

Name _____

Date _____

Use with textbook pages 224–229.


Types of assisted reproductive technologies

Vocabulary

artificial insemination	infertility
assisted reproductive technologies	intracytoplasmic sperm injection
embryos	sperm
fallopian tubes	stem cells
gamete intrafallopian transfer	surrogate mother
gametes	uterus
in vitro fertilization	

Use the terms in the vocabulary box to fill in the blanks. You can use each term more than once. You will not need to use every term.

- _____ is the inability of a couple to have a baby.
- Most _____ include removing egg cells from a woman's body, fertilizing them, and placing one or more embryos in the uterus.
- The _____ is the organ in a female mammal, such as a human, in which an embryo develops and is nourished before birth.
- Techniques for collecting _____ from a male and injecting it into a female were first developed for animals more than 200 years ago.
- _____ is a very specialized procedure in which a single sperm cell is injected into an egg cell. The fertilized egg is then injected into the mother's _____.
- In _____, egg cells are removed from a woman's ovaries and combined with sperm cells. The mixture of eggs and sperm is then injected into the mother's _____ so an egg cell may be fertilized.
- Sometimes, one or both _____ may be provided so a _____ can become pregnant and give birth to a child for someone else to raise.
- In _____, a woman's egg cell is placed in a petri dish, and then sperm are injected into the dish.
- Embryos are a source of _____ that could be used to help cure diseases or regrow impaired or lost organs.

Type of technology	How it works
artificial insemination (AI)	Sperm are collected from the male and then injected into the female.
in vitro fertilization (IVF)	A woman's egg cell is placed in a petri dish, and then sperm are injected into the dish so that one sperm cell may fertilize the egg.
gamete intrafallopian transfer (GIFT)	A woman's egg cell is mixed with sperm, and then the mixture is injected into the woman's fallopian tubes. This way, an egg may be fertilized inside the woman's body.
intracytoplasmic sperm injection (ICSI)	A single sperm cell is injected into an egg cell. The fertilized egg is then inserted into the woman's uterus. 

How does society respond to these technologies? Reproductive technologies have helped many couples have a child. However, these methods also raise questions. For instance:

- ◇ What to do with unused embryos: Not all the embryos that result from these methods are used. What should be done with the unused embryos? Some people want to use them for research purposes. For example, the embryos are a source of stem cells that could be used to help cure diseases or regrow impaired or lost organs. Other people think that it is wrong to use the embryos this way.
- ◇ Unknown donors: Sperm used in AI are often donated by strangers. Does a child of an AI method have the right to know the identity of his or her biological father?
- ◇ Surrogate mothers: Sometimes an infertile couple contracts another woman to carry a baby for them. Using AI or IVF, one or both gametes may be provided by the contracting couple. What if the surrogate mother decides she wants to break the contract and keep the baby?

Questions such as these do not have easy answers.

 **Reading Check**

2. In which reproductive technologies does fertilization occur outside the woman's body?
