

CBSE NCERT Solutions for Class 12 Science Chapter 4

Back of Chapter Questions

1. What do you think is the significance of reproductive health in a society?

Solution:

Reproductive health refers to the total well-being of mental, physical, social and behavioural aspects of the reproduction. It includes proper functioning of the reproductive organs and normal emotional and behavioural interaction regarding sex-related aspects.

Significance of reproductive health in society includes:

- Awareness about the normal functioning of reproductive organs.
- Use of birth control methods to keep the family size in check.
- Use of contraception to prevent sexually transmitted diseases from getting transmitted.
- Eliminating the differences between a male and a female child.
- Emphasising on the benefits of breastfeeding and the importance of postnatal care.

2. Suggest aspects of reproductive health which need to be given special attention in the present scenario.

Solution:

Aspects of reproductive health which needs to be given special attention in the present scenario are:

Importance of contraception in preventing sexually transmitted diseases.

By spreading awareness about safe and hygienic sexual practices.

By providing counselling to teenagers about the physical changes during puberty.

By giving importance to post-childbirth care of females.

Benefits of breastfeeding to young ones.

3. Is sex education necessary in schools? Why?

Solution:

Yes, sex education is necessary for school because of it very essential for a child to receive the right information about the changes in the adolescence, safe sex practices, appropriate use of contraception methods through a proper channel.

4. Do you think that reproductive health in our country has improved in the past 50 years? If yes, mention some such areas of improvement.

Solution:

There has been a tremendous improvement in the reproductive health of India in the past 50 years. The areas where the development has occurred include:

- The government has introduced programs such as family planning to introduce the concept of a small family.
- Programs regarding mother and child care were introduced.
- Hospitals have been equipped with machines and facilities which were required in childbirth and newborn care.
- Improved version of contraception has been introduced.

5. What are the suggested reasons for the population explosion?

Solution:

The population is increasing at a rapid pace because there has been an improvement in the medical facilities and supply of food, awareness about well-being and hygiene, which has led to an increase in birth rate and a decrease in the death rate.

6. Is the use of contraceptives justified? Give reasons.

Solution:

Contraceptives are beneficial in several ways. Following are the reasons:

Mechanical contraceptive devices have a significant role in preventing sexually transmitted disease.

Intrauterine contraceptive devices help a couple in keeping space between two children.

They prevent females from unwanted pregnancies and abortions.

They help the couple to keep the family size in control.

7. Removal of gonads cannot be considered as a contraceptive option. Why?

Solution:

Contraception is a method of avoiding fertilisation for a certain period or to control the no. of progenies. It can be temporary or permanent. However, the gonads continue to produce gametes and hormones. Whereas, removal of gonads cannot be considered as a contraceptive.

Gonads refer to ovaries and testes. Ovaries produce female gamete “ovum” and female sex hormones such as “estrogen” and “progesterone”. Testes produce male gamete “sperm” and male hormone “testosterone”. Hence, if gonads are removed the secretion of sex hormones from them will get affected, causing several other health problems.

8. Amniocentesis for sex determination is banned in our country. Is this ban necessary? Comment.

Solution:

Amniocentesis is a technique in which amniotic fluid of the developing fetus is taken, and the cells of the fetus are analysed. Use of amniocentesis for fetal sex determination is banned to keep a check on the female foeticide, which would happen after the fetal sex determination. Detection of genetic disorders in the foetus such as Haemophilia, Sickle cell anaemia, Down syndrome is done using this technique.

9. Suggest some methods to assist infertile couples to have children.

Solution:

Methods that can help infertile couples to have children are:

- The couple can undergo diagnosis after finding the problem they can undergo treatment in specialised health care units known as infertility clinics.
- The couple can take the help of specialised techniques known as “Assisted reproductive technologies”(ART). These techniques carry out the fertilisation artificially hence known as In-vitro fertilisation. The in-vitro fertilisation techniques are of two types
 1. IFT-Zygote intrafallopian transfer: In this method, mature ova are fertilised with the sperms in artificial condition. The zygote that is formed is placed into the fallopian tube for further development.
 2. GIFT -Gamete intrafallopian transfer: In this method, the ovum from a donor female is placed into the fallopian tube of a female who cannot produce ovum but can undergo fertilisation and support fetal development.

ICSI-Intra cytoplasmic injections: In this method, the sperm nucleus is directly injected into the ovum.

IUI- Intrauterine insemination: In this method, the sperm is injected into the uterus. This method is performed when males have low sperm count.

10. What are the measures one has to take to prevent from contracting STDs?

Solution:

The measures taken by the individual to prevent sexually transmitted disease are:

- Avoid sex with unknown partners or multiple partners.
- Use a barrier method to prevent fluid contact.
- In case any symptoms of infections are suspected one should go to the doctor and get the necessary tests done.

11. State True/False with explanation

(A) Abortions could happen spontaneously too. (True/False)

- (B) Infertility is defined as the inability to produce a viable offspring and is always due to abnormalities/defects in the female partner. (True/False)
- (C) Complete lactation could help as a natural method of contraception. (True/False)
- (D) Creating awareness about sex-related aspects is an effective method to improve the reproductive health of the people. (True/False)

Solution:

- (A) True. Abortions could happen spontaneously due to stress or imbalance in hormones.
- (B) False. Infertility is defined as the inability to produce a viable offspring and is not always due to abnormalities/defects in the female partner as males can be sterile due to abnormalities such as low sperm count and impotence.
- (C) True. Complete lactation could help as a natural method of contraception because when the mother is breastfeeding the hormone prolactin is involved in the process of lactation; this hormone counteracts with the Luteinizing hormone required for the ovulation process.
- (D) True. Creating awareness about sex-related aspects is an effective method to improve the reproductive health of the people. (True/False)

12. Correct the following statements :

- (A) Surgical methods of contraception prevent gamete formation.
- (B) All sexually transmitted diseases are completely curable.
- (C) Oral pills are very popular contraceptives among rural women.
- (D) In E. T. techniques, embryos are transferred into the uterus.

Solution:

- (A) Surgical methods of contraception include tubectomy in females and vasectomy in males. In this method, the fallopian tubes, and vas deferens are cut and then ligated in females and males respectively. These methods do not stop gamete formation as the surgery is not performed in gonads.
- (B) The sexually transmitted disease includes Gonorrhoea, syphilis, genital herpes, chlamydiosis, genital warts, trichomoniasis, and HIV. Out of these diseases, Hepatitis B, genital herpes, HIV infection are not completely curable.
- (C) Contraception is not much popular among rural women. Oral pills are mainly used by females staying in urban areas.
- (D) In embryo transfer technique, the embryo is transferred into the fallopian tube at the eight-cell stage. If the embryo is more than eight cells, it is implanted into the uterus.

