Infertility and Nursing

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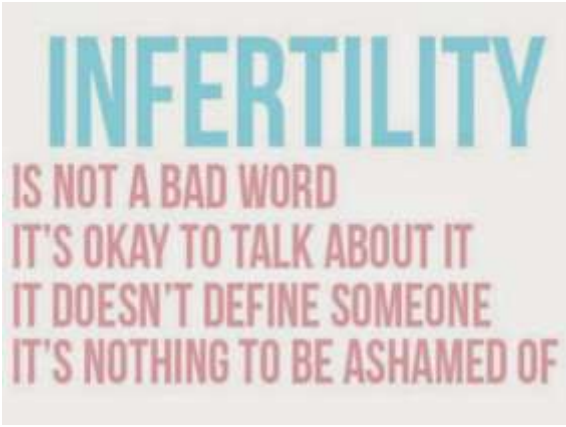
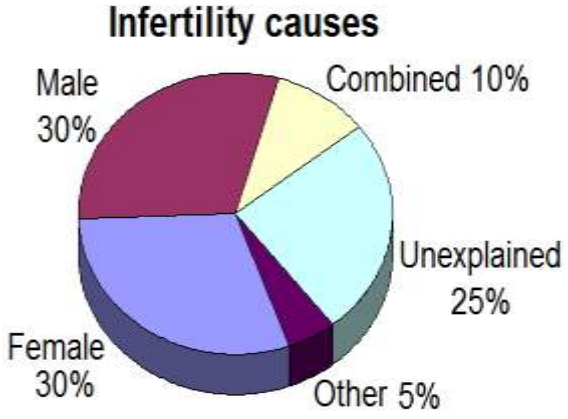
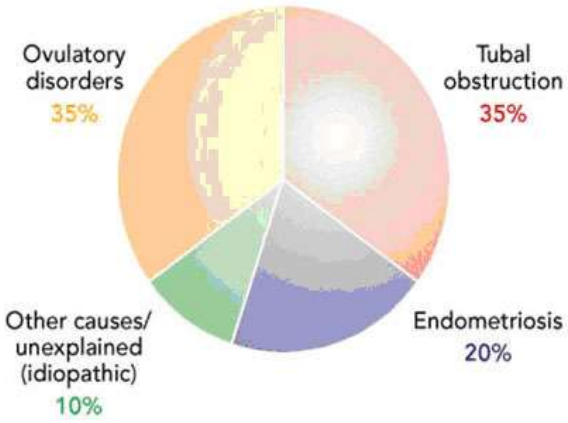
What is Infertility ?

Infertility

Infertility – it s inability to conceive after having regular unprotected sex. Infertility can also refer to the biological inability of an individual to contribute to conception, or to a female who cannot carry a pregnancy to full term. It s affects around 12 % of couples over the world







What can influent on fertility?

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- Age
- Coital frequency
- Nutrition
- Physical anomalies
- Environmental conditions
- Pelvic surgeries or infections
- Hormone levels

Which one methods using to diagnostic fertility?

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- Ultrasonography
- Sperm Count
- Basal body temperature
- Ovulation tests
- Pelvic examination

Fertility Preservation

- Discussing factors related to infertility
- Assessing reproductive status, including pelvic examination and cervical cultures, as appropriate
- Teaching about prevention of sexually transmitted infections including signs and symptoms and need for early, aggressive treatment
- Discussing the effects of various contraceptive methods on fertility

Fertility Preservation

- Referring client for thorough physical examination for health problems affecting fertility, such as endometriosis
- Reviewing lifestyle habits that may affect fertility, such as smoking, substance use, alcohol consumption, nutritional patterns, exercise and sexual behavior
- Instituting a referral for a client with history indicating possible fertility problems for early diagnosis and treatment

If the family cannot have a child, what they can do?

Alternative method of having children

- Artificial insemination
- In vitro fertilization
- Adoption of the child

Denial, Anger, Bargaining and Depression can be occurs in infertility couples before they will reach the level of acceptance that they are different in this one area

Infertility

We can call couples **infertility** if they have unprotected coitus during minimum 1 year and the pregnancy has not occurred.

Second infertility is taking place when the couples had a successful pregnancy before but unable to conceive at present.

Sterility is the inability to conceive because of a known condition, such as the absence of uterus.

Subfertility is a lessened ability to conceive

Infertility

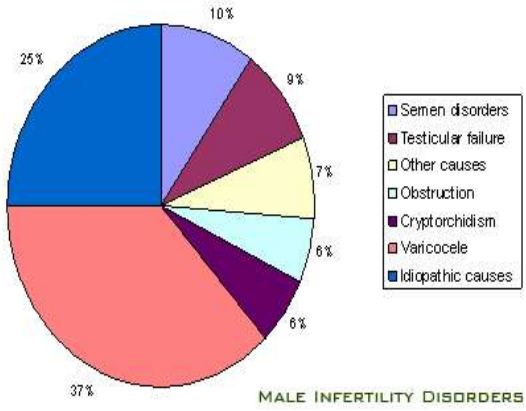
Some couples can think that they are infertile when they are not!

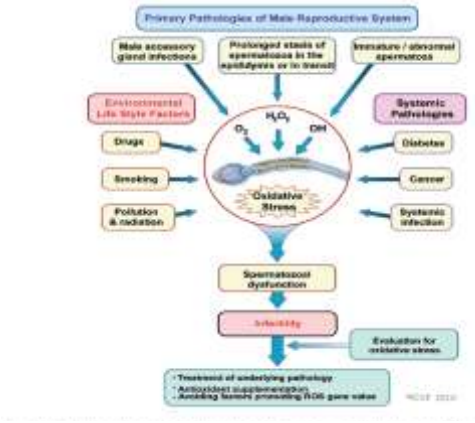
When engaging in coitus an average of four times per week, 50 % of couples will conceive within 6 months, and 85 % within 12 months. These periods will be longer if sexual relations are less frequent. Couples who engage in coitus daily, may have more difficulty conceiving than those who space coitus to every other day

Male Infertility Factors

Male Infertility Factors

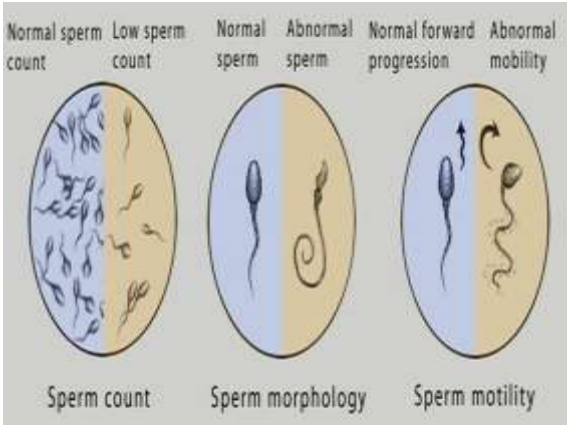
- Disturbance in **spermatogenesis** (production of sperm)
- Obstruction in the seminiferous tubules, ducts, or vesels preventing movement of spermatozoa
- Qualitative or quantitative changes in the seminal fluid preventing **sperm motility** (movement of sperm)
- Development of autoimmunity that immobilizes sperm
- Problems in ejaculation or deposition





Inadequate Sperm Count

The sperm count is a number of sperm in a single ejaculation or in a milliliter of semen. The minimum sperm count considered normal is 20 million per milliliter of semenal fluid, or 50 million per ejaculation. At least 50 % of sperm should be motile and 30 % should be normal in shape and form. Criptochidism (undescended testes), varicocele (varicosity of the spermatic vein), trauma to the testes or endocrine imbalances may lead to lowered sperm production



Obstruction or impaired sperm motility

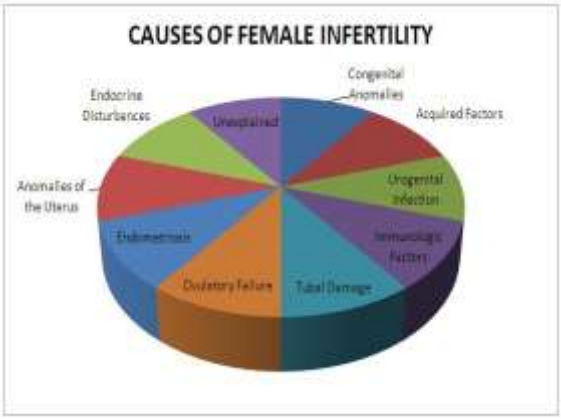
- Mumps orchitis
- Epididymitis
- Tubal infections (gonorrhea etc)
- Enlarged prostate glad
- Hipospadias or epispadias (urethral opening on the ventral or dorsal surface of the penis)
- Extreme obesity

Ejaculation Problems

Erectile dysfunction can be caused by:

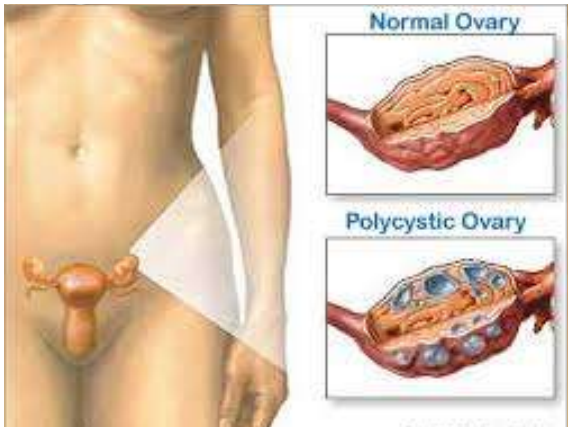
- Psychological problems
- Cerebrovascular accident
- Parkinson's disease
- Using some of medications
- Stress and depression
- Premature ejaculation

Infertility in Women



Anovulations

Anovulations (absence of ovulation), the most common cause of infertility in women, may occur from a genetic abnormality such as Turner's syndrome, hormonal imbalance, polycystic ovary syndrome, ovarian tumors, excessive exposure to x-rays, poor diet and stress



Tubal Transport Problems

- Chronic salpingitis (chronic pelvic inflammatory disease)
- Ruptured appendix
- Abdominal surgery which left adhesion formation

Pelvic Inflamation Disease

PID is infection of the pelvic organs : the uterus, fallopian tubes, ovaries and supporting structures

As usually this is caused by chlamydia and gonorrhea

20 % of those who acquire PID will be left infertile

Uterine Problems

- Tumors such as fibromas
- Inadequate endometrium formation
- Endometriosis (a condition resulting from the appearance of endometrial tissue outside the womb. Tubal obstruction may occur)

Cervical and Vaginal Problems

- To much thick cervical mucus not allow the spermatozoa to penetrate the cervix (this can be in the cases: unorganized timing of conceiving, inflammation of the cervix, polyp of the cervical os, scar on the cervix)
- Infection of the vagina can make the ph acidotic
- Sperm – agglutinating antibodies in the women bodys

Fertility Assessment

Fertility Assessment

- Basic fertility assessment begins with a health history and physical examination of both sexual partners (general health, nutrition, alcohol, drug, tobacco use, hypospadias or cryptorchidism, mumps orchitis, urinary tract infection, STI, surgical operations such as hernia, endocrine disease, job factors)
- In a history important to ask a frequency of coitus or masturbation, failure to achieve ejaculation, coital position used, using lubricant, previous children

Fertility Assessment

Important to take menstrual history

- Age of menarche
- Length, regularity and frequency of menstrual periods
- Amount of flow
- Any difficulties experienced, such as dysmenorrhea or premenstrual dysphoric disorder

Also don t forget about history of contraceptive use and history of any previous pregnancies or abortions

Take a time with couple together and individually with each partner

Fertility Assessment

After a full history taking it needs full physical examination for both man and woman

- Deeply external physical examination
- For the man prostate examination
- For woman breast and thyroid examination, complete pelvic examination inc. pap test

Fertility Testing

Basic fertility testing:

- Semen analysis in the male
- Ovulation monitoring
- Tubal patency assessment in the female

Fertility Testing

For man:

- Urinalysis
- Complete blood count
- Blood type, Rh
- Serologic test for syphilis
- HIV test
- Protein – bound iodine
- Cholesterol level
- Gonadotropin, prolactin, testosteron

Fertility Testing

For woman:

- Rubella titer
- Serologic test for syphilis
- HIV
- Thyreoid hormones, FSH, estrogen, LH, progesteron
- Pelvis sonography

Semen Analysis

- 2 – 4 days after sexual abstinence
- 2.5 to 5.0 ml of semen should contain min 20 million spermatozoa per ml
- New analysis can be done just only after 2 -3 months (spermatogenesis ongoing while 30 – 90 days)

Ovulation Monitoring

- Recording basal temperature every day early in the morning before get up from bed at least 1 month
- Ovulation tests

Tubal Patency

- Ultrasonography
- X – ray
- Sonohysterography (Uterus is felled with sterile saline, transvaginal ultrasound transducter is inserted into the vaginato inspect the uterus abnormalities)
- Hysterosalpingography (radiologic examination of the fallopian tubes)

Surgical Procedures Testing Fertility

- Endometrial biopsy (2-3 days before expected menstrual flow)
- Hysteroscopy (trough the cervix)
- Laparoscopy

Infertility Management

Infertility Management

- Sperm counting
- Reducing the presence of infection
- Hormone therapy
- Surgery
- Assisted reproductive techniques

Artificial Insemination

Artificial Insemination

Artificial Insemination it s the instillation of sperm into the female reproductive tract:

- Intracervical insemination
- Intrauterine insemination
- Artificial insemination by husband
- Artificial insemination by donor

In Vitro Fertilization

One or more oocytes are removed from a woman's ovary by laparoscopy and fertilized by exposure to sperm under laboratory conditions outside the woman's body. About 40 hours after fertilization, the laboratory grown fertilized ova are inserted into the woman's uterus, where ideally one or more of them will implant and grow

In Vitro Fertilization

About the 10 th day of the menstruation cycle, ovaries examined daily for follicles. When follicles appears to be mature the woman is given an injection of hCG, which causes ovulation in 38 to 42 hours. Usually 3 to 12 oocytes can be removed. Oocytes are incubated for at least 8 hours to ensure viability after they are mixed with fresh spermatozoa and leaving for growth

In Vitro Fertilization

- By 40 hours after fertilization the zygotes occurs a first cell
- The eggs are examined and choose if the woman is 35 years and more two of them, if 40 and more 5 of them
- The pregnancy test can be done not early then 11 days after

Gamete Intrafallopian Transfer

Fertilization occurs in the tube and the zygote moves to the uterus for implantation

Zygote Intrafallopian Transfer

Fertilized eggs are transferred by laparoscopic technique into the end of a waiting fallopian tube

Surrogate Embryo Transfer

This method for the woman who can ovulate. Procedure – transvaginal ultrasound guided

Alternatives to childbirth

- Surrogate Mothers
- Adoption
- Child-Free Living

Thank You For Your Attention