

Reaching the Age of Adolescence

- Q1. Write notes on—
- Adam's apple.
 - Secondary sexual characters.
 - Sex determination in the unborn baby.

Ans. (a) Adam's apple - At puberty, the voice box or the larynx begins to grow. Boys develop larger voice boxes. The growing voice box in boys can be seen as a protruding part of the throat called Adam's apple.

(b) Secondary sexual characters - In girls, breasts begin to develop at puberty and boys begin to grow facial hair, that is, moustaches and beard. As these features help to distinguish the male from the female they are called secondary sexual characters. Boys also develop hair on their chest. In both, boys and girls, hair grows under the arms and in the region above the thighs or the pubic region.

(c) Sex determination in the unborn baby - All human beings have 23 pairs of chromosomes in the nuclei of their cells. Two chromosomes out of these are the sex chromosomes, named X and Y. A female has two X chromosomes, while a male has one X and one Y chromosome. The gametes (egg and sperm) have only one set of chromosomes. The unfertilised egg always has one X chromosome. But sperms are of two kinds. One kind has an X chromosome, and the other kind has a Y chromosome. When a sperm containing X chromosome fertilises the egg, the zygote would have two X chromosomes and develop into a female child. If the sperm contributes a Y chromosome to the egg (ovum) at fertilisation, the zygote would develop into a male child.

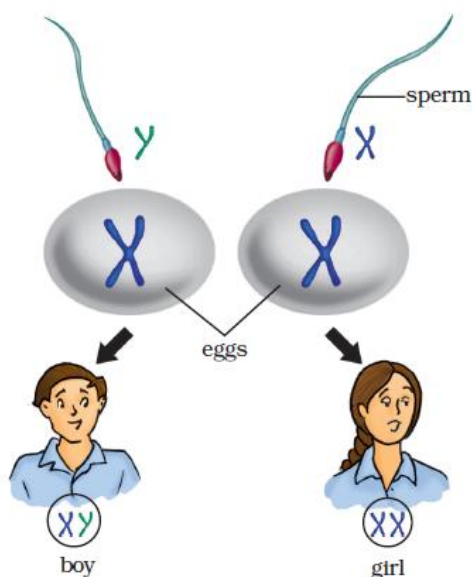


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