



PRESENTATION

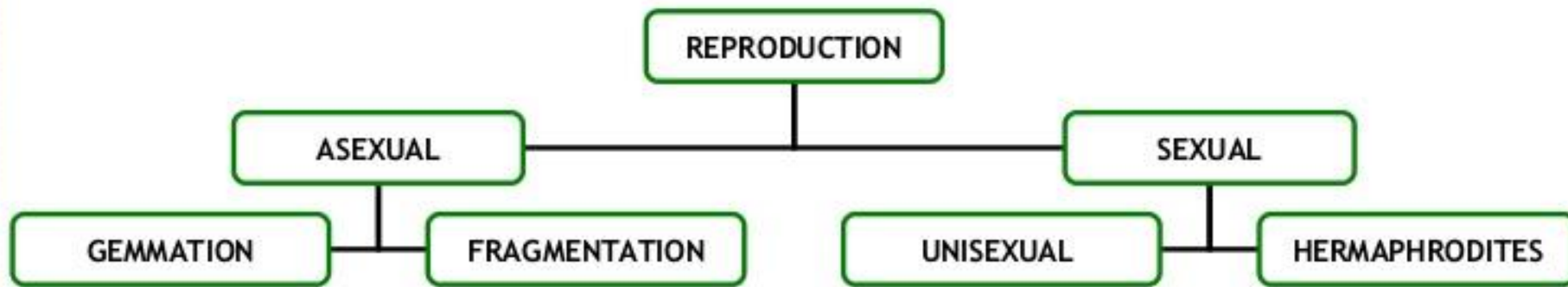
ON

REPRODUCTION

IN ANIMALS

Reproduction in animals

Reproduction is the biological process by which new individual organisms are produced. Look at the diagram and try to match each photograph with the main types of reproduction.



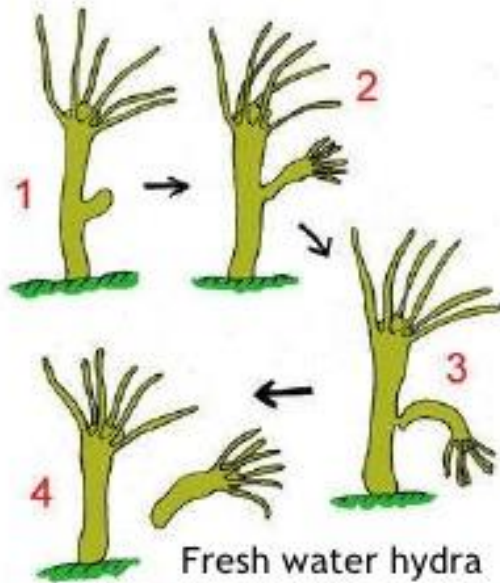
E.g. Ducks reproduce... asexually by gemmation / fragmentation sexually. They are unisexual / hermaphrodites.

Asexual reproduction in animals

Asexual reproduction occurs in the most simple animals. There are two main types:

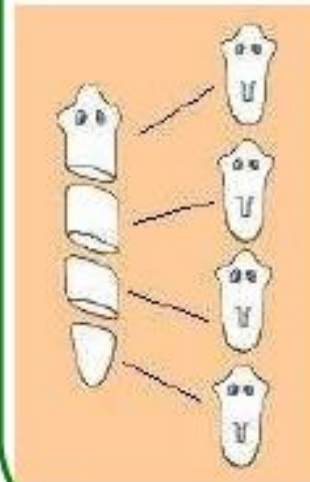
Gemmation

Small buds appear on the body of the progenitor or “parent” and develops into a new individual.



Fragmentation

A new organism grows from a fragment of the progenitor or parent. It is common in worms and starfish.



Worm



Starfish

Sexual reproduction in animals

Sexual reproduction in animals requires two members of the opposite sex, a male and a female. Each one has different reproductive organs. These are called gonads. Depending on the types of gonads, animals can be:

Unisexual

Each individual has one type of gonad: male or female.

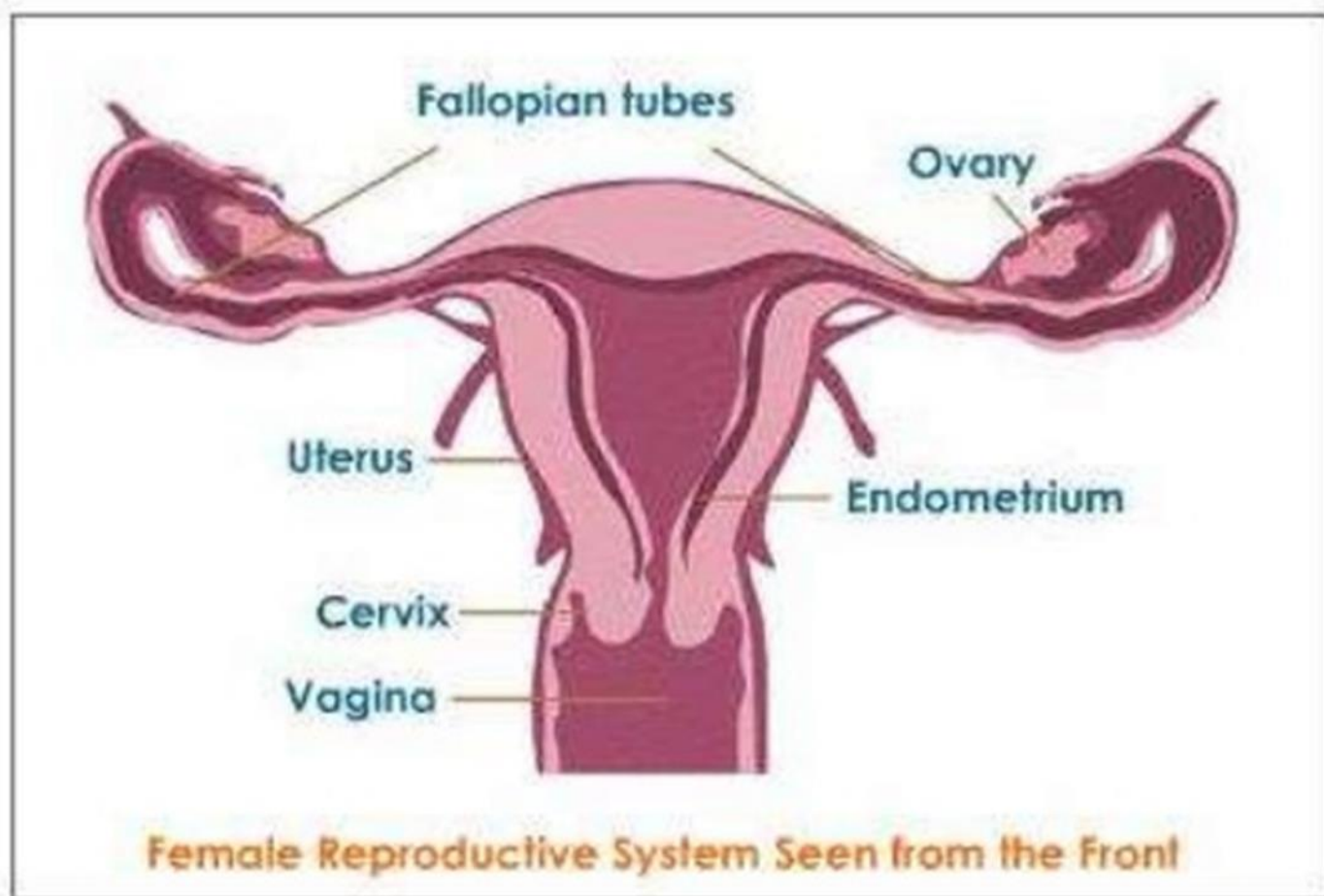


Hermaphrodites

Each individual has both male and female gonads.

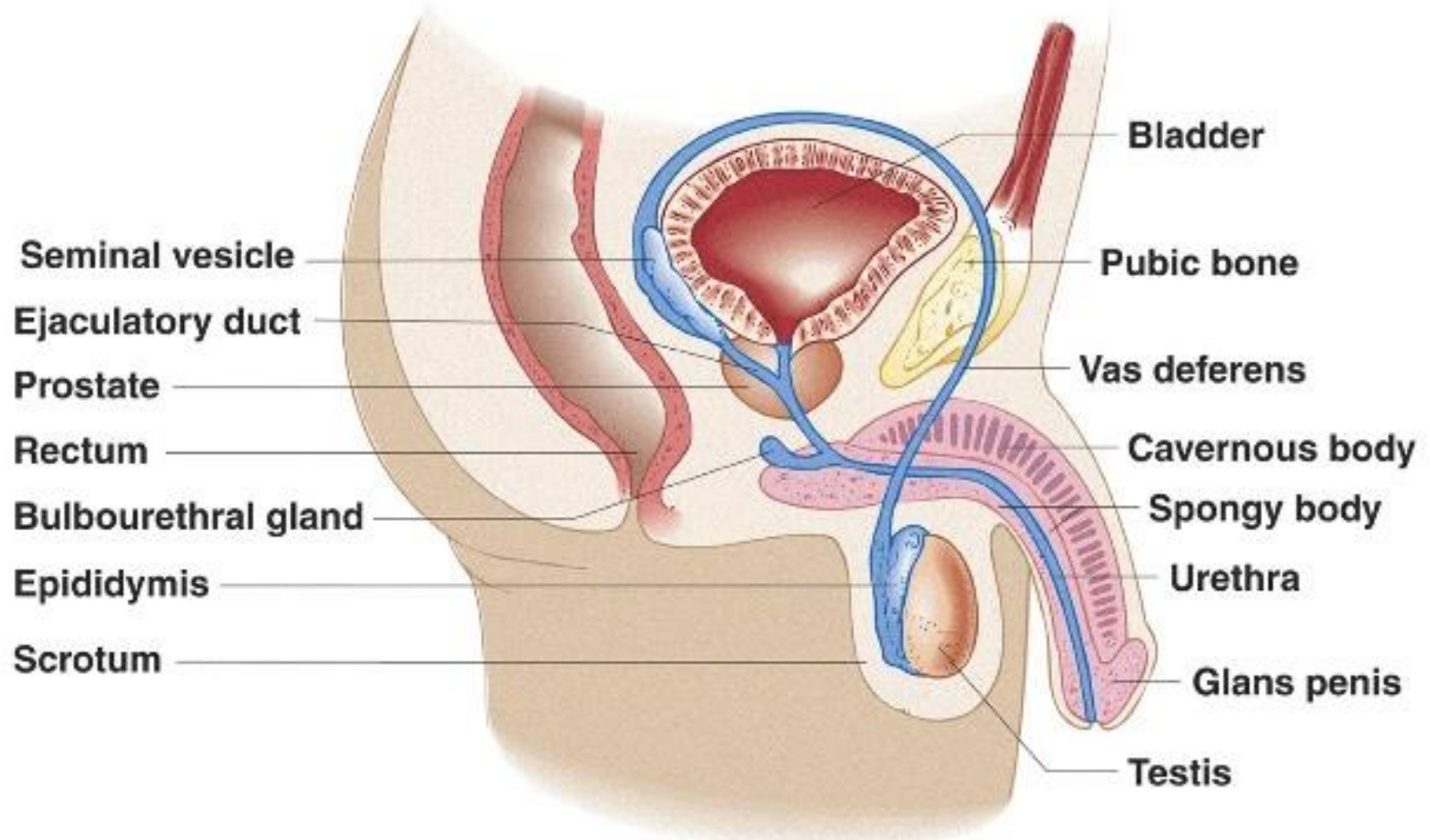


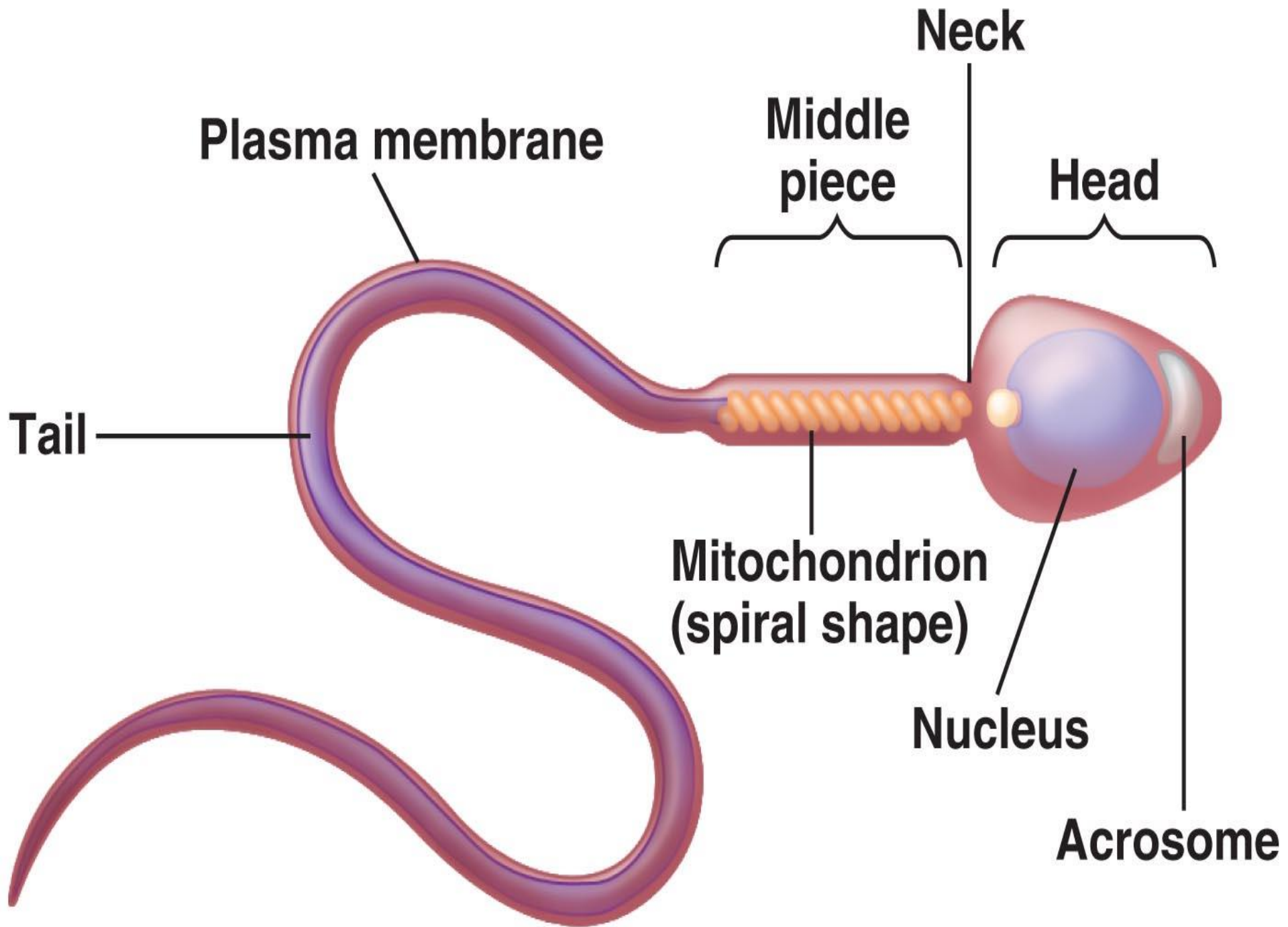
Female Reproduction Organs



MALE REPRODUCTIVE ORGANS

Solomon/Berg/Martin, Biology, 6/e
Figure 48.3





Types of Fertilization

External fertilization

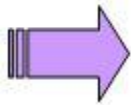
egg and sperm are released into the water



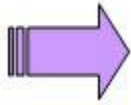
Internal fertilization

eggs are fertilized by sperm
“INSIDE” the mother’s body.

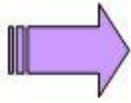
INTERNAL FERTILIZATION



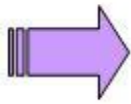
Fertilization within the body of the female is called *internal fertilization*.



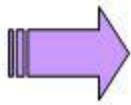
It is found most often in animals that reproduce on land and also found in some aquatic animals, such as sharks.



Internal fertilization requires a specialized sex organ to carry sperm from the body of the male into the body of the female.

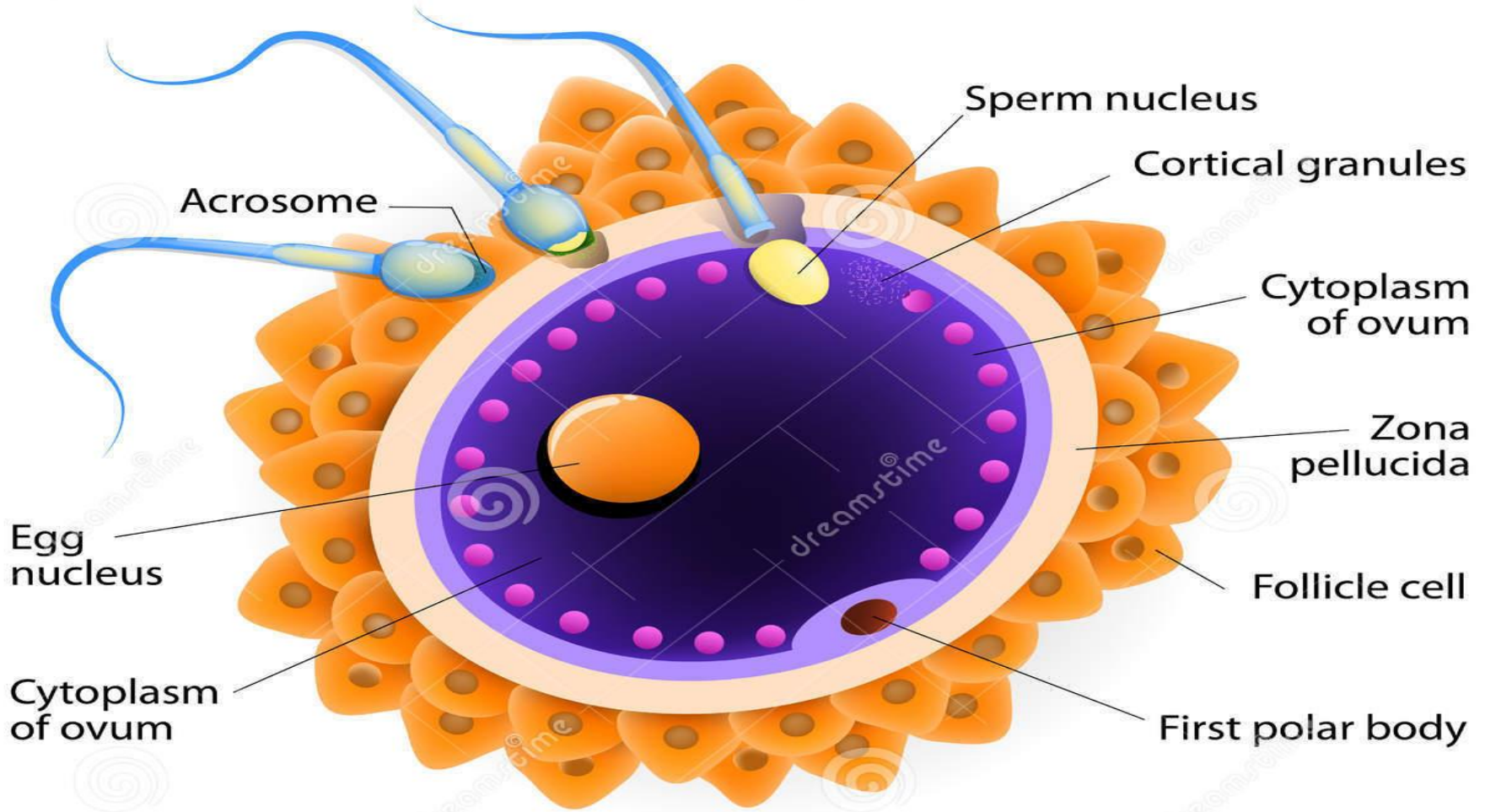


Less number of eggs are produced

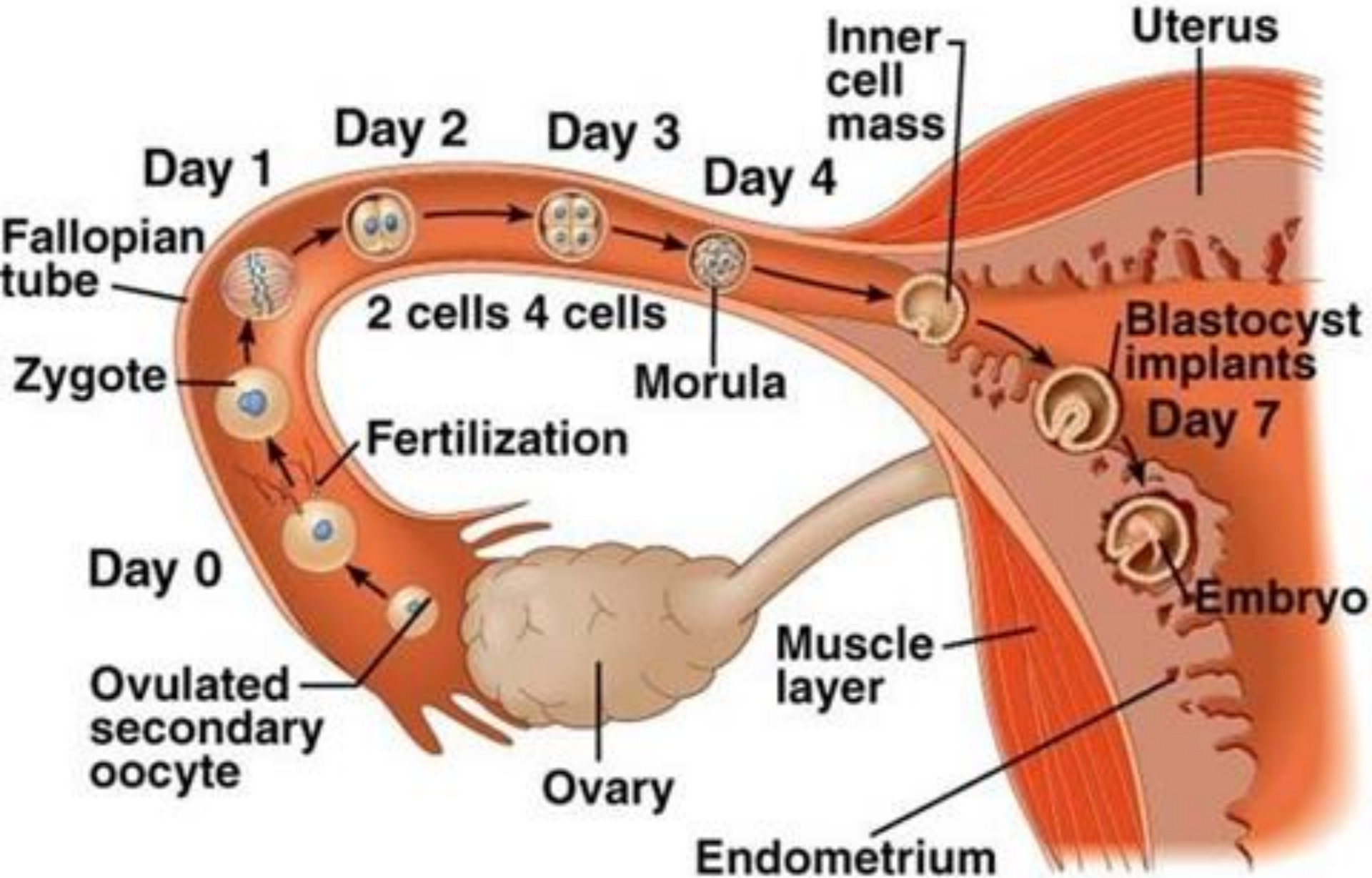


After fertilization, either the zygote is enclosed in a protective shell and released by the female, or it remains and develops within a special part of the female's body.

FERTILIZATION

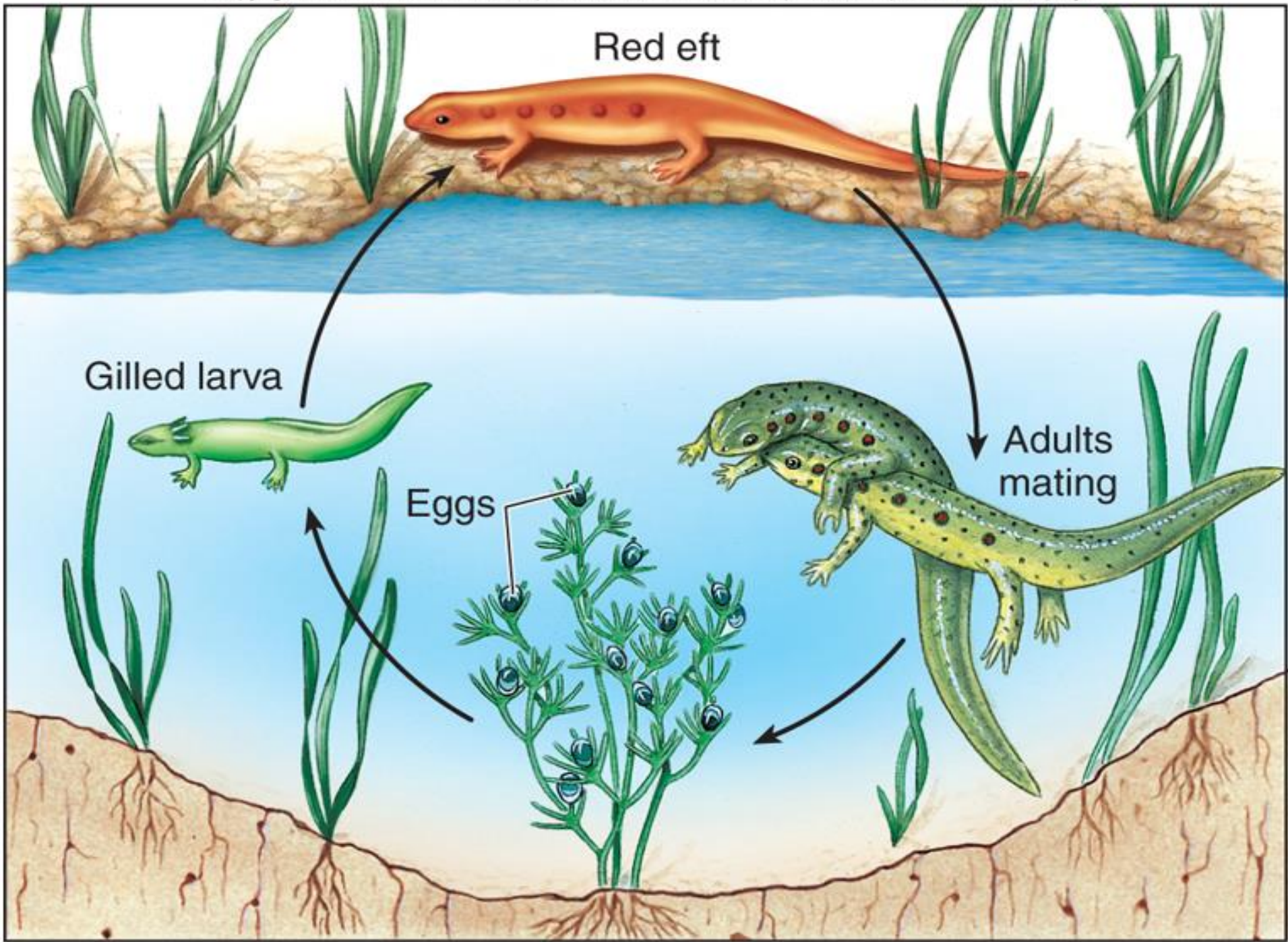


From ovulation to implantation



EXTERNAL FERTILIZATION

- ➔ In external fertilization, the eggs are in the environment outside the body of the female.
- ➔ Takes place in animals that live in water.
Ex: Fish (but not sharks), many amphibians
- ➔ To overcome the hazards of external fertilization, large numbers of eggs and sperm are released.
- ➔ Embryo inside the fertilized egg develops in aquatic environment.



Red eft

Gilled larva

Eggs

Adults mating

In Vitro Fertilization. How it Works.

A SHORT GUIDE TO HOW IVF WORKS

Here's what you'll typically experience while trying to conceive a child with in vitro fertilization.

THE INTAKE INTERVIEW

The initial meeting with the doctor will involve discussions with your medical fertility history, and of your partner, to establish which treatment procedure will work best for you, as well as improve the odds of a healthy birth.



DRUGS TO INDUCE EGG GROWTH

For two weeks, you'll self administer three daily injections or fertility medications in your thigh or stomach to stimulate follicles to grow as many eggs as possible during your cycle. Around day 12, you'll inject drug human chorionic gonadotropin (hCG) to stimulate ovulation. During these two weeks, visiting the clinic five times for blood and ultrasound tests is necessary to monitor progress.



EGG HARVESTING

Shortly before doctors calculate that your eggs will be released through fallopian tubes during ovulation – you'll be heavily sedated and, using ultrasound as guide, your doctor will pull eggs out of your ovaries with a hollow needle. In another room, your partner will ejaculate into a cup to obtain sperm. The lab will quickly process to extract the most robust sperm and mix with the eggs in an incubator for insemination to happen



PRELIMINARY TESTS AND TALKS

Ultrasound and blood tests will take place to determine number and quality of eggs. A nurse will educate you on how to self administer fertility drugs. A financial counsellor will aid to work out payment and psychologist will be on hand to discuss coping with any stress that may arise.



EMBRYO TRANSFER

Three days after harvesting your eggs, your doctor will insert two or three embryos into your uterus using a thin catheter. If there are genetic concerns, embryo transfer may happen on day five, after laboratory has performed to select the healthiest embryos.

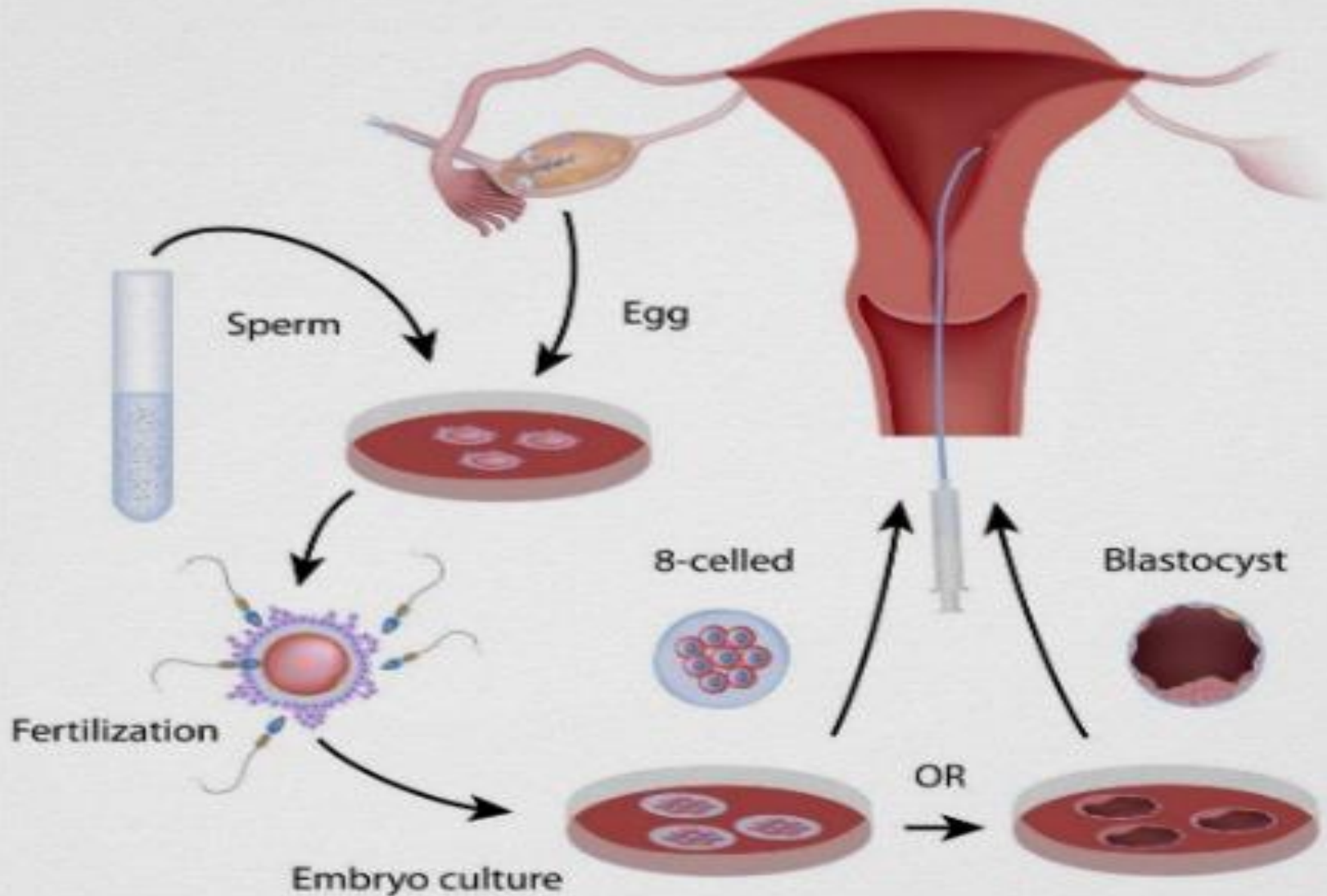


THE OUTCOME

Your partner or a trusted friend or family member will give you daily injections of progesterone in the buttocks. Progesterone aids implantation. You'll take a pregnancy test in two weeks and someone from there will give you the results.



In Vitro Fertilization



Thank You

* Made By Maithsee