**Infertility & Assisted Reproductive Technologies**

**Infertility**

* The inability to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ after \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of properly timed, unprotected intercourse.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Rate**: The monthly probability of conception with a healthy couple is 20%.
* After 12 months, \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of couples will conceive.

**Female Causes of Infertility**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Blockage/Damage**
  + Can keep \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from reaching \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Can cause a fertilized egg to implant in the fallopian tube resulting in an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pregnancy.
  + Can be caused by STI’s such as chlamydia.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Uterine tissue \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ outside the uterus
  + Affects ovary, fallopian tube, & uterine function.
  + The implants respond to hormones, shedding & bleeding in sync with the uterus.
  + Causes inflammation, pain, scarring, & infertility.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Disorders**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: No egg is released from the ovaries.
  + Caused by
    - Abnormal/low levels of hormones (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
    - Tumors
    - Excessive exercise
    - Malnutrition
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Ovarian Syndrome (PCOS)**
  + Many small \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_in the ovaries
  + Eggs do not mature in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Follicles turn into cysts.
  + Higher than normal levels of androgens (male hormones)

**Male Causes of Infertility**

* **Impaired** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **of Sperm**
  + Keeps sperm from reaching & penetrating the egg.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Concentration**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ million sperm/ml is normal
  + Below \_\_\_\_\_\_\_\_\_\_\_\_ million sperm/ml is low sperm count.
  + \_\_\_\_\_\_\_\_\_\_\_\_\_ million sperm/ml is high fertility.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Testicle**
  + One or both testicles fail to descend from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cavity during fetal development.
  + Testes are exposed to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Affects sperm production.
* **Infections**
  + Cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sperm passages.
  + Inflammation of the testicles, prostate, urethra, & epididymis
  + Caused by:
    - STI’s (Gonorrhea & Chlamydia)

**Artificial Insemination**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is inserted into the female body for the purpose of pregnancy by means other than sexual intercourse.
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Intracervical
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Intratubal
* Used when the infertility is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_related.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Fertilization**

* Eggs & sperm are harvested from the male & female and manually combined in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Usually several eggs are fertilized.
* A decision must be made regarding the number of embryos to implant into the uterus.
* Remaining embryos can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Intracytoplasmic Sperm** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Egg is injected with a single sperm.
* A special needle is used to insert the sperm into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the egg.
* Embryo is transferred into the female uterus.

**Miscarriage**

* Spontaneous loss of fetus before \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ weeks.
* Most are due to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ abnormalities in the fetus.
* Most occur before \_\_\_\_\_\_\_\_\_\_\_\_\_\_ weeks.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_% of all fertilized eggs are miscarried, usually before the female knows she is pregnant.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_% of miscarriages are known miscarriages.