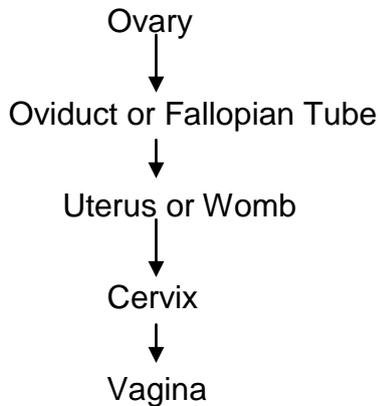


THE HUMAN FEMALE REPRODUCTIVE SYSTEM

THE PATH THE EGG TRAVELS



PARTS OF THE FEMALE REPRODUCTIVE SYSTEM

Ovary

- ◆ There are _____ ovaries (female gonads)
- ◆ Produces eggs or ova (female gametes), female sex _____ (**oestrogen and progesterone**) that regulate the menstrual cycle, pregnancy, and the secondary sexual characteristics (e.g. _____)
- ◆ **Puberty** is the time during teenage years when females start to release eggs. Puberty occurs a couple of years _____ for females than males usually
- ◆ **Menopause** is the time when females _____ releasing eggs. This usually occurs between 45 to 55 years of age.
- ◆ At birth, females have all their eggs formed, but in an immature state
- ◆ After puberty and before menopause, one egg is released about every _____ days from each ovary

Oviduct or Fallopian Tube

- ◆ Connects between ovary and _____
- ◆ Place where conception or fertilisation of an egg by a _____ occurs

Uterus or Womb

- ◆ Strong muscular and elastic organ where an unborn _____ develops
- ◆ After an egg is released from the ovary, a blood-filled lining develops on the walls of the uterus in preparation for the nourishment of the unborn baby. If no fertilisation of the egg occurs, then this lining passes out through the vagina over several days as 'periods' or _____

Cervix

- ◆ The opening between the uterus and the vagina
- ◆ During pregnancy, a mucous plug forms across the cervix separating the uterus from the outside to prevent _____ of the unborn baby.

Vagina

- ◆ Place where the _____ is inserted during sexual intercourse
- ◆ An elastic and muscular organ that _____ during birth to allow for the passage of the baby

THE FEMALE MENSTRUAL CYCLE

- ◆ The menstrual cycle begins at _____ and ceases at menopause.
- ◆ It takes about _____ days.
- ◆ Menstruation is regulated by the female sex hormones, oestrogen and _____
- ◆ **Menstruation** – Menstruation or ‘periods’ is the release of the blood-filled lining of the uterus if a woman is not pregnant. It begins on Day 1 when menstruation or ‘periods’ begin, and lasts about _____ days.
- ◆ **Ovulation** is the release of the egg from the ovary between about Days 12 to 16.
- ◆ A woman will become pregnant if fertilisation (the _____ of the egg and the sperm) occurs several days after ovulation when the egg is in the fallopian tube. During pregnancy, menstruation _____
- ◆ **Role of hormones in the menstrual cycle** - The Hypothalamus in the brain stimulates the pituitary gland in the brain to produce the hormone FSH (Follicle-Stimulating Hormone). FSH stimulates the growth of an egg _____ in the ovary. The follicle in the ovary secretes oestrogen which stimulates the repair of the uterus wall after _____ and it also stimulates the pituitary gland to produce LH (Luteinizing Hormone). This prevents more than one follicle from developing. LH induces ovulation (release of the _____) and the development of the follicle into the corpus _____. The corpus luteum secretes progesterone. If a female becomes pregnant, the corpus luteum will secrete gonadotrophin which allows the corpus luteum to continue producing progesterone which stimulates the growth of the uterus wall, by inhibiting LH and FSH. If the woman does not become pregnant, the corpus luteum _____, which leads to less production of progesterone and oestrogen, and menstruation will occur, and another menstrual cycle begins because the lower progesterone and oestrogen levels will stimulate the _____ gland in the brain to produce FSH.

OESTRUS CYCLE IN OTHER ANIMALS

- ◆ **Oestrus** is a time when a female animal demonstrates the intensity of the sexual urge. She is said to be 'in _____'. Changes in the lining of the vagina and uterus also prepare for the fertilised egg. Oestrus occurs about the time of ovulation. Female cats and dogs have 2 oestrus periods per year, whereas rats can have them every 5 days.

FERTILISATION OR CONCEPTION

- ◆ After sexual intercourse, the sperm travels up to join with the egg in the fallopian tube.
- ◆ The single-celled fertilised egg is called a _____
- ◆ 23 chromosomes of the sperm and 23 chromosomes of the egg combine in the zygote's nucleus, so that the developing baby has _____ chromosomes.

INTERNAL AND EXTERNAL FERTILISATION IN ANIMALS

- ◆ **Internal Fertilisation** occurs when the male gamete joins with the female gamete inside an organism (e.g. in _____). An advantage is that the survival rate is higher, but the number of offspring is _____
- ◆ **External Fertilisation** occurs when the male gamete joins with the female gamete outside the organism (e.g. fish). This often occurs in a _____ environment, many offspring are produced, but there is a low survival rate.

GESTATION OR PREGNANCY

- ◆ Gestation in humans lasts about 40 weeks or _____ months
- ◆ The first sign that a woman is pregnant is usually _____ of menstruation ('no periods')
- ◆ After fertilisation in the fallopian tube, the zygote multiplies to form a ball of cells which travels down to the uterus
- ◆ The ball of cells (**embryo**) implants into the wall of the _____
- ◆ At the place where _____ occurs, an organ called the **placenta** develops
- ◆ The **umbilical cord** grows between the _____ and the unborn baby's navel
- ◆ Inside the umbilical cord are blood vessels which provide nutrients and oxygen to the baby, and return wastes such as _____ back to the mother's bloodstream
- ◆ As the baby grows, it is called a **foetus**
- ◆ The foetus is _____ by **amniotic fluid** inside an **amniotic sac**
- ◆ In the ninth month of pregnancy, the foetus turns upside down, and the mother's breasts enlarge ready for _____ production

BIRTH

- ◆ At about 9 months, the 'plug' at the cervix releases, the _____ sac breaks and fluid comes out through the vagina ('breaking of the waters')
- ◆ Muscular contractions occur to both dilate the _____ and 'push' out the baby _____ first from the uterus
- ◆ Further muscular contractions expel the _____ ('afterbirth')
- ◆ The umbilical cord is cut close to the baby's navel
- ◆ The mother begins breast milk production
- ◆ The mother begins the _____ cycle again after the lining of the uterus from the pregnancy has been expelled over several days
- ◆ **Breech Birth** occurs when the baby is born legs first
- ◆ **Caesarean Birth** is the _____ removal of the baby from the mother's uterus
- ◆ **Twins - Identical Twins** (i.e. 2 sisters or 2 _____) form when one egg and one sperm join, but as the zygote multiplies to form a ball of cells, the ball _____. **Non-identical or Fraternal Twins** are formed when ___ eggs are fertilised by 2 sperm.