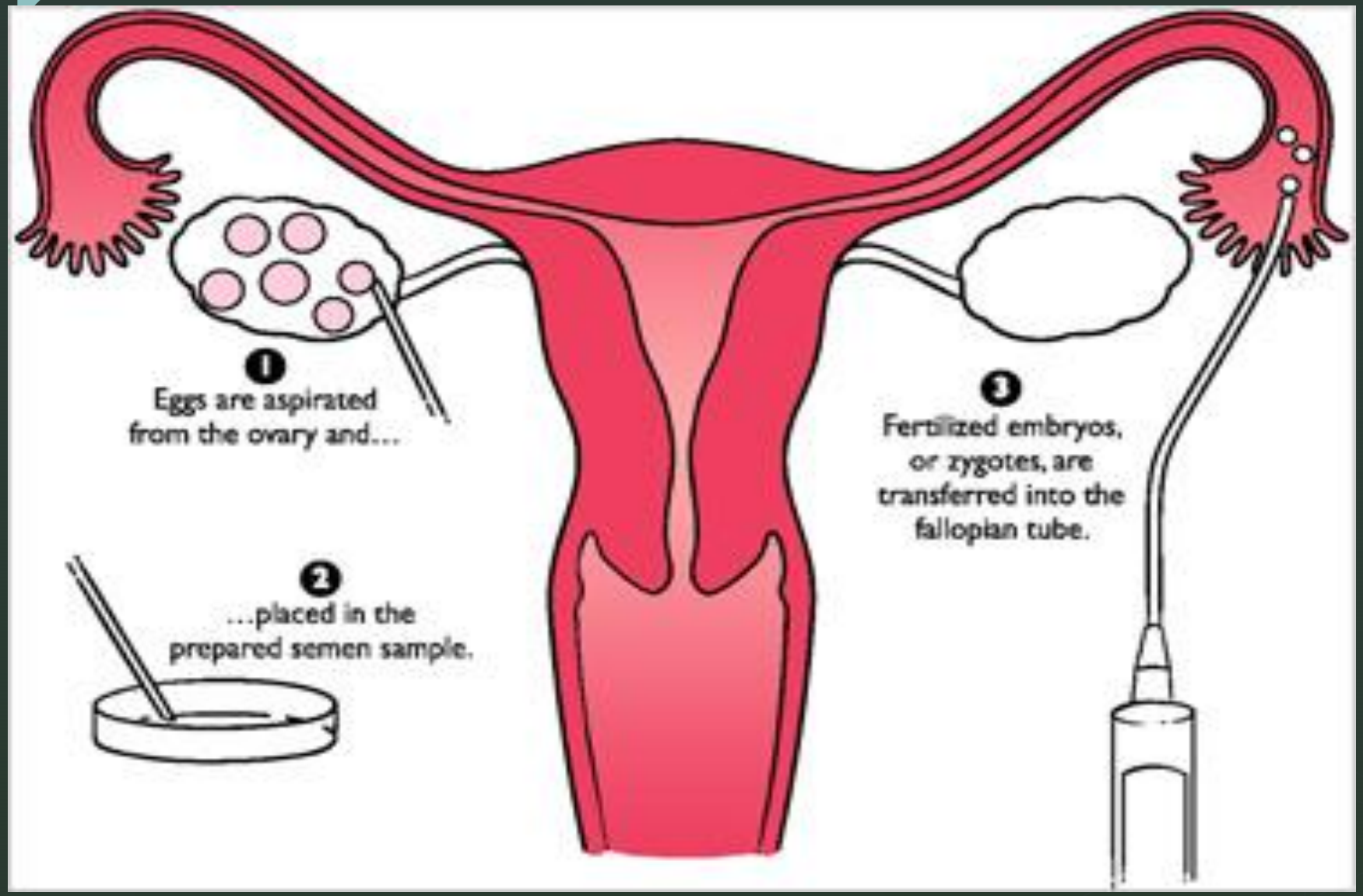
REPRODUCTIVE BIOLOGY

WHAT IS ZIFT?

- ZIFT stands for zygote intrafallopian transfer, a method used to treat infertility in which an egg fertilized in vitro (outside the body) is placed into woman’s fallopian tube. This technique is one used to overcome infertility, the inability of couples to produce offspring on their own.

- Zygote intrafallopian transfer (ZIFT) is similar to in vitro fertilization (IVF) and GIFT, but in this procedure eggs are fertilized in a lab before a doctor places them inside the fallopian tubes. These fertilized eggs are called zygotes – one-celled embryos that have not yet begun to divide into multiple cells.
- ZIFT is the most invasive of all fertility treatments, which is why it's rarely done anymore. It accounts for less than 1 percent of assisted reproductive technology (ART) procedures.


1
Eggs are aspirated from the ovary and…
2
…placed in the prepared semen sample.
3
Fertilized embryos, or zygotes, are transferred into the fallopian tube.

HOW DOES ZIFT WORK?

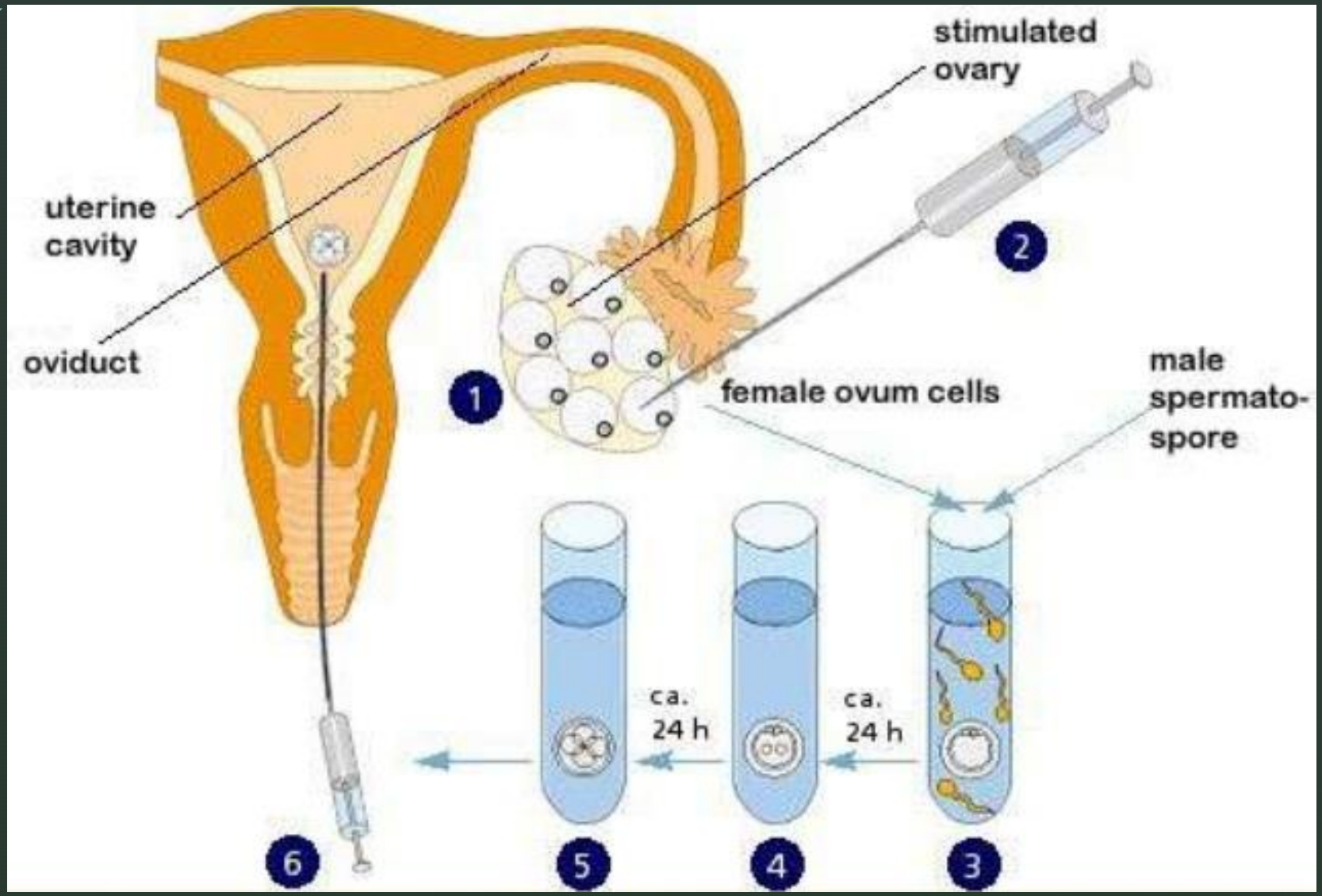
- The first few steps of ZIFT are similar to those of IVF:
- **Ovary stimulation.** For several days at the beginning of the period, medications are taken to stimulate the ovaries to develop mature eggs and to keep the body from releasing the eggs too early.
- **Follicle development.** While taking these drugs, women visit the doctor's office or clinic every two to three days so she can check blood hormone levels and take ultrasound measurements of developing follicles – the fluid-filled sacs where eggs mature.

- **Gathering the eggs.** When the eggs are ready for retrieval, doctor gives an anesthetic and inserts an ultrasound probe through vagina to look at the ovaries. Once the follicles are identified, a thin needle is inserted through vaginal wall to remove about eight to 15 eggs.
- **Fertilization.** An embryologist (a scientist who specializes in eggs, sperm, and embryos) then combines eggs with sperm in a laboratory and monitors them closely for fertilization. About a day later, each of the successfully fertilized eggs becomes a single-celled embryo called a zygote.

- The next steps differ from IVF:
- **Surgery.** Once a zygote develops, the doctor performs minor surgery. After giving an anesthetic, the doctor makes a small incision in the abdomen. Then the doctor uses a thin, lighted microscope (a laparoscope) to transfer one to five zygotes to the fallopian tubes. Women are usually a bit sore after the surgery. Any extra zygotes can be frozen if the treatment is unsuccessful.
- **Successful implantation.** If the treatment works, a zygote travels through the fallopian tube and implants in the uterus, where it grows into a baby. If more than one zygote is transferred, chance of pregnancy is higher, but so is the risk of having twins, triplets, or more.
- **Testing for pregnancy.** A pregnancy test can be taken about 2 weeks after the surgery.

How long does ZIFT take?

- It takes four to six weeks to complete one treatment cycle of ZIFT, starting with fertility medications and ending with a pregnancy test.
- Women have to take fertility drugs and wait for the eggs to mature. Then the couple spend about half a day at the doctor's office or clinic, having the eggs and sperm retrieved.
- The next day, the zygotes are surgically transferred to fallopian tubes. Pregnancy testing takes place about two weeks later.


stimulated ovary
uterine cavity
oviduct
2
1
female ovum cells
male spermato-spore
ca. 24 h
ca. 24 h
6
5
4
3

WHAT'S THE SUCCESS RATE FOR ZIFT?

- The success rate for ZIFT varies dramatically, depending on a couple's fertility problem and age. Younger women usually have healthier eggs and higher success rates. Women have about a 22 percent chance of delivering a baby with each ZIFT cycle – similar to the IVF success rate.

ADVANTAGES OF ZIFT:

- **Fertilized eggs.** ZIFT is slightly more reassuring than GIFT because the doctor confirms that eggs have been fertilized before placing them in the fallopian tubes.
- **Natural implantation.** ZIFT allows a developing embryo to travel into the uterus on its own, which may appeal to you if you'd like your baby to develop as naturally as possible (although there are no medical reasons why natural fertilization is preferable to assisted fertilization).
- **No link to cancer.** Recent studies have shown no connection between ovulation-inducing fertility drugs and cancer. Early studies suggested that exposure to fertility drugs might lead to a higher risk of ovarian cancer or other cancers of the female reproductive system.

DISADVANTAGES OF ZIFT:

- **Expensive.** ZIFT involves expensive lab work, medications, and surgery.
- **Time-consuming.** Monitoring fertility drugs requires a lot of time, with frequent trips to the doctor's office for blood tests and ultrasounds.
- **Hard to find.** Many fertility clinics don't even offer ZIFT as a treatment alternative.
- **Requires surgery.** Transferring zygotes to your fallopian tubes requires invasive surgery, unlike IVF.
- **Multiples more likely.** Because multiple zygotes are usually transferred to the fallopian tubes, you're more likely to have twins or more. Though many couples consider this a blessing, carrying multiple fetuses increases the risk of miscarriage and other complications.


Thank
you