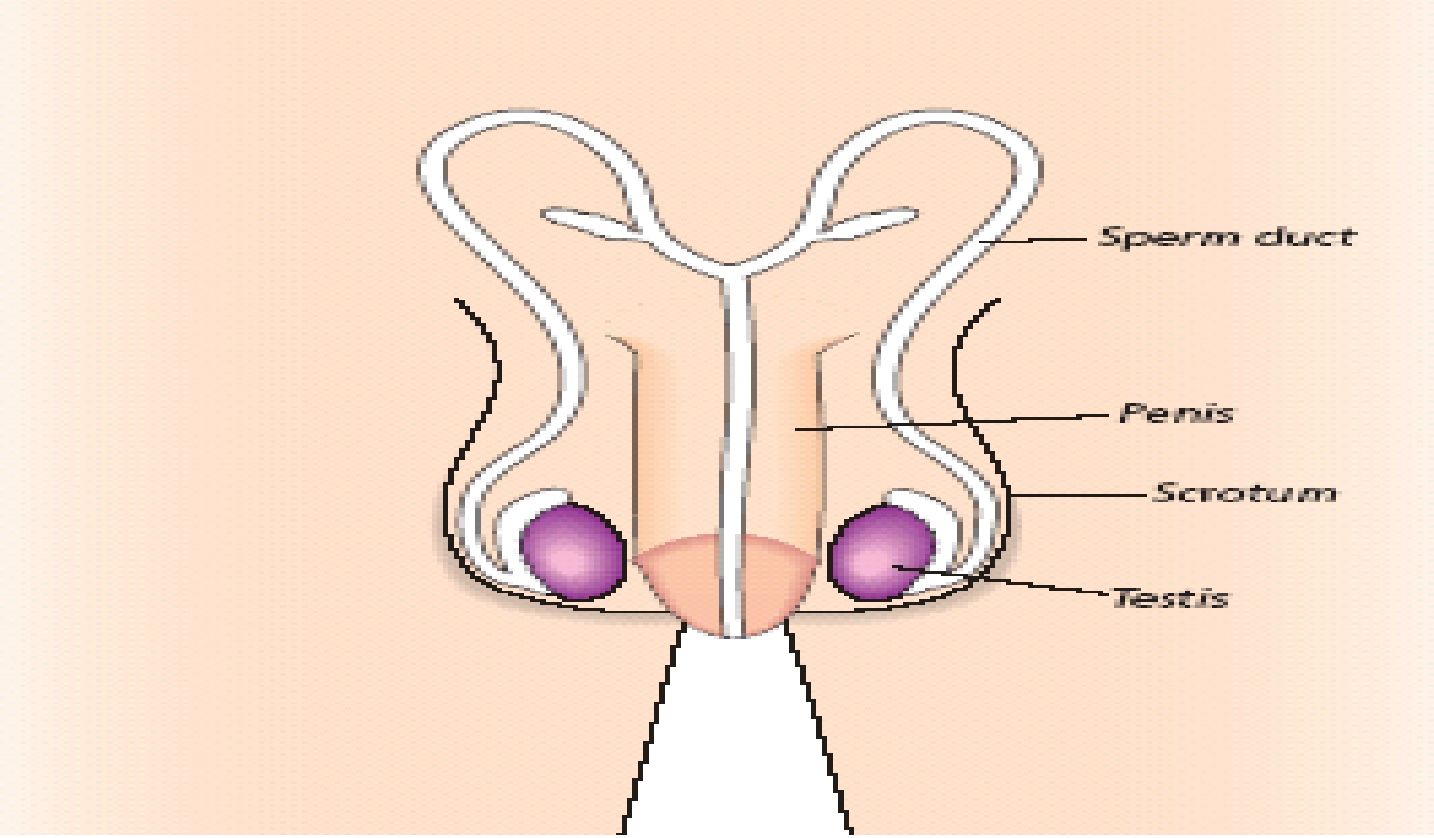
The Male Reproductive System

The Testis

- The Testis make sperm

- Millions of sperm are produced each day

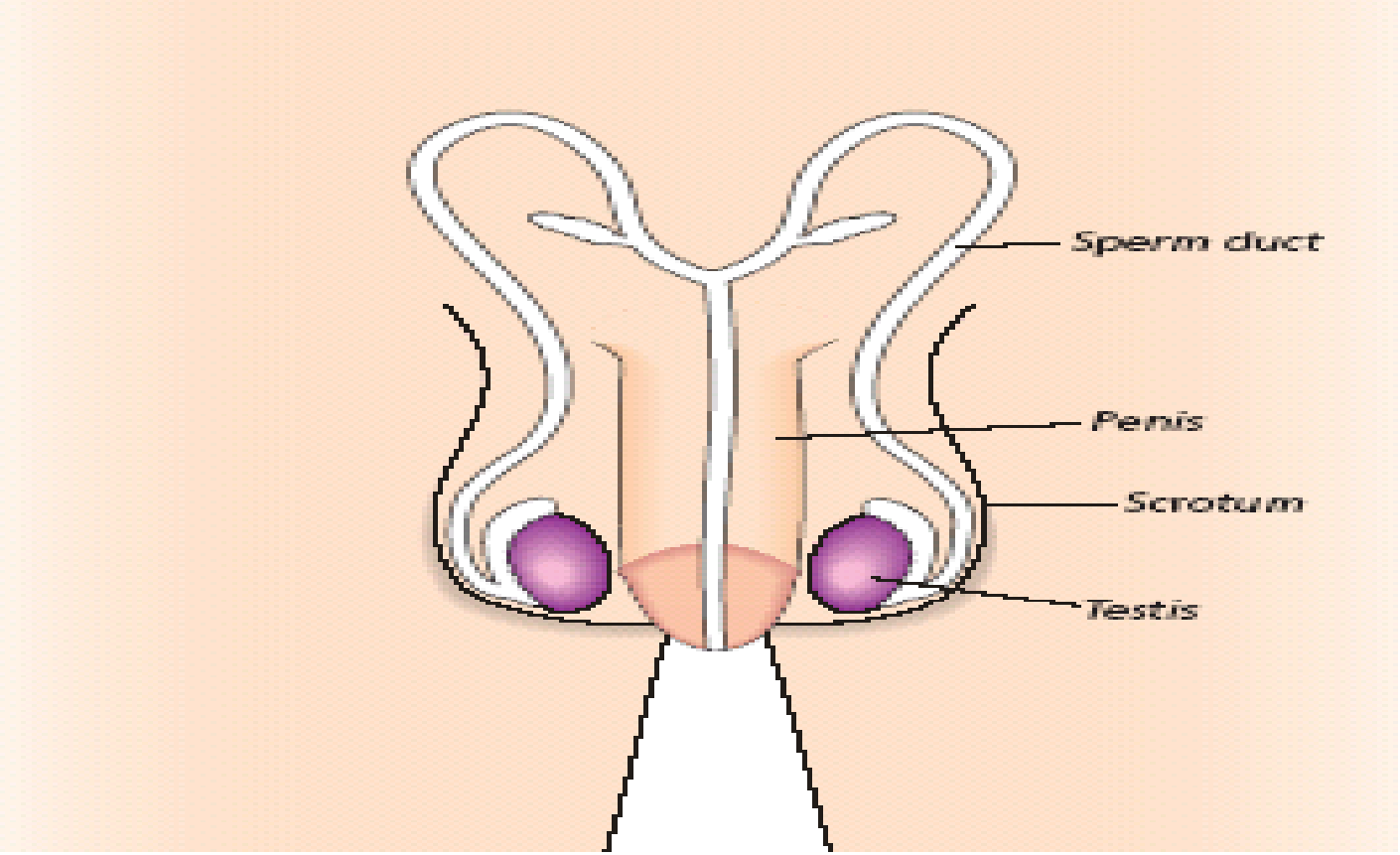
Sperm (Male sex cell)


Sperm duct
Penis
Scrotum
Testis

The Male Reproductive System

The Scrotum

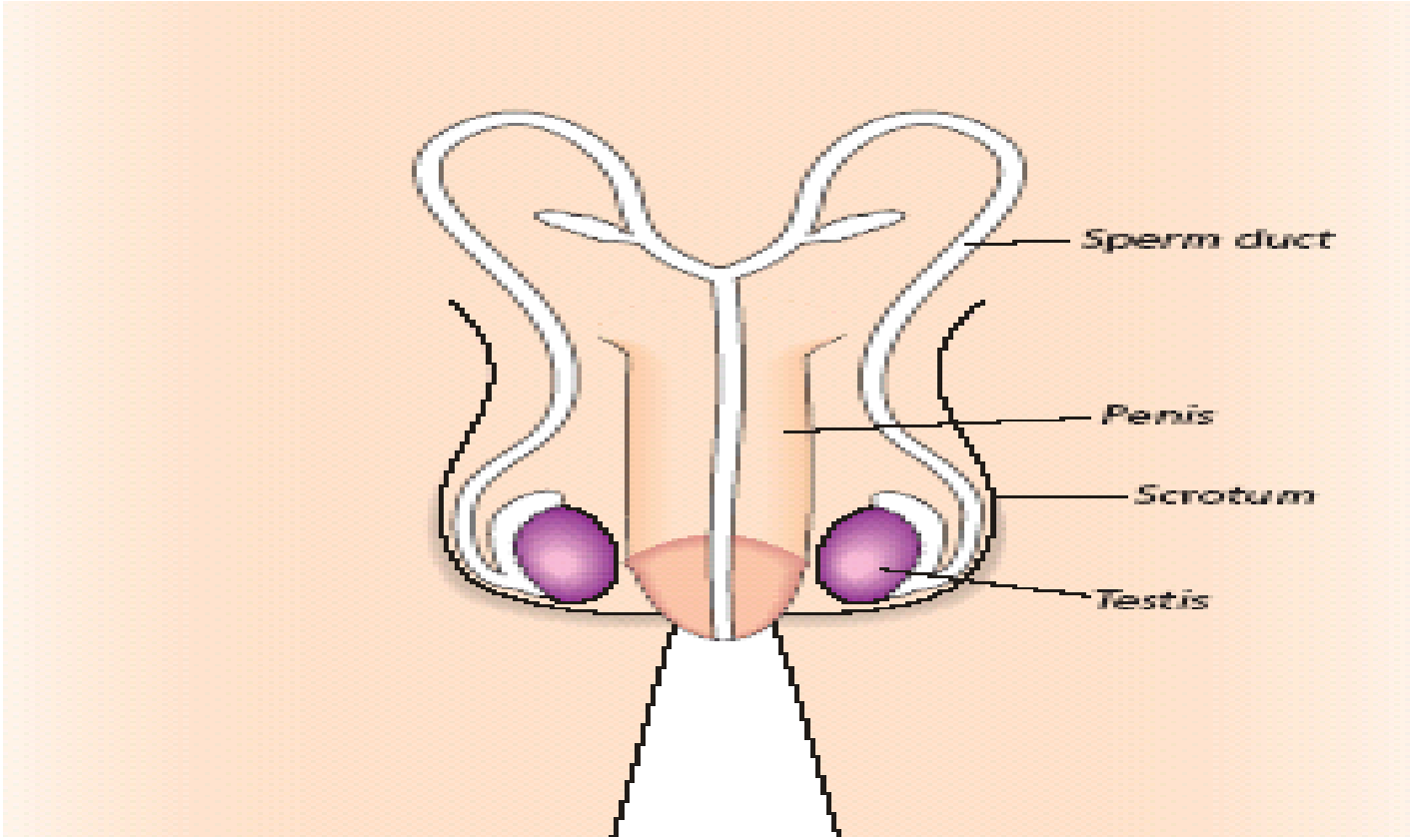
- The Scrotum is a sac where the testis are held
- The Scrotum keeps the testis at a temperature just below body temperature (37°C)
- This allows sperm to be made successfully


Sperm duct
Penis
Scrotum
Testis

The Male Reproductive System

Sperm Ducts

- 2 Sperm Ducts carry sperm from the testis to the penis
- A number of glands are found along the sperm ducts. These glands produce a liquid called seminal fluid
- Sperm + Seminal fluid = semen

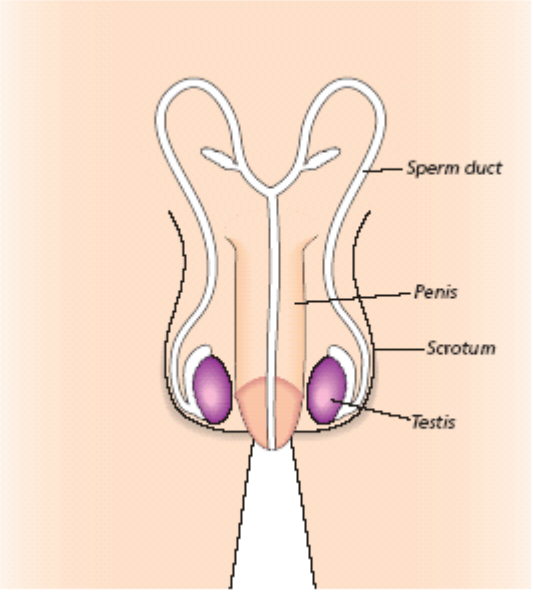

Sperm duct
Penis
Scrotum
Testis

The Male Reproductive System

The Penis

- The 2 sperm ducts join to form a tube called the urethra (in the middle of the penis)
- Semen (Sperm and Seminal fluid) pass out of this tube and into the female body

The Male Reproductive System



The Female Reproductive System

The Female Reproductive Systen

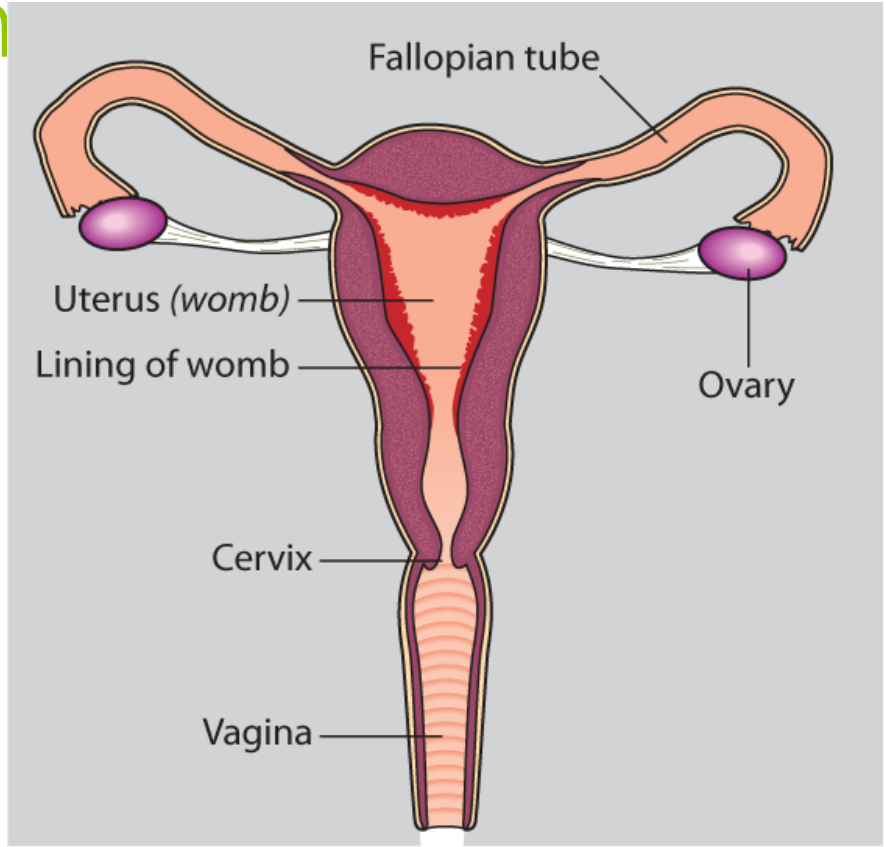


Fig 10.4 The female reproductive system

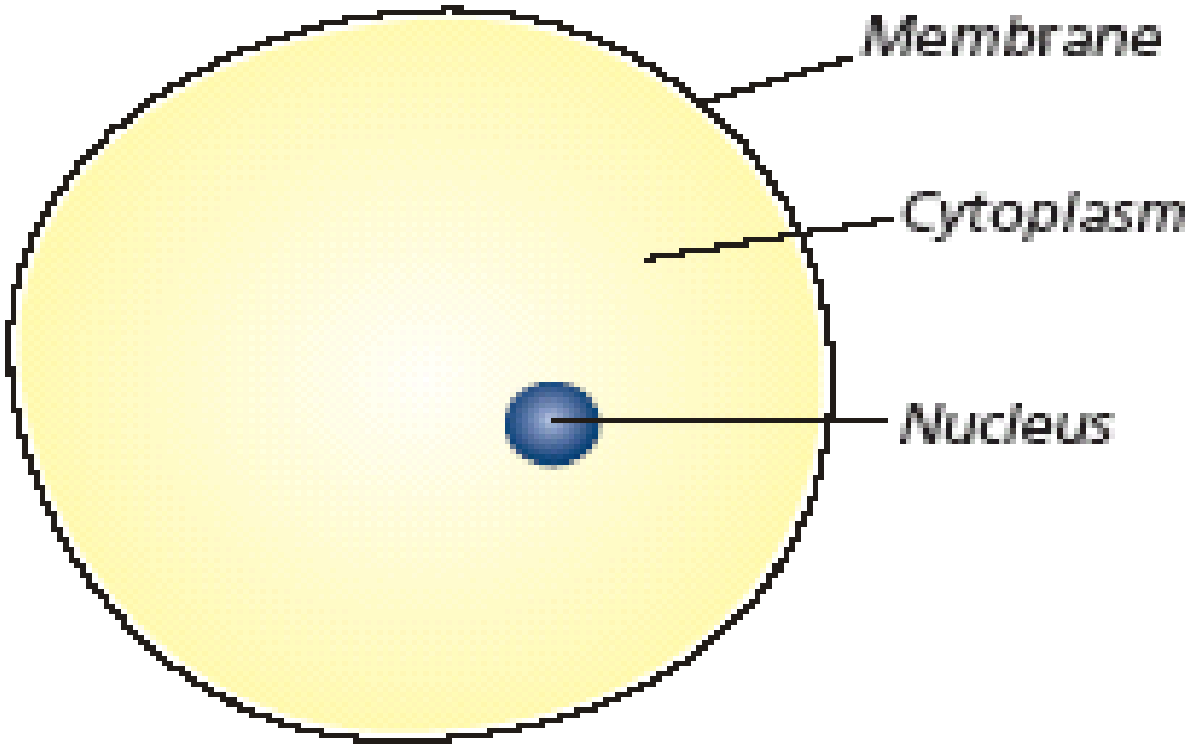
The Female Reproductive System

The Ovary

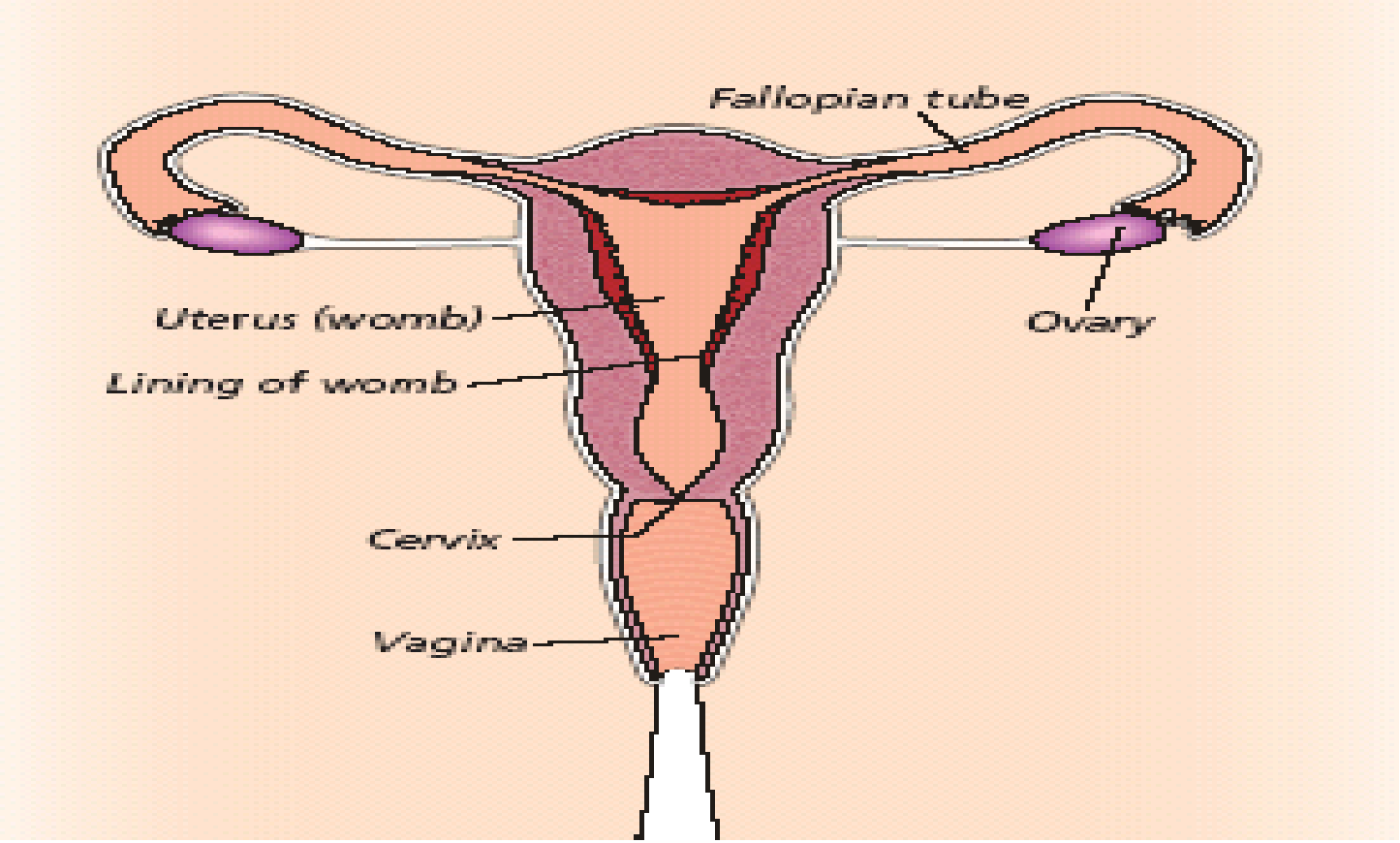
- The ovaries produce eggs

- Normally 1 egg is produced each month

The Egg (Female sex cell)



The Female Reproductive

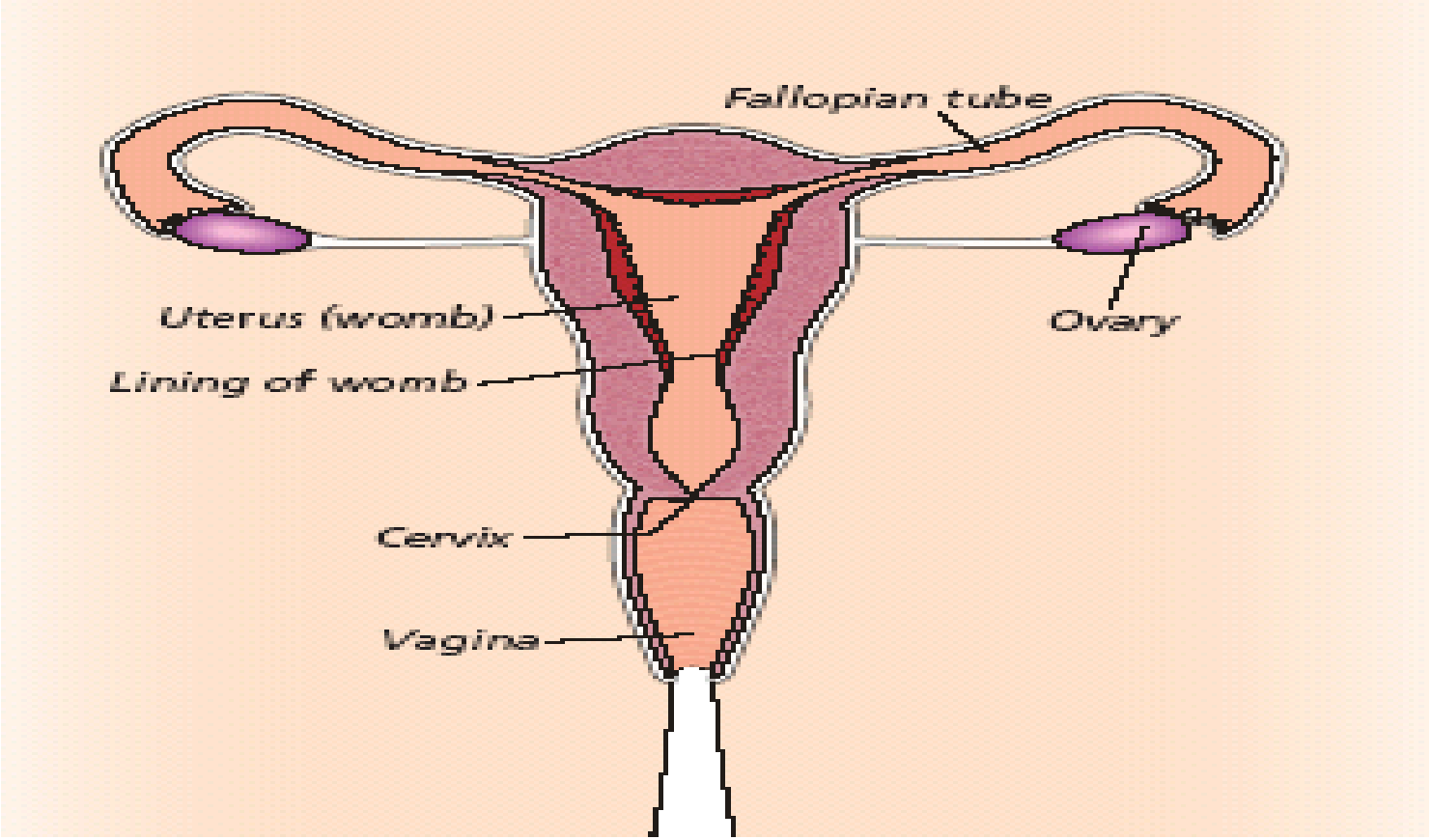


The Female Reproductive System

The Fallopian Tube

- The Fallopian Tube collects the egg from the ovary each month and brings it to the uterus (womb)
- If sperm are present, one may join with the egg here
- If no sperm are present, the egg dies

The Female Reproductive



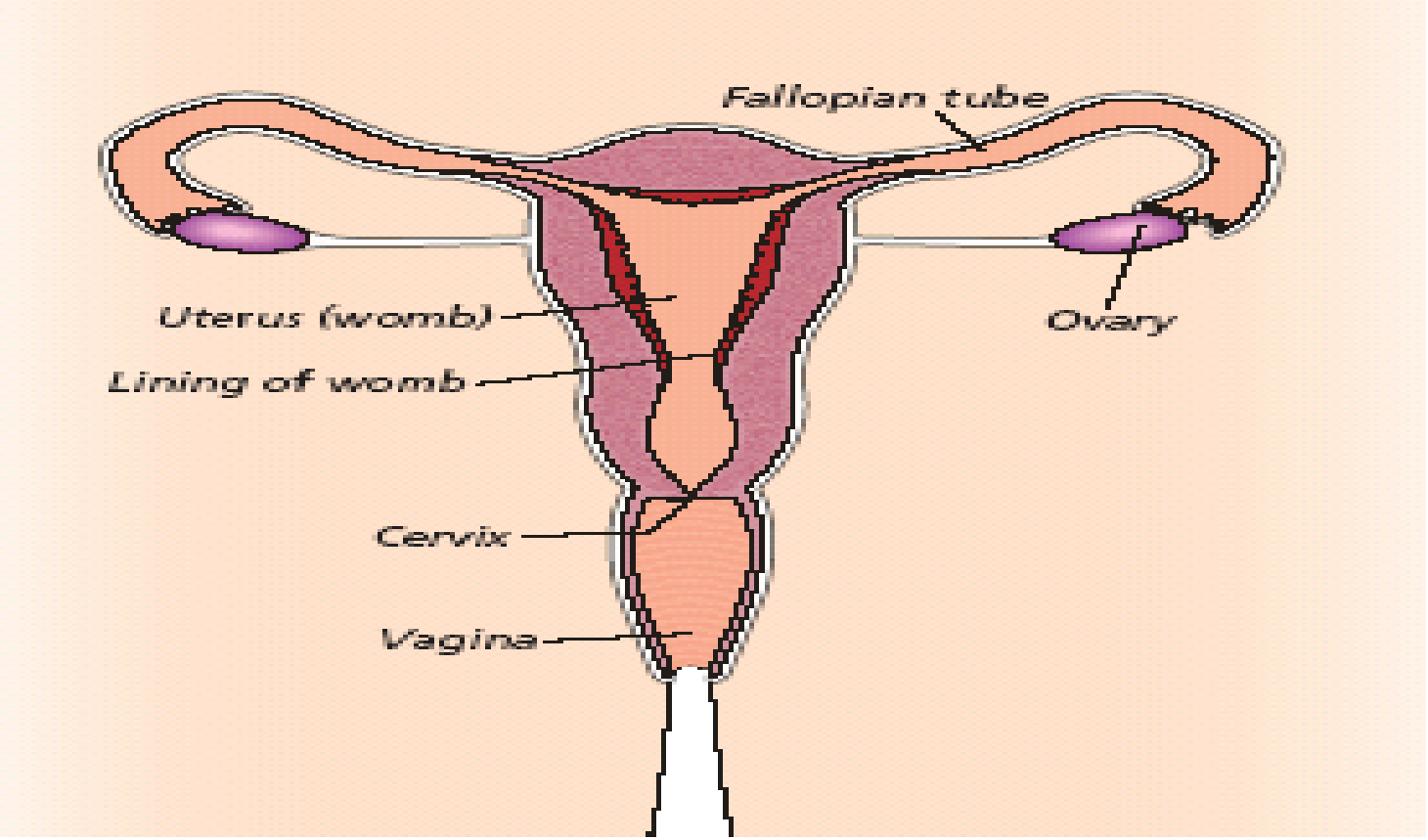
The Female Reproductive System

The Uterus

- The Uterus = The Womb

- This is where the embryo (baby) will develop

The Female Reproductive



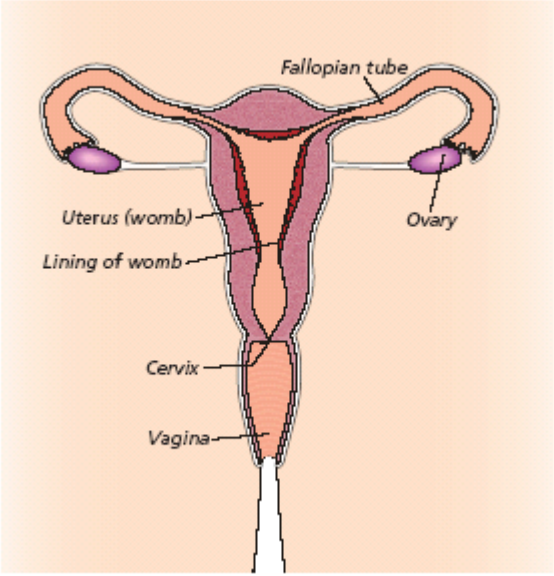
The Female Reproductive System

The Cervix

- The Cervix is the opening or the neck of the Uterus

- Sperm pass through the Cervix to get to the egg

The Female Reproductive System

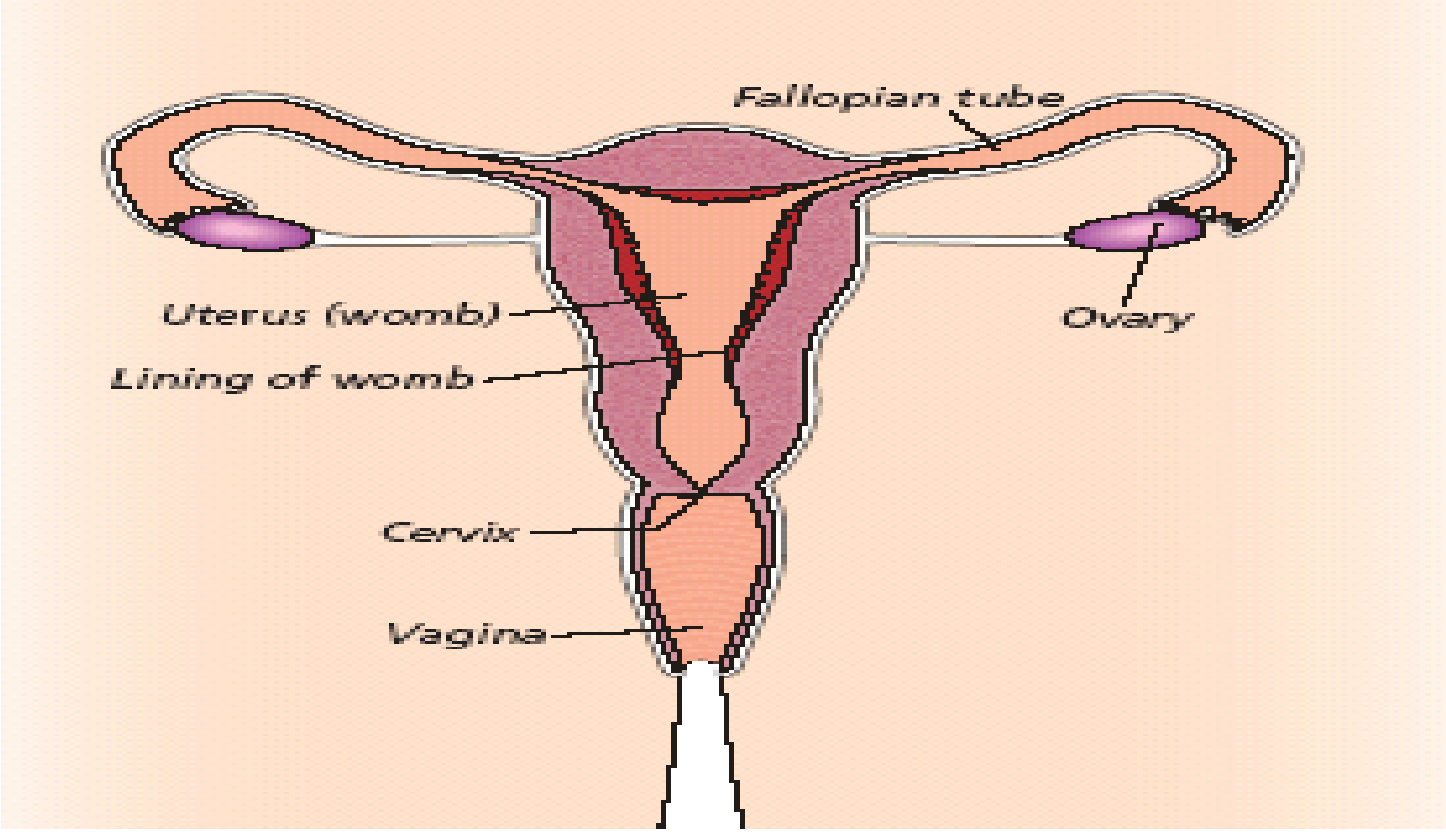


The Female Reproductive System

The Vagina

- The vagina is a muscular tube
- The penis releases sperm through the vagina
- The vagina also forms the birth canal during birth

The Female Reproductive



The Menstrual Cycle

The Menstrual Cycle

- **The Menstrual Cycle** lasts approx 28 days
- Puberty is when the Menstrual Cycle begins (age 10 – 16)
- The Menopause is when the Menstrual Cycle ends (age 50 – 60)

The Me

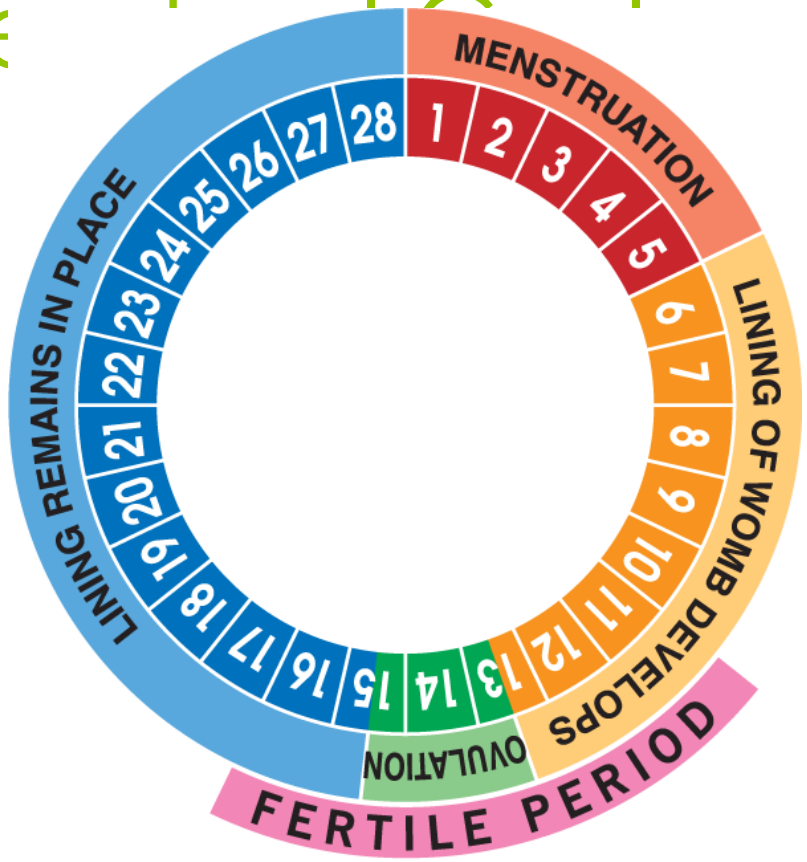


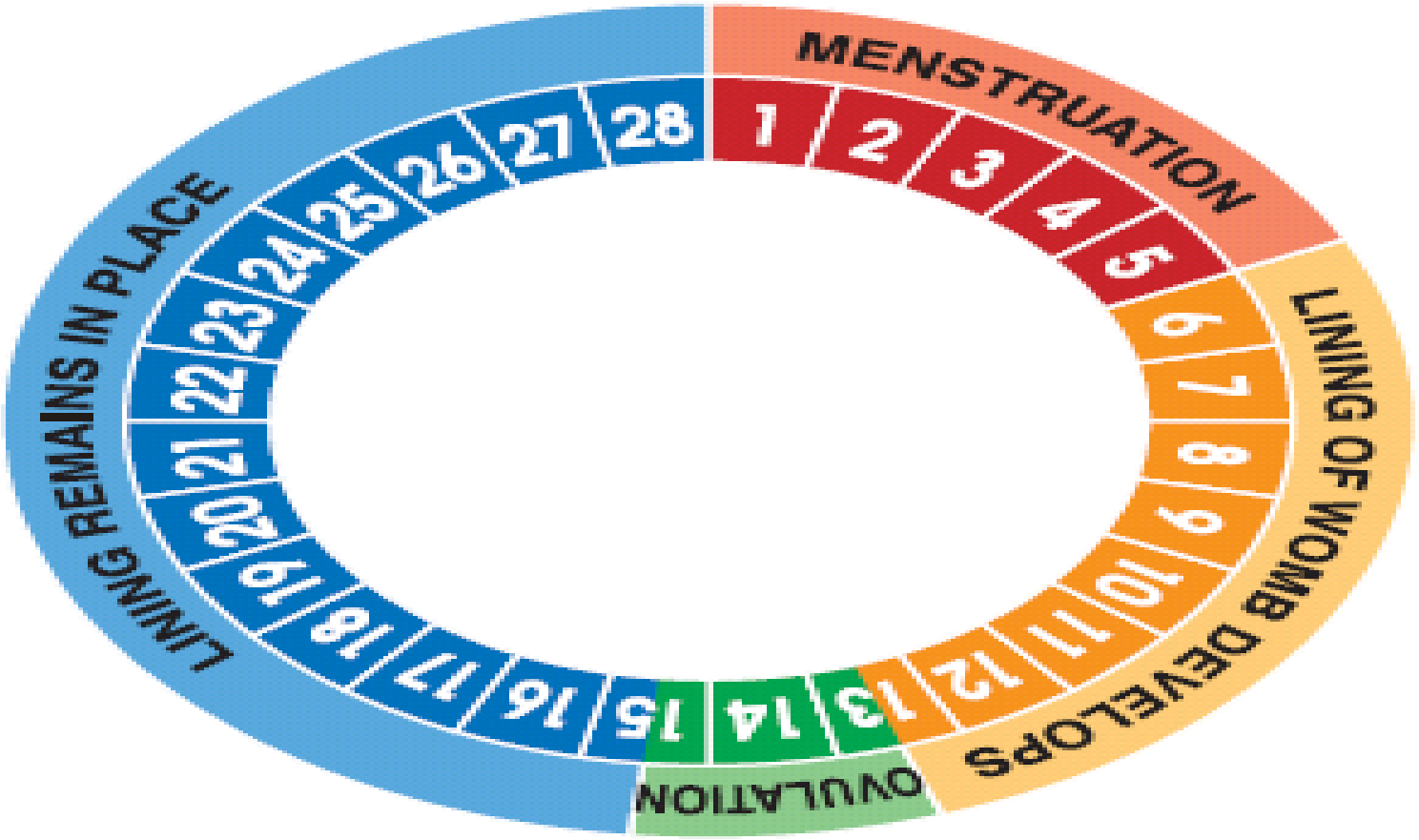
Fig 10.6 The menstrual cycle

The Menstrual Cycle

Day 1-5

- **Menstruation**

  This means the lining of the womb breaks down and is released with some blood as a period out through the vagina in females

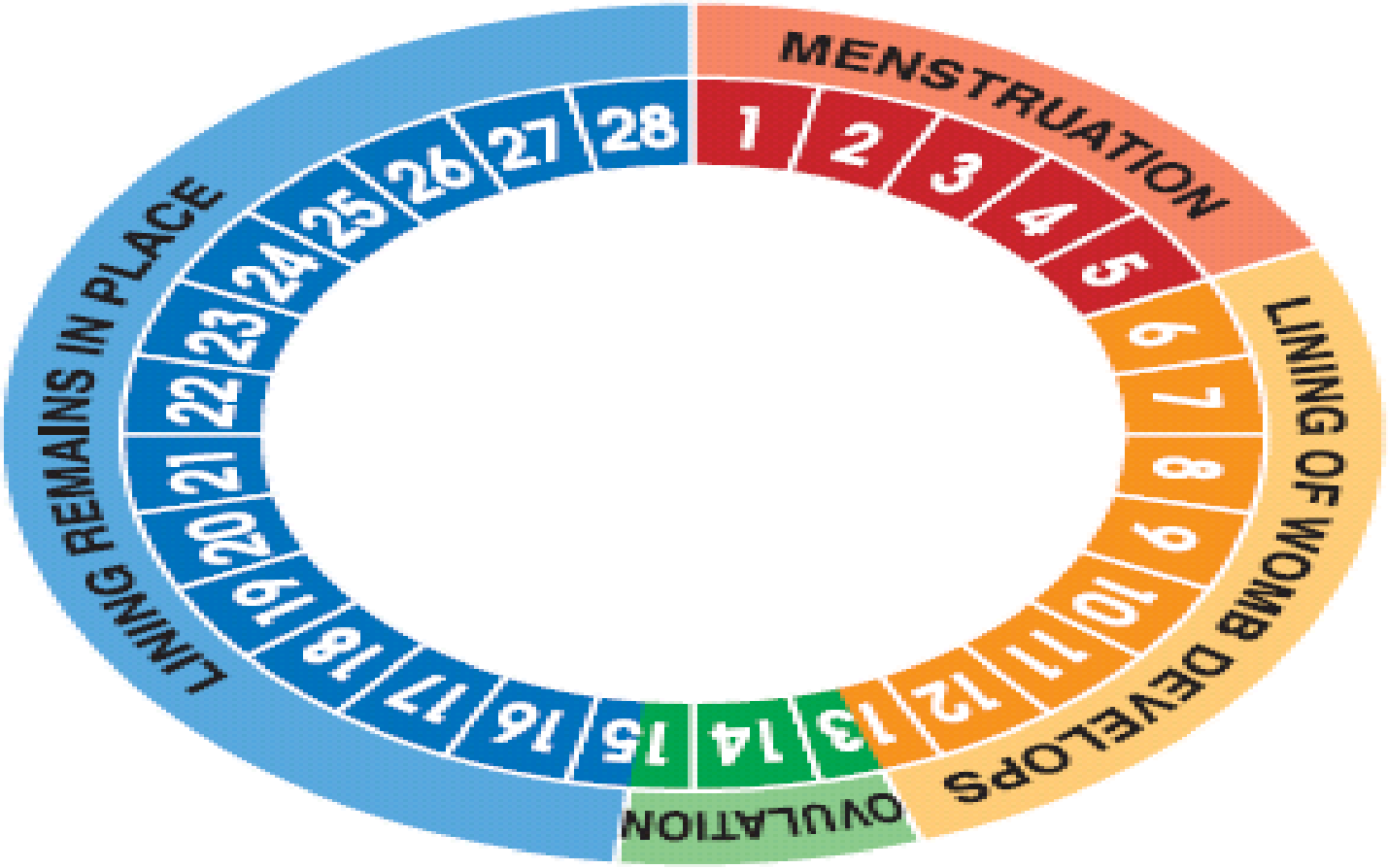

MENSTRUATION
1
2
3
4
5
LINING OF WOMB DEVELOPS
6
7
8
9
10
11
12
13
OVULATION
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
LINING REMAINS IN PLACE

The Menstrual Cycle

Day 14

- **Ovulation**

  This is when an egg is released from the ovary


MENSTRUATION
1
2
3
4
5
LINING OF WOMB DEVELOPS
6
7
8
9
10
11
12
13
OVULATION
14
15
LINING REMAINS IN PLACE
16
17
18
19
20
21
22
23
24
25
26
27
28

The Fertile Period

- **The Fertile Period**

  The Fertile Period is the days in the Menstrual cycle when a female is most likely to get pregnant if she has unprotected sex

The Fertile Period

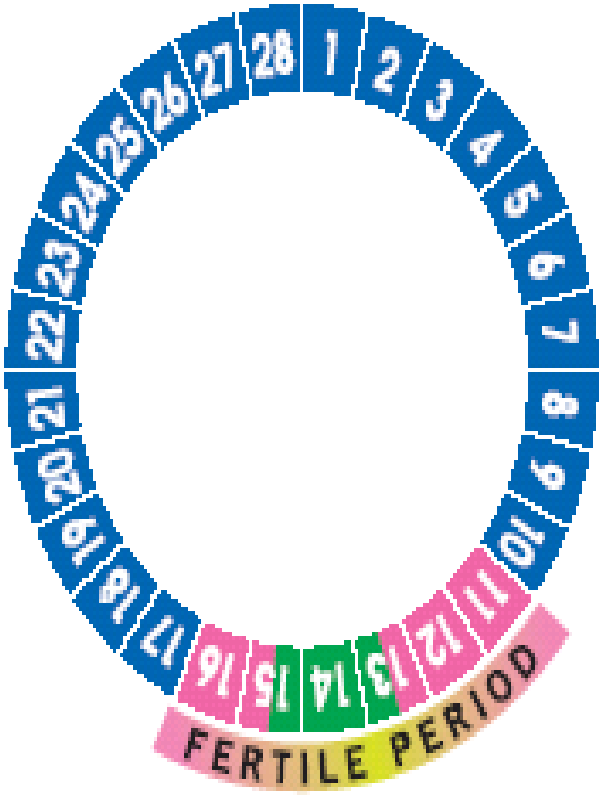
- Sperm can stay alive for 3 days inside the female
- This means the female could get pregnant if she had unprotected sex 3 days before ovulation

The Fertile Period

- The Egg can stay alive for 2 days
- This means the female could get pregnant if she had unprotected sex 2 days after ovulation

The Fertile Per

- Therefore the Fertile Period could last up to 6 days!



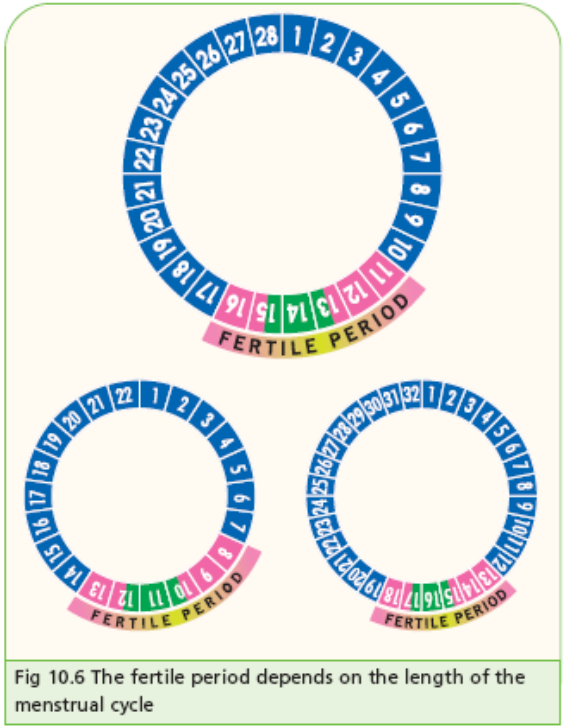


Fig 10.6 The fertile period depends on the length of the menstrual cycle

Sexual Reproduction

Sexual Reproduction

Sexual Reproduction involves many stages. These are:

1. Sexual Intercourse
2. Fertilisation
3. Implantation
4. Pregnancy
5. Birth

Sexual Intercourse

Sexual Intercourse

- **Sexual Intercourse** is:

1. When the erect penis of the male is placed in the vagina of the female.
2. The movement of the penis in the vagina causes semen to be released from the penis (ejaculation)

The path of sperm

The path of sperm:

- 100,000,000 sperm are released into the vagina
- The sperm swim up through the cervix and into the uterus
- They swim from the uterus to the fallopian tubes

The path of sperm

- If an egg is present one sperm will join to it (Fertilisation)
- If no egg is present the sperm will die after 3 days

Fertilisation

Fertilisation

- **Fertilisation is:**

  Is the joining of the male sex cell (sperm) to the female sex cell (egg) to form a zygote

Fertilisation

- The egg has left the ovary and waits in the fallopian tube
- Many sperm swarm around the egg in the fallopian tube
- Only one sperm will enter with it's head

Fertilisation

- Fertilisation occurs when the nucleus of the sperm joins with the nucleus of the egg
- A single cell called a zygote forms

Implantation

Implantation

- The Zygote divides many times to form an Embryo
- After a few days **Implantation** occurs

Implantation

- **Implantation is:**

  When the Embryo attaches itself to the lining of the womb

- The Embryo divides many more times to form a foetus

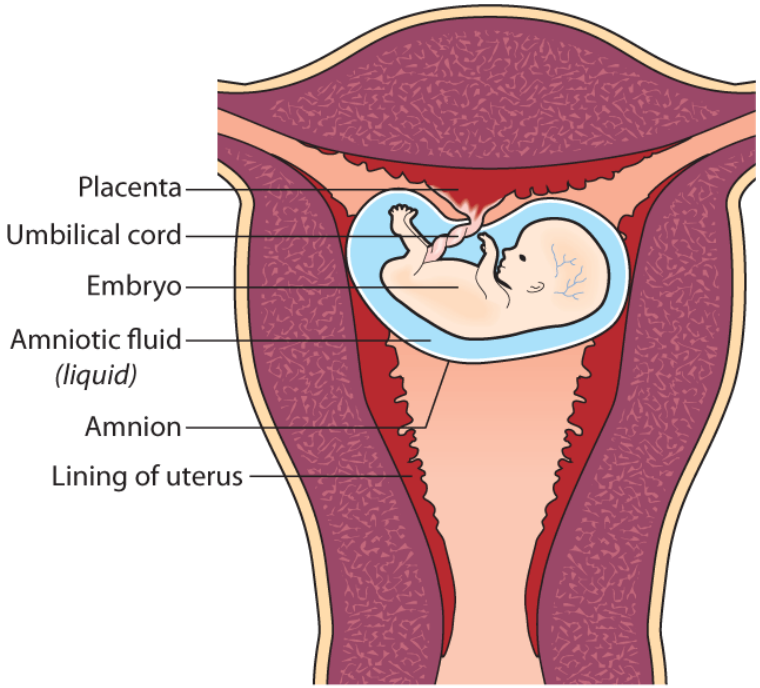


Fig 10.9 Embryo (or foetus) in the uterus

Pregnancy

Pregnancy

- **Pregnancy is:**

  The length of time the baby spends developing in the uterus (womb)

- Pregnancy lasts approx 9 months

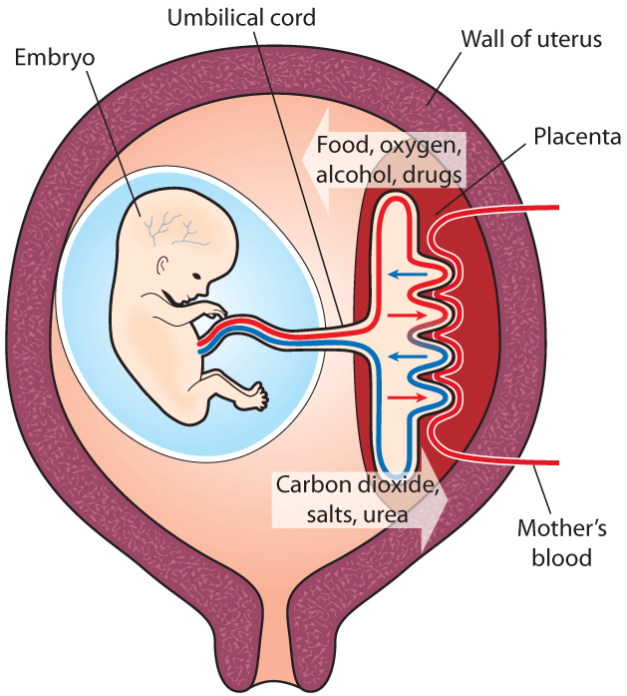


Fig 10.11 The functions of the placenta

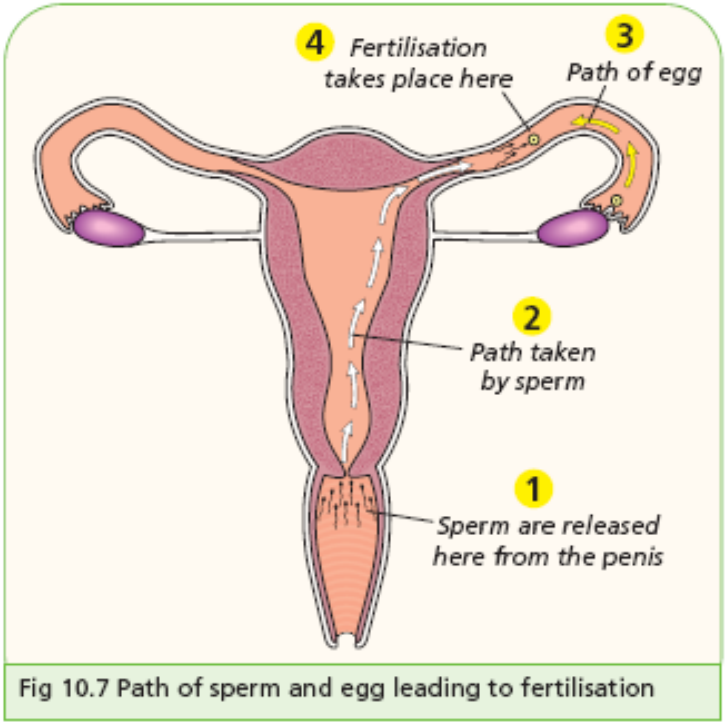


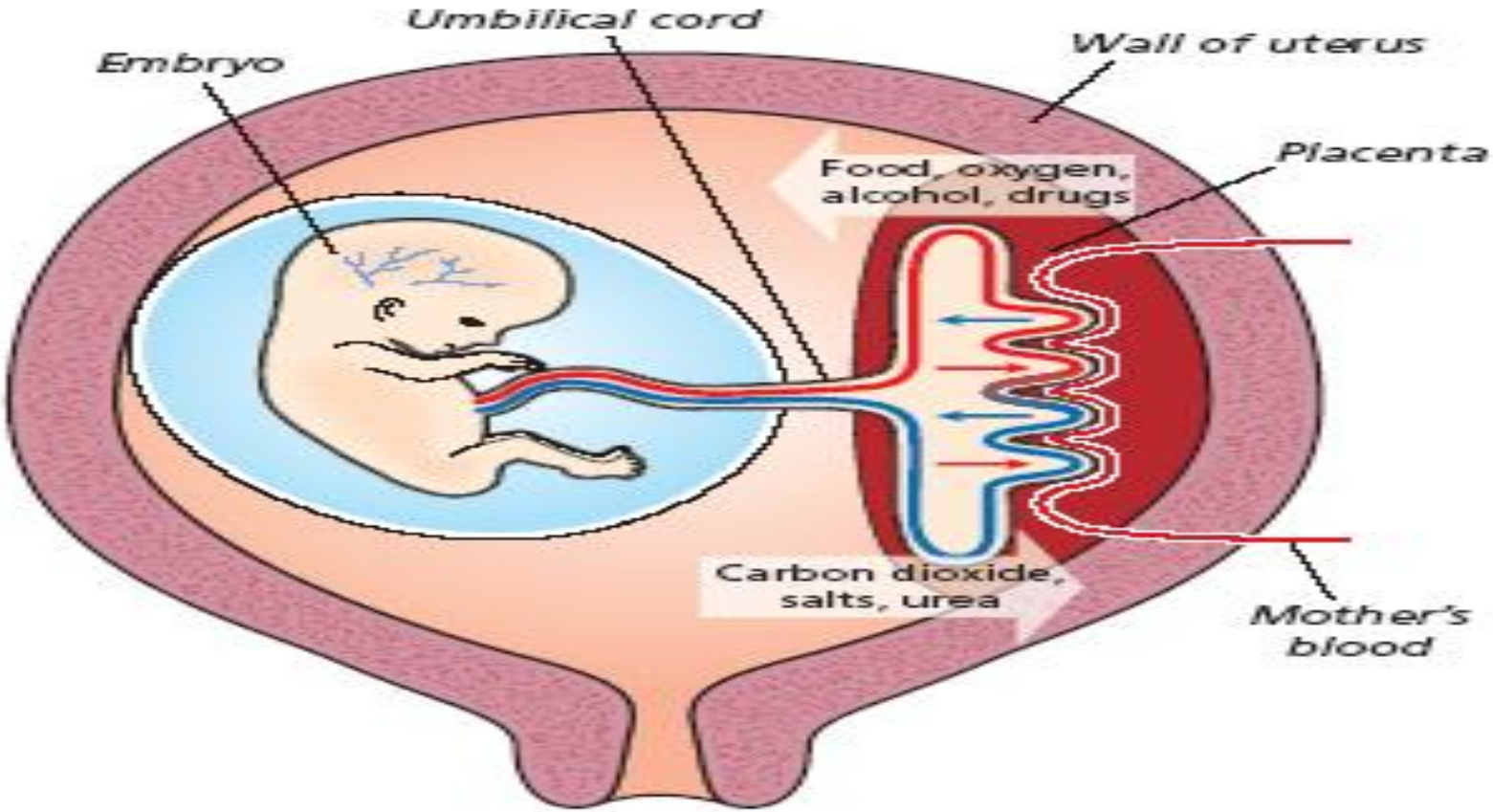
Fig 10.7 Path of sperm and egg leading to fertilisation

The Placenta

- **The Placenta:**

  allows materials (food, oxygen, waste products) to pass between mother and baby in the womb

- The mothers and babys blood never mix
- Instead materials diffuse across to each other


Umbilical cord
Embryo
Wall of uterus
Placenta
Food, oxygen, alcohol, drugs
Carbon dioxide, salts, urea
Mother's blood

Birth

Birth

- At approx 9 months birth occurs
- The uterus begins to contract (labour)
- The baby's head is pushed out through the Cervix and Vagina

Birth

- The umbilical cord is clamped and cut
- The uterus continues to contract until the placenta is pushed out (after birth)

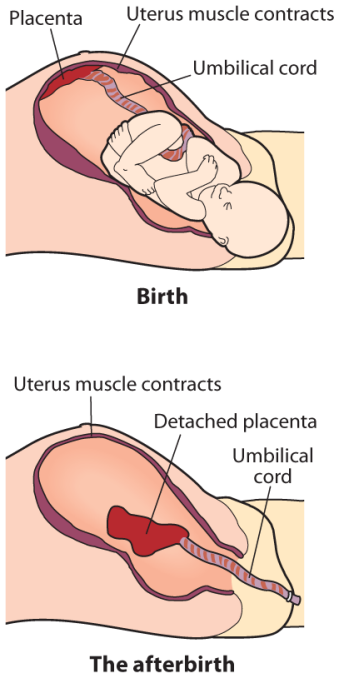


Fig 10.13 Childbirth

Growth of the baby

Growth of the baby

- The baby ideally should be fed breast milk (full of antibodies) which will help fight off infection
- The differenet systems develop and become co-ordinated in the first few months

Growth of the baby

- Teeth form at approx 6 months
- The baby will eat solids at approx 1 year
- The baby will walk and talk at approx 1 year

Puberty

Puberty

- **Puberty** occurs at approx 10 -16
- During Puberty the sex organs fully develop

Puberty in Boys

- Enlargement of the penis and testes
- Deepening of the voice
- Growth of hair on body parts

Puberty in Girls

- Enlargement of the pelvis (hips), breasts, vagina and uterus
- Growth of hair on body parts

Contraception

Contraception

- **Contraception is:**

  the prevention of fertilisation or pregnancy

- There are 2 main types of contraception:

1. Preventing Fertilisation
2. Preventing Pregnancy

Contraception

- **Preventing Fertilisation**

1. The pill stops the female producing eggs
2. A condom prevents sperm from reaching the egg

- Other methods: chemical creams, a cap, an operation

Contraception

- **Preventing Pregnancy**

1. The Coil prevents the embryo from attaching to the womb
2. The morning after pill prevents the embryo from attaching to the womb
3. Moral beliefs. Waiting for sex until marriage prevent pregnancy