

Fertilization Quiz PDF

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What is the primary site of fertilization in humans?

- Uterus
- Fallopian tubes
- Ovaries
- Cervix

Discuss the significance of genetic variation introduced during fertilization.

What are the initial stages of zygote development following fertilization?

What factors can affect fertilization success? (Select all that apply)

- pH levels
- Temperature
- Blood pressure

Health of gametes

Which structure in the sperm contains enzymes necessary for penetrating the egg?

- Nucleus
- Midpiece
- Tail
- Acrosome

What is the term for the initial cell divisions of a zygote?

- Meiosis
- Cleavage
- Differentiation
- Fertilization

What is the result of fertilization in terms of cell formation?

- Gamete
- Embryo
- Zygote
- Blastocyst

Which of the following contribute to genetic variation during fertilization? (Select all that apply)

- Random fertilization
- Identical twins
- Crossing over during meiosis
- Independent assortment of chromosomes

What prevents polyspermy after the first sperm enters the egg?

- Chemotaxis
- Acrosome reaction
- Cortical reaction
- Sperm capacitation

Explain the role of the cortical reaction in preventing polyspermy.

Describe the process of sperm capacitation and its importance in fertilization.

What are the key differences between internal and external fertilization? Provide examples of organisms for each type.

How does in vitro fertilization (IVF) assist in human reproduction?

Which mechanisms prevent polyspermy? (Select all that apply)

Fast block

- Slow block
- Chemotaxis
- Acrosome reaction

Which of the following are stages of fertilization? (Select all that apply)

- Sperm capacitation
- Gastrulation
- Acrosome reaction
- Cortical reaction

In which organisms does external fertilization commonly occur? (Select all that apply)

- Fish
- Birds
- Amphibians
- Mammals

How many chromosomes does a human zygote have?

- 23
- 46
- 69
- 92

Which term describes the movement of sperm towards the egg guided by chemical signals?

- Chemotaxis
- Phototaxis
- Geotaxis
- Thermotaxis

Which process involves the release of enzymes from the sperm to penetrate the egg?

- Capacitation
- Acrosome reaction
- Cortical reaction
- Implantation

Which processes are involved in plant fertilization? (Select all that apply)

- Pollination
- Fertilization
- Germination
- Photosynthesis