

Human Sexual and Reproductive System:

evolution, diversity, structure and function



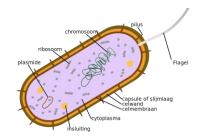
Establish class values



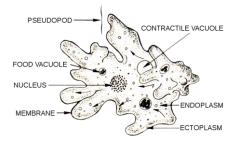
- We will be talking about sexuality, gender, pleasure, abuse and safety in these sessions. What will make this class a safe space for everyone to share, express their views and discuss freely?
- How do we want others to behave?
- How will we behave?

Asexual organisms

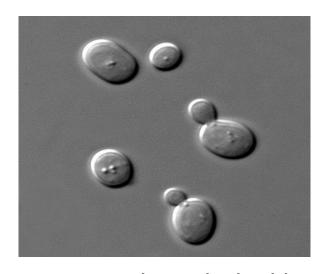




Bacteria



Amoeba



Yeast reproducing by budding

Very little genetic variation Limited diversity

Image Sources: 123

Hermaphroditic organisms

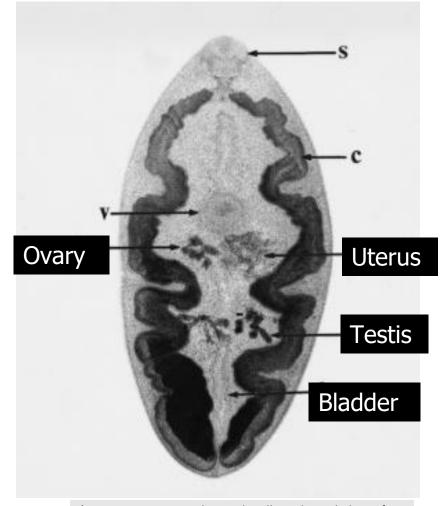




Earthworms (below) and flatworms (above and on the right) have both male and female systems in the same body.

Image sources: 12

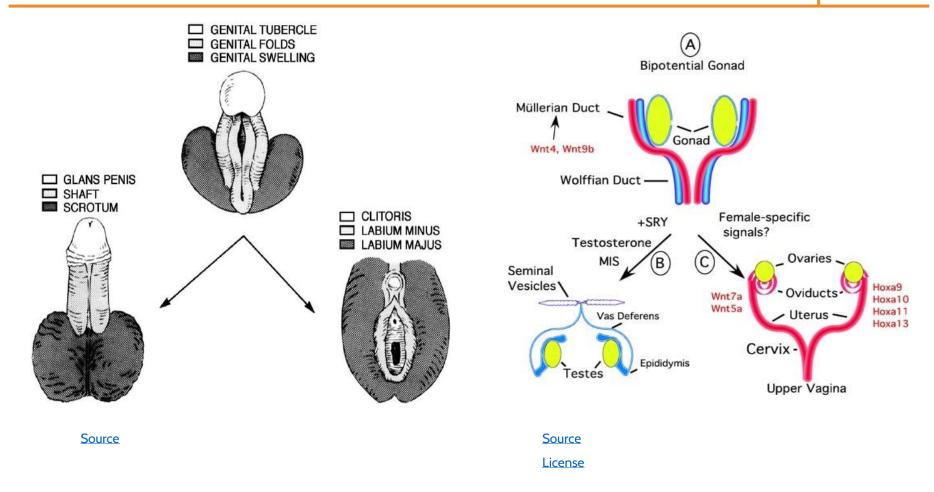




(From D.H. Connor and F.W. Chandler, eds. *Pathology of Infectious Diseases*. Appelton and lange, Stamford Conn., 1997. Original photography courtesy of Mr. Harold Langben, Walter Reed Army Institute of Research).

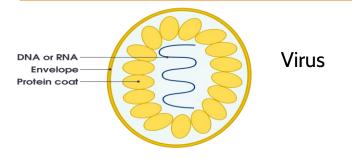
Human evolution: hermaphroditic origins



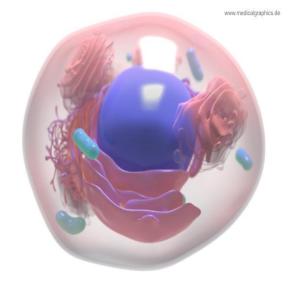


Evolution of life – shared origin





Animal cell



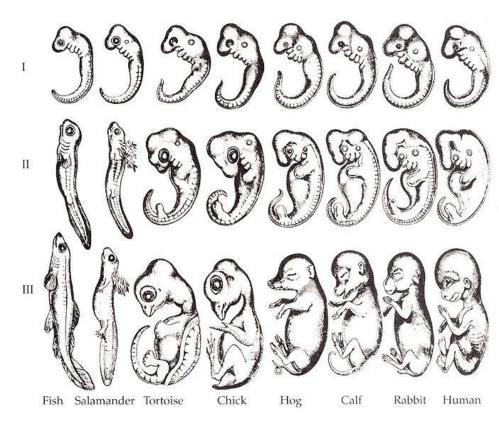


Image Sources: 123

Romanes, G. J. (1892). Darwin and After Darwin. Open Court, Chicago.

Group activity



A-Z of sexuality

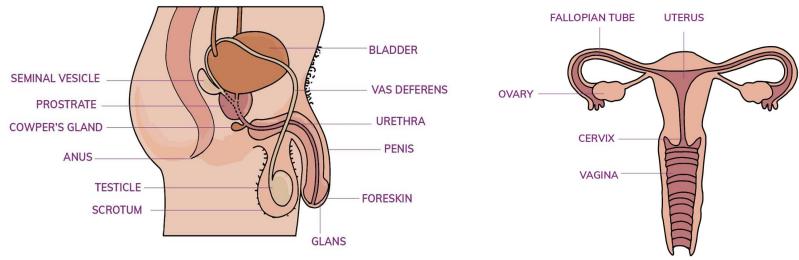
- Participants break into groups of 4-6
- Each group lists as many scientific words as they can think of that are to do with the anatomy and function of the reproductive system.

Discussion:

- First group calls out the words on their list. Other groups cross out the words that are common.
- Groups take turns to call out the remaining words on their list.
- Any word that is not known/ understood by the participants is discussed, and its correct meaning explained by a participant who knows this word or by referring to reliable websites.

Female and male systems

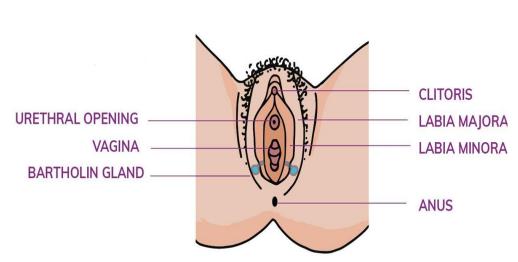


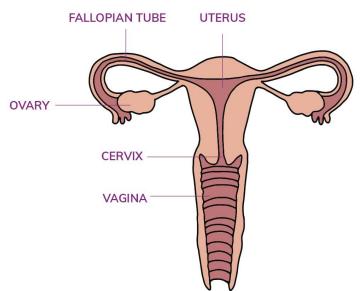


- Images Source: Suvidha Manual 2020, Enfold Proactive Health Trust
- •In the presence of XY chromosomes the gonad develops into a testis and with appropriate hormone exposure, the male reproductive organs develop.
- •In the presence of XX chromosomes the gonad develops into an ovary and the female reproductive system develops from the ducts.

Female reproductive system



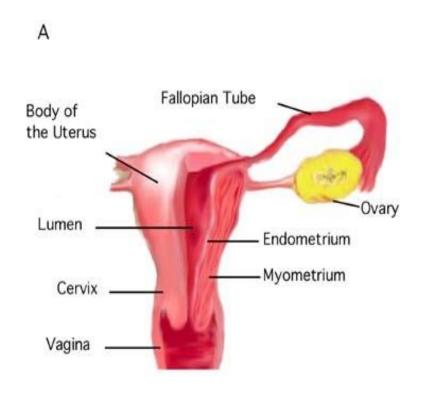


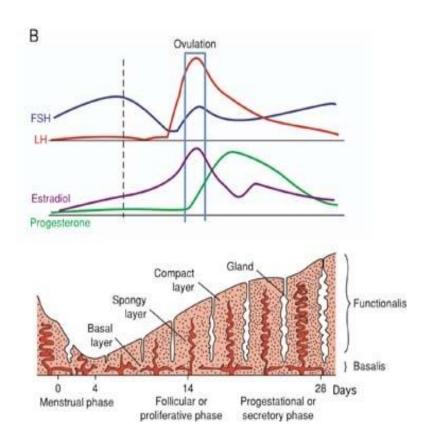


Images Source: Suvidha Manual 2020, Enfold Proactive Health Trust

Menstruation



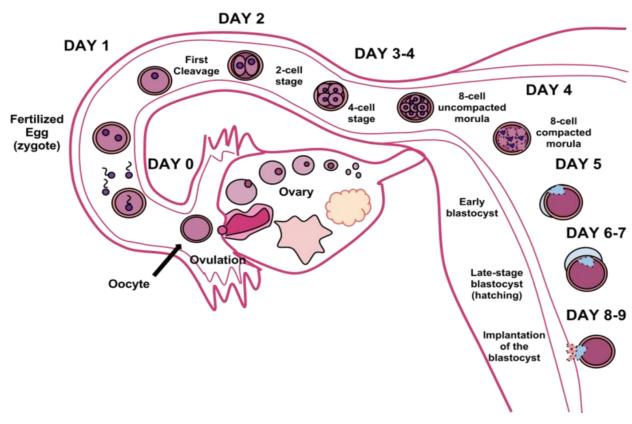




Source

Fertilization and implantation





Source

Male reproductive system



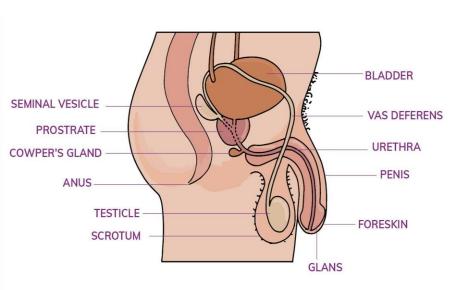


Image Source: Suvidha Manual 2020, Enfold Proactive Health Trust

Organ	Function
Testis	Production of testosterone and sperms
Epididymis	Transport, maturation and ejaculation
Vas Deferens	Transport and ejaculation
Seminal Vesicle	Secrete thick liquid to transport sperm
Prostate Gland	Secrete thin alkaline solution to neutralise urine
Cowper's gland	Secretions may lubricate, flush out urine or form a gelatinous plug
Urethra	Passage for urine and sperm
Penis	Penetration

Intersex variations



- Natural variations in reproductive anatomy and sexual characteristics
 - External genitals that cannot be easily classified as male or female at birth
 - Incomplete or unusual development of the internal reproductive organs
 - o Inconsistency between the external genitals and the internal reproductive organs
 - Variations of the sex chromosomes (46XXY (Klinefelter syndrome), 46XO
 (Turner's syndrome) Incomplete or unusual development of the testes or ovaries
 - Over- or underproduction of sex-related hormones (example Congenital Adreneal Hyperplasia)
 - Inability of the body to respond normally to sex related hormones (example Androgen Insensitivity Syndrome)
- Variations may be visible at birth, evident during puberty or not evident at all until a medical intervention is done for some other reasons.
- More common than thought 1.3 in 1000 live births reported from Turkey (Aydin et al., 2019)

Pubertal changes



- Bodily features required for survival are present from birth. What develops at puberty is to do with reproduction - and signals sexual maturity.
- Changes happen in the brain and the body
- The sexual and reproductive organs develop further and begin to function under the influence of various factors - genetic, hormonal, other biological factors, nutrition etc.
- Similar changes occur in all sexes but to different extent.

Examples of pubertal changes



- Height, muscles, body and facial hair, voice deepening usually more in males: play a role in establishing dominance over sexual competitors.
- Fat under the skin, pelvic size, breast usually more in females: helps in pregnancy, delivery, lactation.

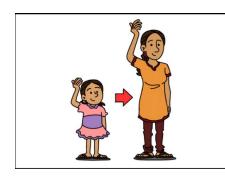
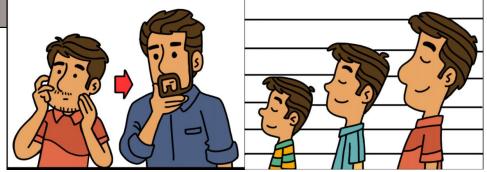




Image Source: Suvidha Manual 2020, Enfold Proactive Health Trust



Attraction and sexual arousal



Various factors determine who we feel attracted to.

At a biological level, our senses also play a role:

- Sight we look for symmetry one of the biological markers of health
- Sound we hear voice indicates the effect of sex hormones
- Smell we smell pheromones play a role, said to play a role in avoiding inbreeding
- Taste kissing exchange of HLA antigens present in saliva, gustatory senses and other senses are activated -said to play a role in avoid inbreeding
- Touch releases oxytocin plays a role in bonding, trust



Source

Sexual acts

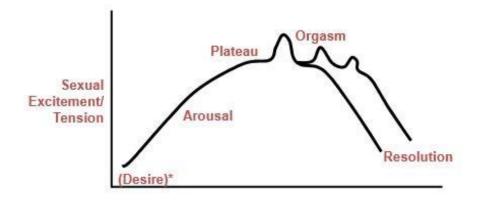


- Intercourse penetrative sex
- Outercourse sexual stimulation to orgasm without penetration
 - different from foreplay which almost always leads to an act of penetration
 - Includes a myriad of sexual acts

Sexual response cycle



Human Sexual Response Cycle



Masters et al. Human Sexual Response. (1966).
*Kaplan HS. Disorders of Sexual Desire and Other New Concepts and Techniques in Sex Therapy. (1979).

Sexual satisfaction possible at any stage, not just during orgasm



This PowerPoint is part of a project to prevent gender-based violence. This project is supported by Ford Foundation.





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Thank You!

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Information, stories on personal safety for children.



Information on answering children's questions, managing child sexual abuse.



STRI SURAKSHA APP

On crimes against women, laws, interventions and healing techniques.