

CHAPTER 27 - Reproduction and Embryonic Development

Chapter Reading Guide

Asexual and Sexual Reproduction

1. Compare the types, advantages, and disadvantages of asexual and sexual reproduction. Define each example of asexual and sexual reproduction.

| Types of Reproduction | Examples | Advantages | Disadvantages |
|----------------------------|--|------------|---------------|
| <hr style="width: 100%;"/> | budding | | |
| | | | |
| | fragmentation/regeneration | | |
| <hr style="width: 100%;"/> | hermaphroditism - a condition in which an individual has both female and male gonads and functions as both a male and a female in sexual reproduction making eggs and sperm | | |
| | external fertilization | | |
| | | | |

Human Reproduction

2. Briefly provide an overview of the structures and functions of the female and male human reproductive tracts.

3. Describe and compare the processes and products of spermatogenesis and oogenesis.

4. Completely label Figure 27.5 and then briefly summarize the stages, events and controls of the menstrual cycle in each illustration.

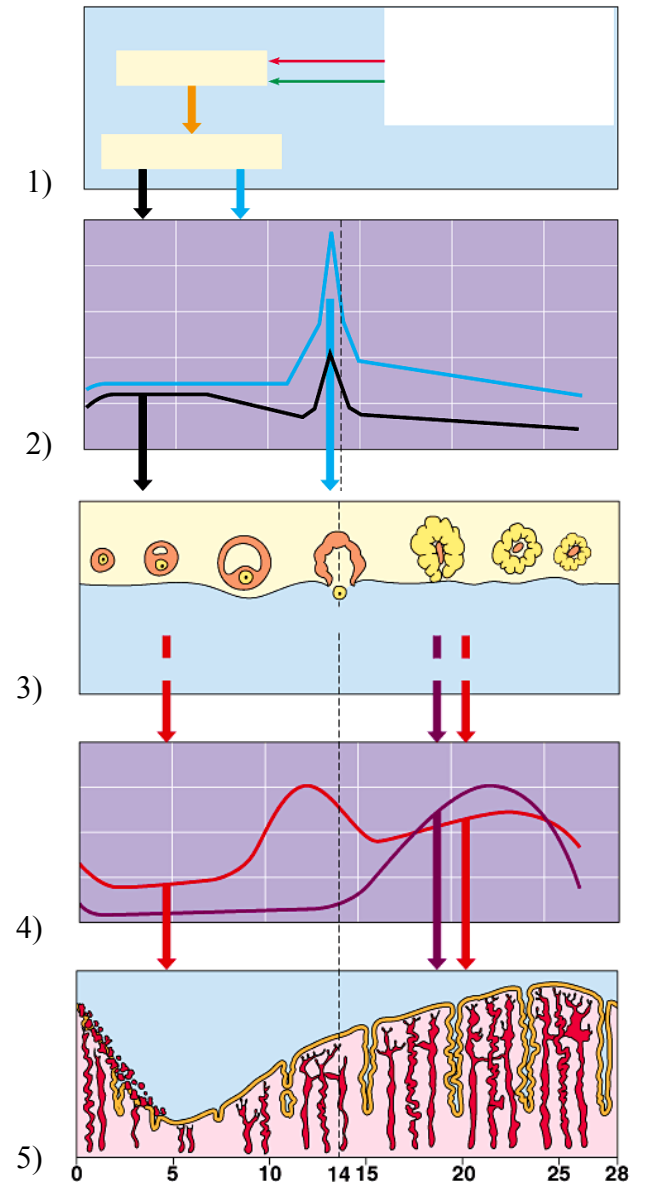
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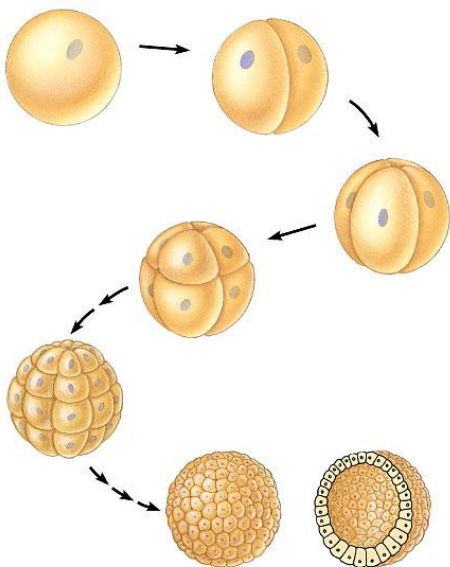
5. Describe the four stages of the human sexual response.

6. Describe the nature of the **eight** most common sexually transmitted diseases. Note their forms of prevention and treatment.

Principles of Embryonic Development

7. Describe the structure of sperm and the process of fertilization.

8. Label Figure 27.10. Describe the process and results of cleavage and gastrulation.



Summary

9. Explain how organs form after the development of a gastrula.

10. Explain how changes in cell shape, cell migration, and apoptosis contribute to development.

11. Describe the role of induction in the formation of the vertebrate eye.

12. Explain how the one-dimensional information in DNA is used to direct the three-dimensional form of an embryo.

Human Development

13. Describe the initial embryonic stages and the formation and functions of the extraembryonic membranes.

14. Describe the main changes that occur during each of the trimesters of human development.

15. Explain how labor begins and describe the main events of the three stages of labor.