





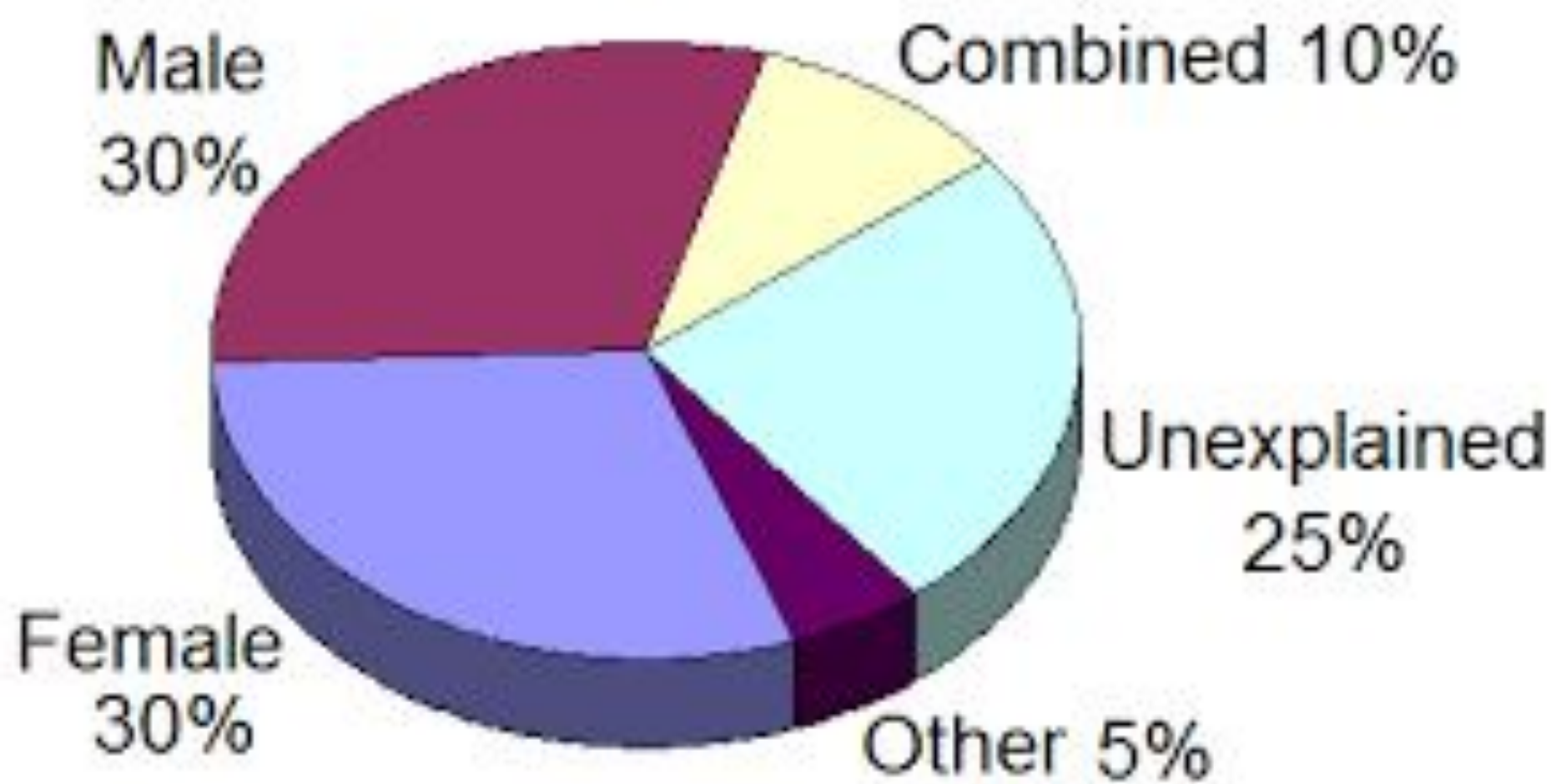
Family planning:

- **The use of education and birth control to limit the number of offspring and the population of a country.**
- **Involves the use education about reproduction and birth control in order to allow women to make decision about their fertility and family size.**



**INFERTILITY IS DEFINED AS
FAILURE TO CONCEIVE WITHIN ONE
OR MORE YEARS OF REGULAR UN
PROTECTED COITUS.**

Infertility causes





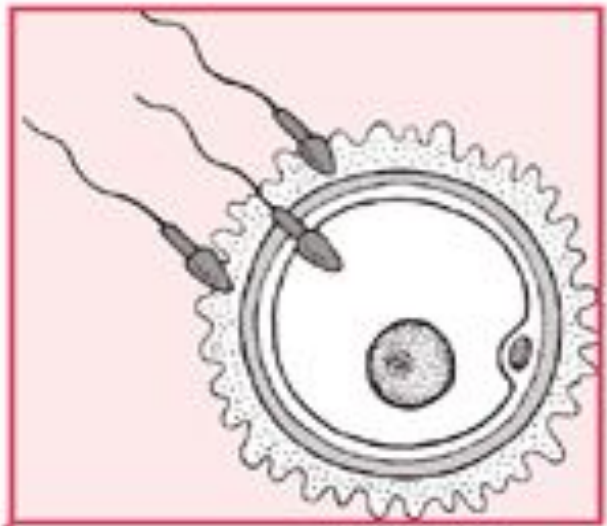
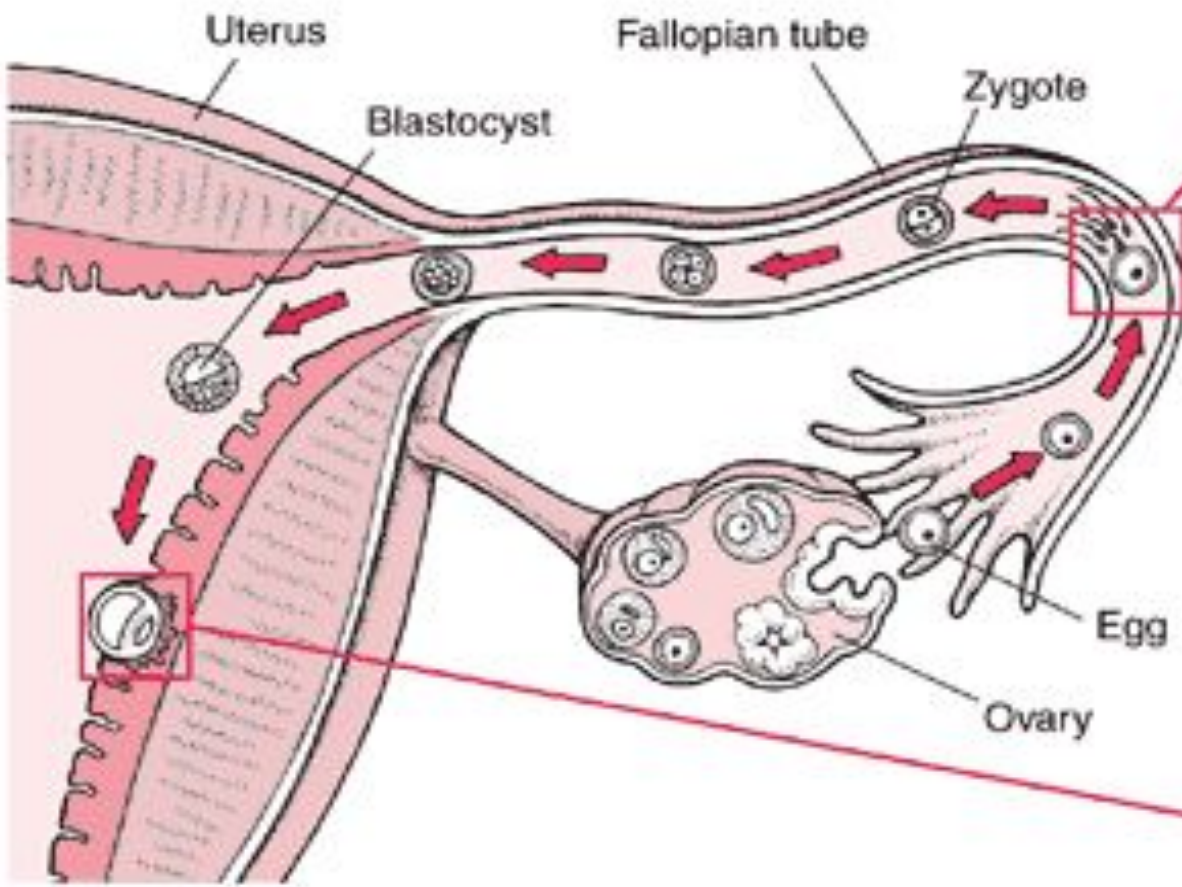
Types of Infertility

- Primary infertility
 - couple has never produced a pregnancy
- Secondary infertility
 - woman has previously been pregnant, regardless of the outcome, and
 - now is unable to conceive

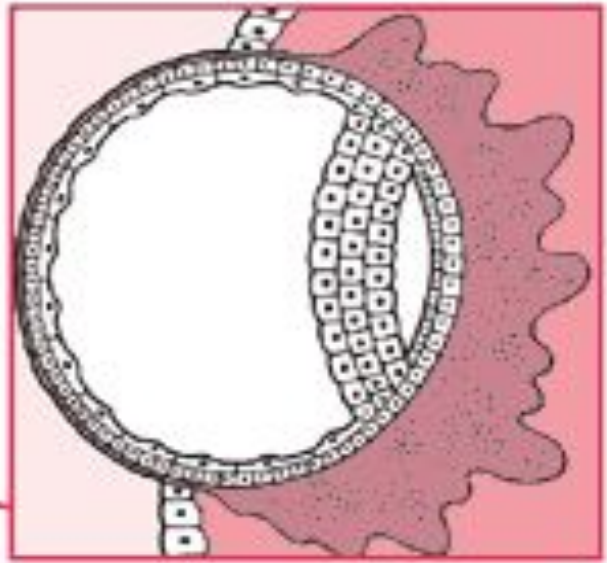
FACTORS RESPONSIBLE FOR FERTILITY

- **Healthy spermatozoa should be deposited high in the vagina.**
- **Spermatozoa should undergo changes and acquire motility.**
- **The motile spermatozoa should ascend through the cervix into the uterine cavity and fallopian tube.**
- **There should be ovulation.**
- **The fallopian tubes should be patent and the oocyte should be picked up by the fimbriated end of the tube**

- **The spermatozoa should fertilize the oocyte at the ampulla of the tube.**
- **The embryo should reach the uterine cavity after 3-4 days of fertilization.**
- **The endometrium should be prepared for implantation and corpus luteum should function adequately.**



Fertilization



Implantation

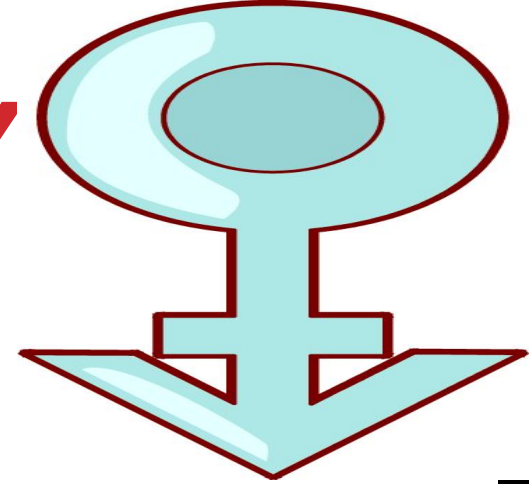
Cause of Male Infertility

- **OBSTRUCTIVE LESIONS OF THE EPIDIDYMIS AND VAS DEFERENS**
- **NUTRITIONAL DEFICIENCIES**
- **OTHER FACTORS**
 - Endocrine disorders
 - Genetic disorders
 - Psychologic disorders
 - Sexually transmitted infections
 - Exposure of scrotum to high temperatures
 - Exposure to workplace hazards such as radiation or toxic substances



*Male
Infertility*

CAUSES OF INFERTILITY FACTORS IN MEN



Abnormalities of the sperm.

Abnormal erections

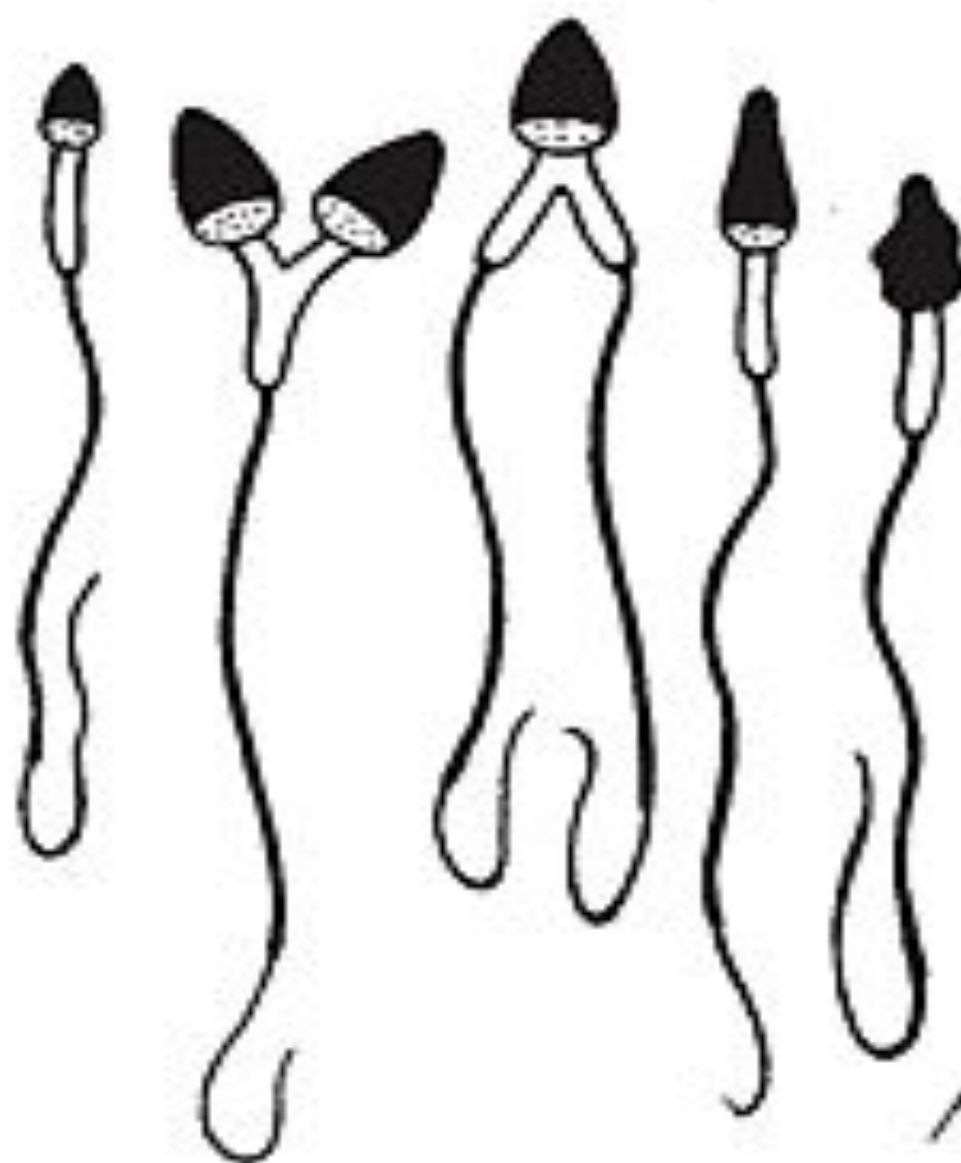
Abnormal ejaculation

Abnormalities of seminal fluid.

Normal sperm



Abnormal sperm

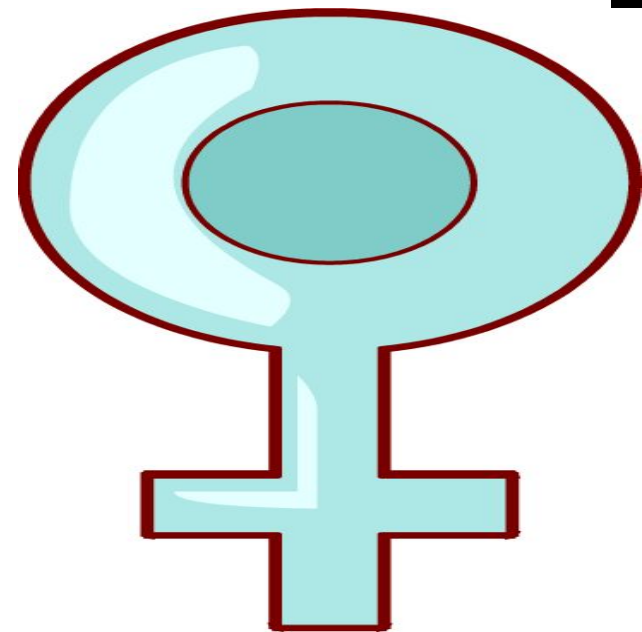


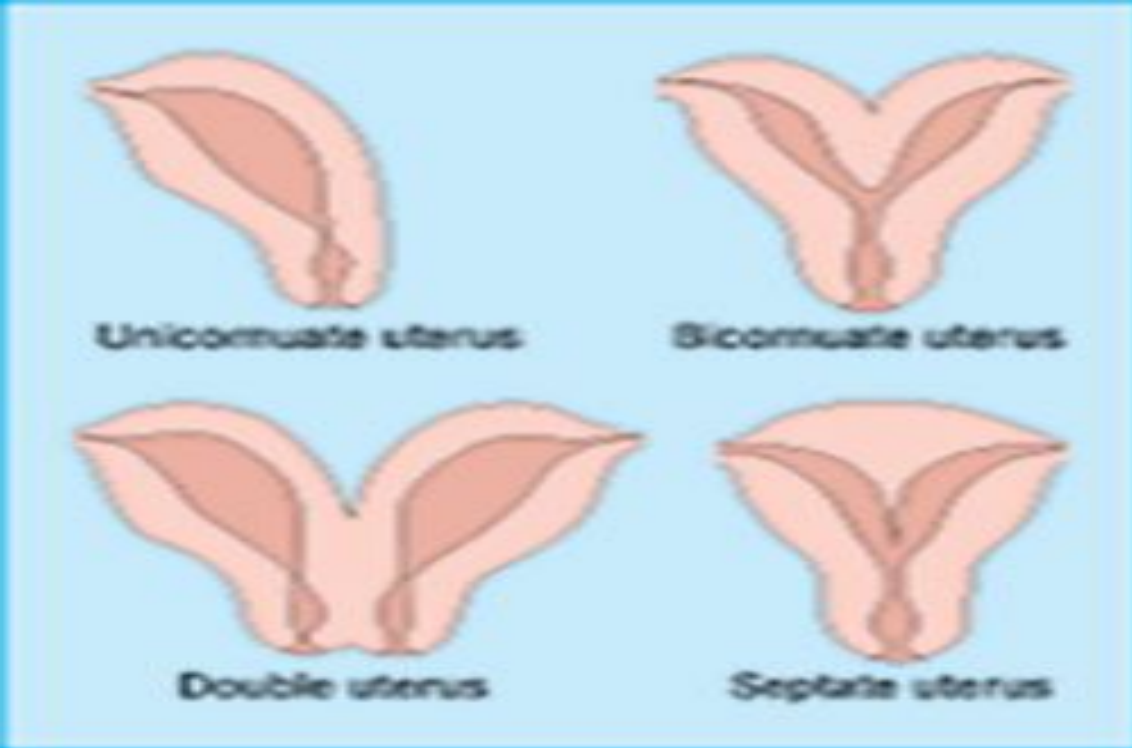
FACTORS IN **WOMEN**

Disorders of ovulation

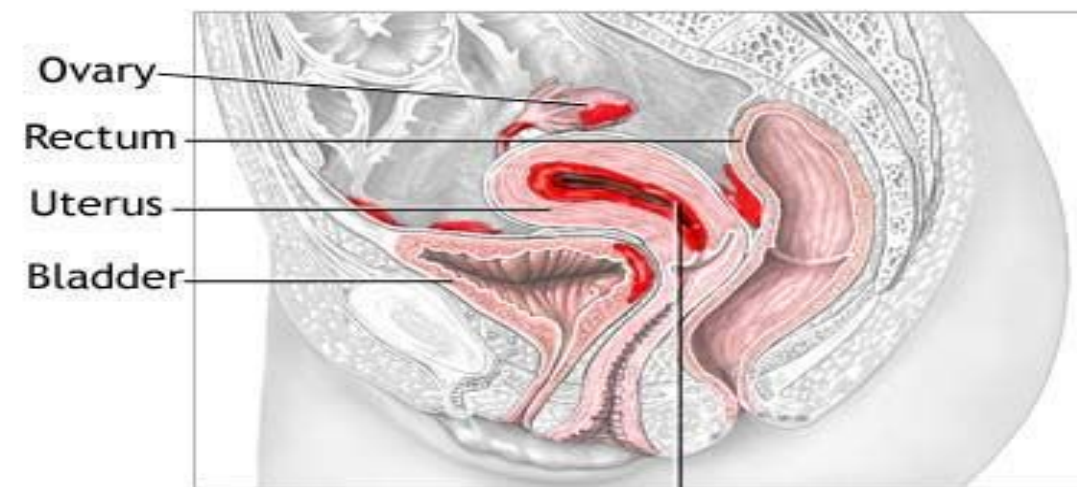
Abnormalities of fallopian tube.

**Abnormalities of the cervix or
uterus**



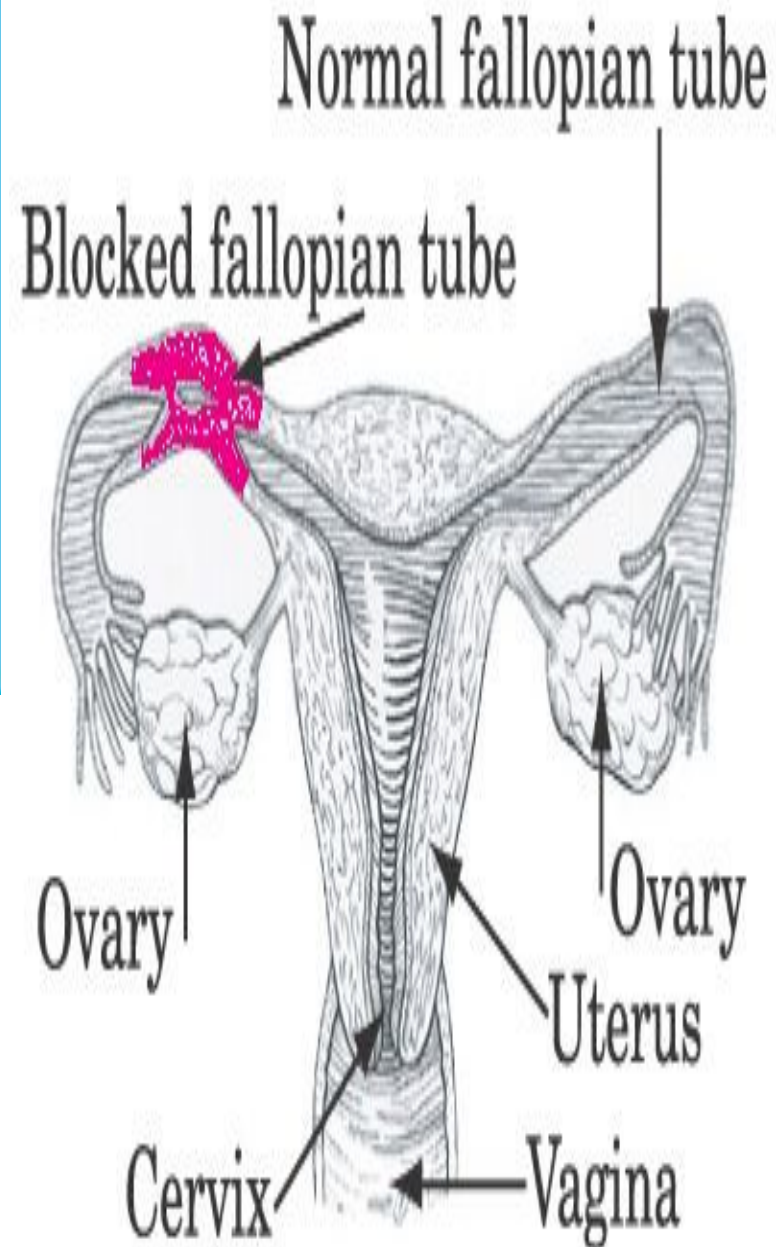


Common sites for endometrial growths in red



Normal endometrial lining

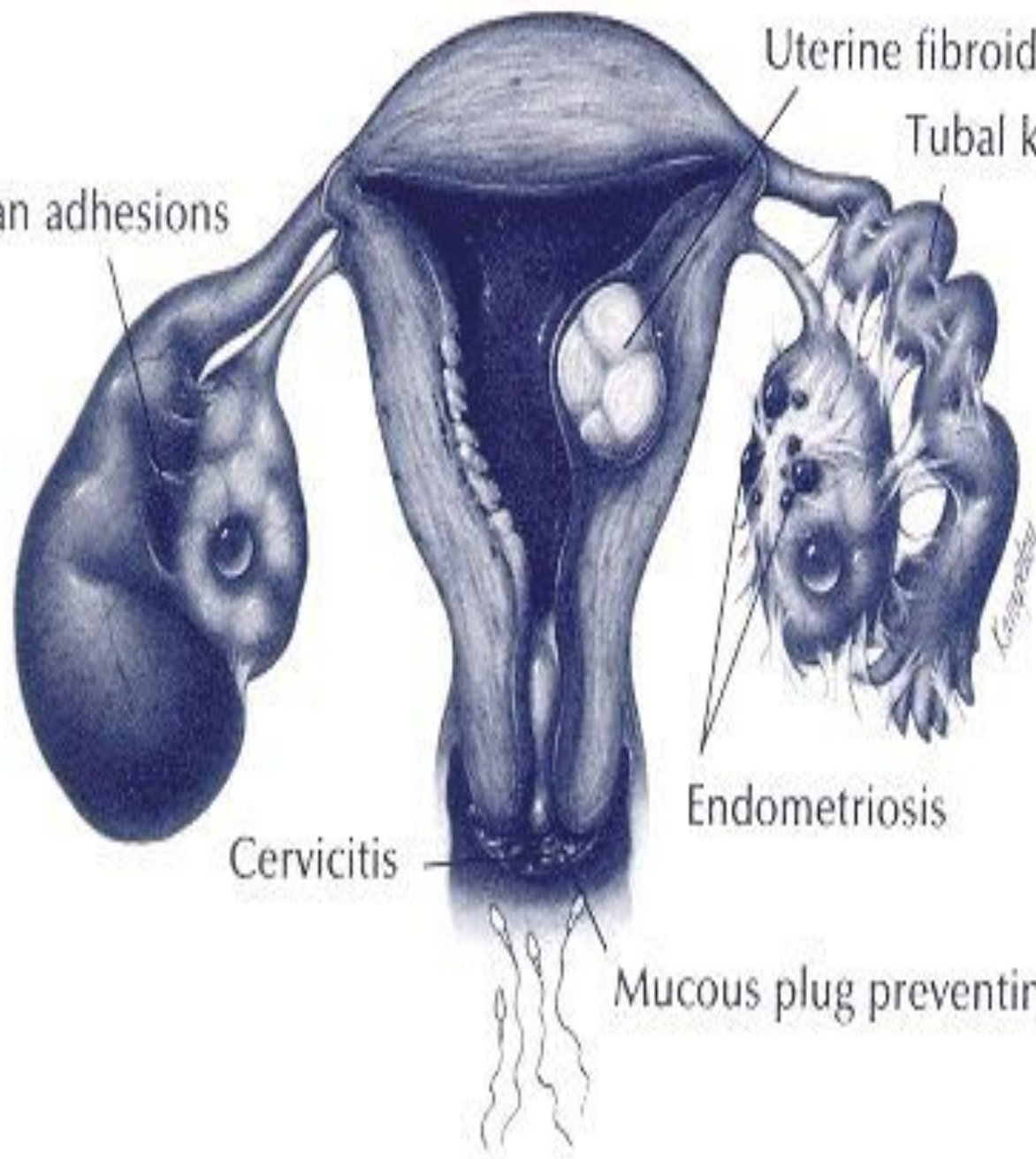
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Tubo-ovarian adhesions

Uterine fibroid

Tubal kinking from adhesions



Endometriosis

Cervicitis

Mucous plug preventing passage of sperm

REPEATED **PREGNANCY LOSS**

Abnormalities of fetal chromosomes

Abnormalities of the cervix or uterus.

Endocrine abnormalities.

Immunologic factors

Environmental factors.

Infection

SPECIFIC INVESTIGATIONS

MALE

- 1. Semen analysis**
- 2. Serum FSH, LH, testosterone, prolactin and TSH**
- 3. Fructose content in seminal fluid**
- 4. Testicular biopsy**
- 5. Karyotype analysis**
- 6. Immunological tests**
- 7. Trans rectal ultra sound (TRUS)**
- 8. Vasogram**
- 9. Presence of pus cells**

FEMALE

1. Basal body temperature
2. Cervical mucus study
3. Hormone estimation

Serum progesterone

Serum LH

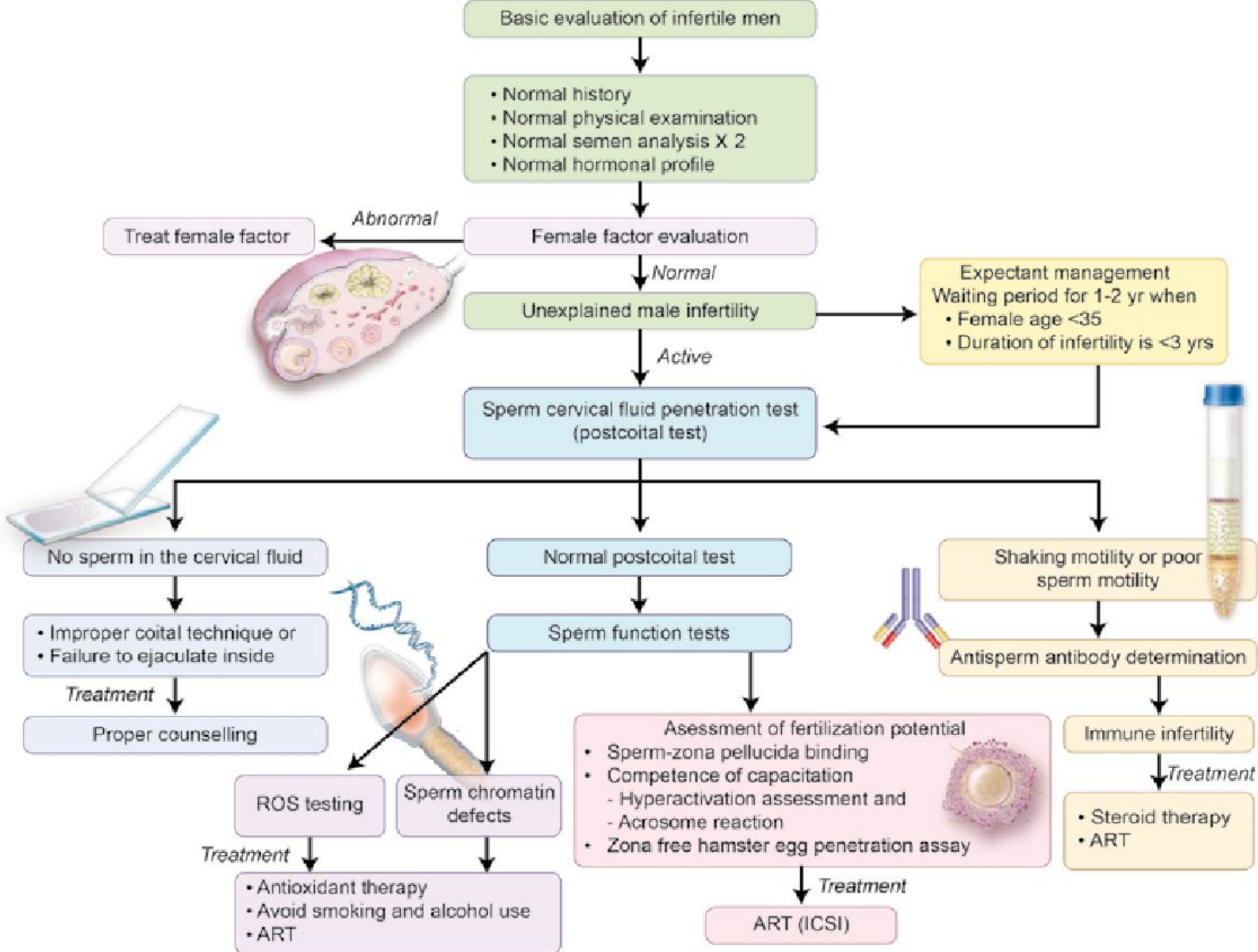
Serum estradiol

4. Endometrial biopsy

5. Ovum transport: investigation of tube patency

Laparoscopy

Hysterosalpingography



THERAPIES TO FACILITATE PREGNANCY

1. Stimulation of ovulation

- Clomiphene citrate (clomid)**
- Human chorionic gonadotrophin (HCG)**
- Human menopausal gonadotrophin (HMG)**
- Bromocriptine (parlodel)**

2. Surgical procedures

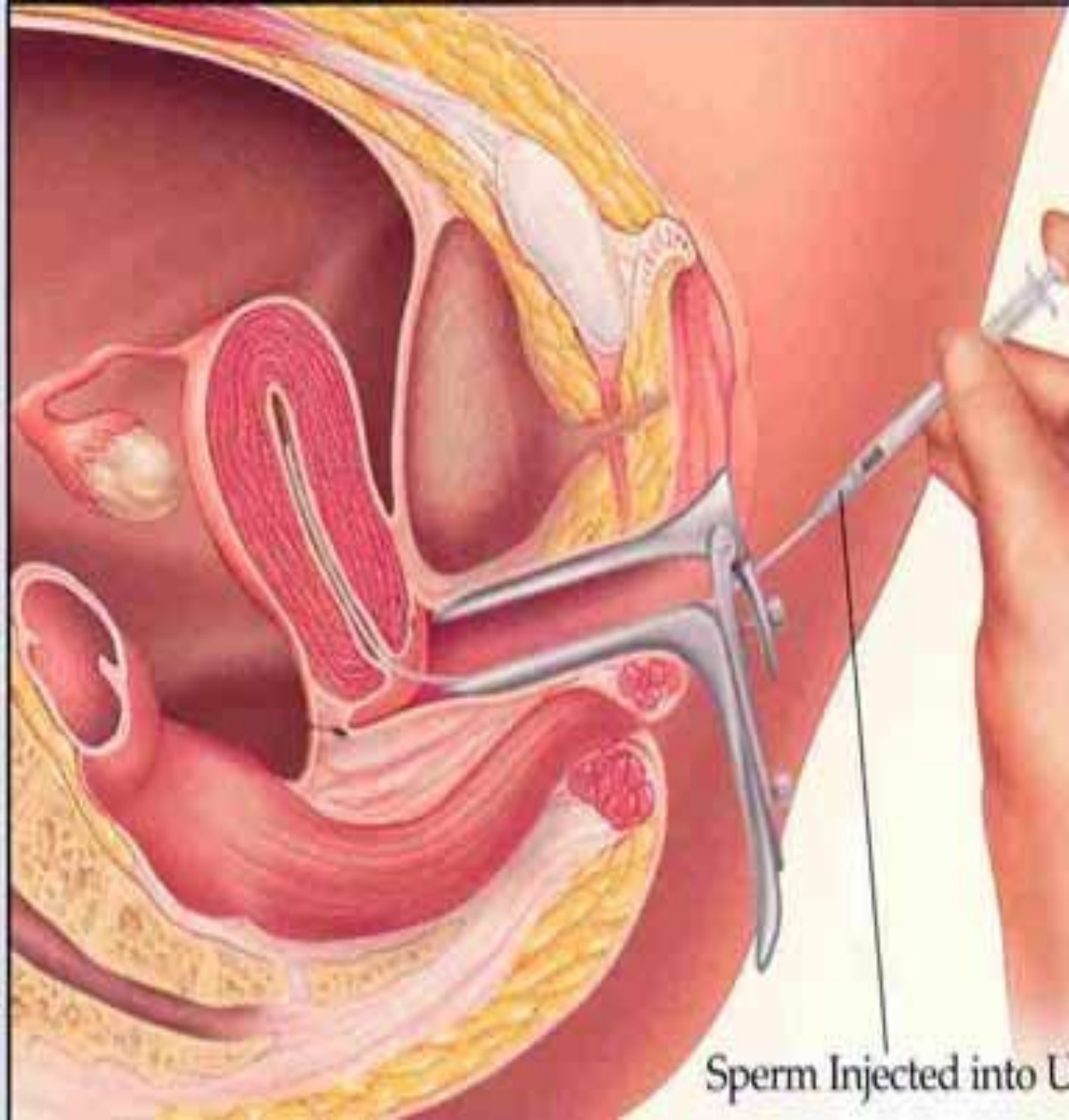
3. Egg donation

4. Surrogate parenting

- ## **5. Assisted reproductive technology**
- Artificial insemination by husband (AIH)**
 - Artificial insemination by donor (AID/DI)**
 - In vitro fertilization/ embryo transfer (IVF/ET)**
 - Gamete intrafallopian transfer (GIFT)**
 - Zygote intrafallopian transfer (ZIFT)**
 - Intracytoplasmic sperm injection (ICSI)**



Sperm in Sterile
Medium



Sperm Injected into U

1. Stimulation of Ovaries



2. Egg Retrieval from Ovaries
Day 0



3. Fertilization of Egg
Day 0



6. Pregnancy Test (bHCG)
14 days after ET



In Vitro Fertilization-IVF

4. Embryo Culture
Day 0 - 5



5. Embryo Transfer
Day 3 - 5

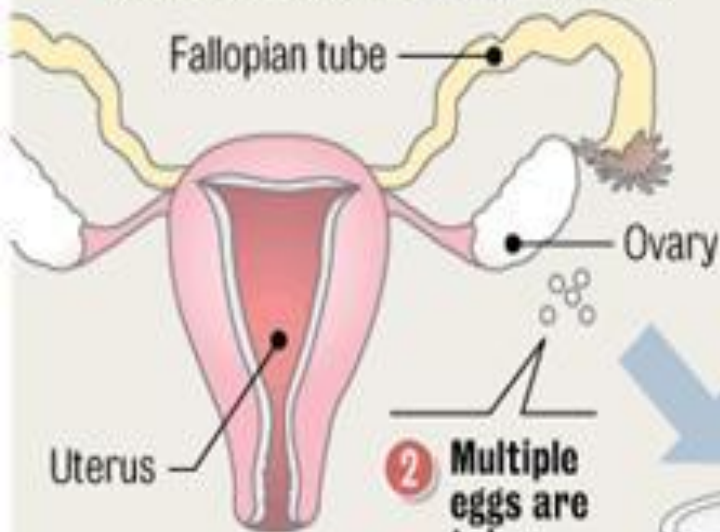


Freezing excess Embryos
Day 3 - 5

THE IN VITRO FERTILIZATION PROCESS

Used as a remedy for infertility, a woman's egg cells are combined with a man's sperm cells outside the uterus. The fertilized egg is then implanted in the woman's uterus and, if successful, begins the pregnancy cycle. The first baby realized from this fertilization method was born in 1978.

- 1** The woman is given hormone treatments to stimulate egg production



- 2** Multiple eggs are taken from the woman's ovaries

- 3** In the lab, the eggs are mixed with the man's sperm cells in a culture dish to become fertilized



- 4** The fertilized eggs, or embryos, are placed in an incubator for about 48 hours



- 5** Embryos are implanted in the woman's uterus or frozen for future implanting



Source: Staff research

ICSI

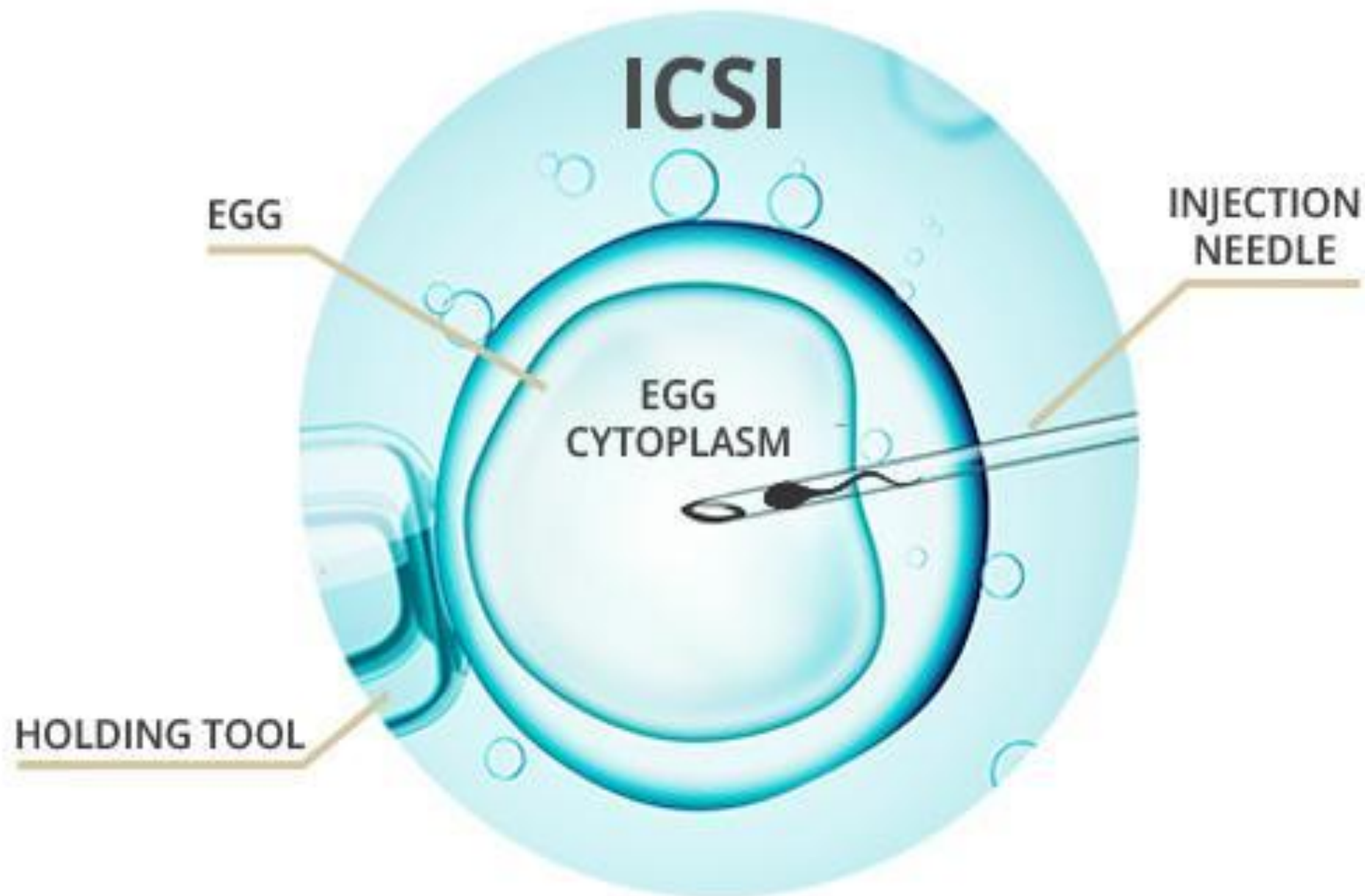
EGG

INJECTION
NEEDLE

EGG
CYTOPLASM

HOLDING TOOL

Sperm is injected into the
cytoplasm of the egg using a fine needle





THANK YOU FOR YOUR ATTENTION!