Family planning

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FAMILY PLANNING DEFINITION

- Family planning as follows :
- "Family planning refers to practices that help individuals or couples to attain certain objectives :

- (a) to avoid unwanted births
- (b) to bring about wanted births
- {c) to regulate the intervals between pregnancies
- {d) to control the time at which births occur in relation to the ages of the parent.
- {e) to determine the number of children in the family.

Health aspects of family planning

- Family planning and health have a two-way relationship.
- **Women's health:**

Maternal mortality, morbidity of women of childbearing age

nutritional status (weight changes, hemoglobin level, etc.)

preventable complications of pregnancy and abortion.

- **Fetal health :**

Fetal mortality {early and late fetal death); abnormal development.

Health aspects of family planning

- **Infant and child health.**
- : Issues relating to family planning
- Birth spacing and family size are important factors in child growth and development.
- The child is likely to receive his full share of love and care, including nutrition he needs
- Family planning, in other words, is effective prevention against malnutrition.
- Infectious diseases : Children living in large-sized families have an increase in infection, especially infectious gastroenteritis, respiratory and skin infections.

CONTRACEPTIVE METHODS (Fertility Regulating Methods)

- Contraceptive methods are, by definition, preventive methods to help women avoid unwanted pregnancies.
- They include all temporary and permanent measures to prevent pregnancy .

CONTRACEPTIVE CLASSIFICATION

- The contraceptive methods may be broadly grouped into two classes spacing methods and terminal methods,
- I. Spacing methods
- 1. Barrier methods
- (a) Physical methods
- (b) Chemical methods
- (c) Combined methods
- 2. Intra-uterine devices
- 3. Hormonal methods
- 4. Post-conceptional methods
- 5. Miscellaneous.

- II. Terminal methods
- 1 Male sterilization
- 2 Female sterilization.

BARRIER METHODS

- The aim of these methods is to prevent live sperm from meeting the ovum.
- The main contraceptive advantage is the absence of side-effects associated with the "pill" and IUD.
- The non-contraceptive advantages include some protection from sexually transmitted diseases, a reduction in the incidence of pelvic inflammatory disease and possibly some protection from the risk of cervical cancer.
- Barrier methods are less effective than either the pill or the loop. They are only effective if they are used consistently and carefully.

BARRIER METHODS
A. PHYSICAL METHODS

1 . Condom:

- The effectiveness of a condom may be increased by using it in conjunction with a spermicidal jelly inserted into the vagina before intercourse.
- The spermicide serves as additional protection in the unlikely event that the condom should slip off or tear.
- Failure rate :reported pregnancy rates varying from 2-3 per 100 women years to more than 14 in typical users ,Most failures are due to incorrect use.

Condom advantage

- The ADVANTAGES of condom are :
- (a) they are easily available
- (b) safe and inexpensive
- (c) easy to use; do not require medical supervision
- (d) no side effects
- (e) light, compact and disposable.
- (f) provides protection not only against pregnancy but also against STD.

Female condom

- Is a pouch made of polyurethane, which lines the vagina.
- An internal ring in the close end of the pouch covers the cervix and an external ring remains outside the vagina.
- It is prelubricated with silicon, and a spermicide need not be used.
- It is an effective barrier to STD infection.
- However, high cost and acceptability are major problems.
- The failure rates during the first year use vary from 5 per 100 women-years pregnancy rate to about 21 in typical users


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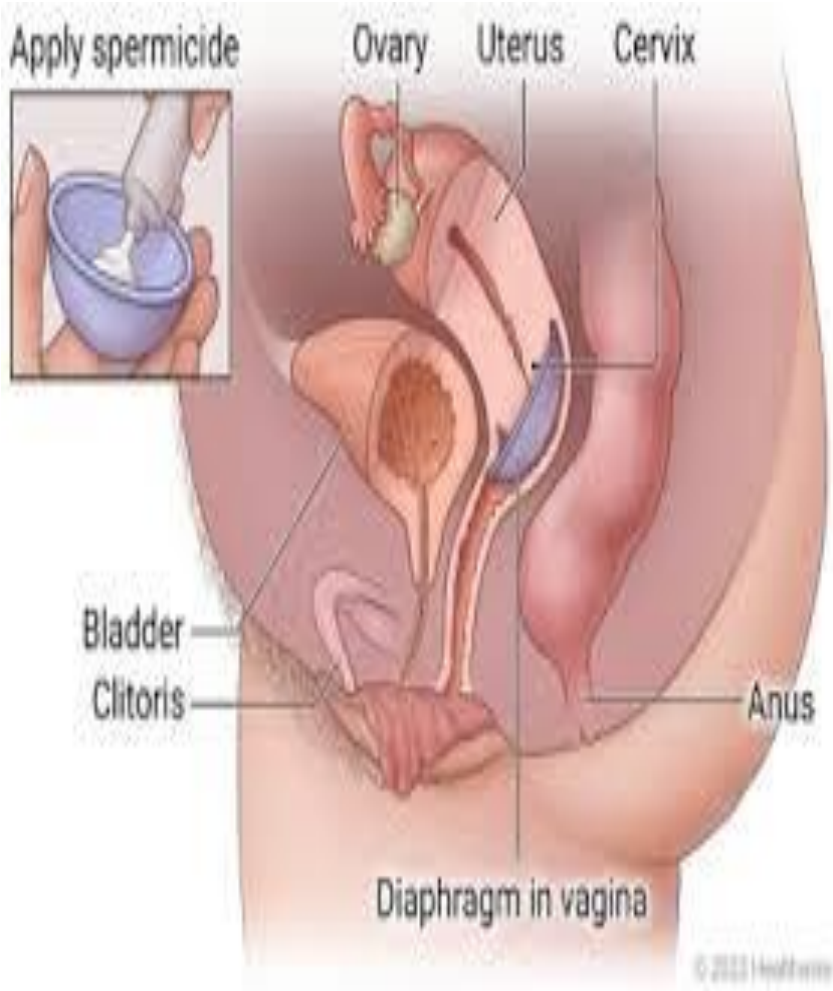
2. Diaphragm

- is a shallow cup made of synthetic rubber or plastic material.
- It ranges in diameter from 5-10 cm (2-4 inches).
- It has a flexible rim made of spring or metal.
- It is important that a woman be fitted with a diaphragm of the proper size.
- It is held in position partly by the spring tension and partly by the vaginal muscle tone.
- This means, for successful use, the vaginal tone must be reasonable. Otherwise, in the case of a severe degree of cystocele, the rim may slip down.

2. Diaphragm

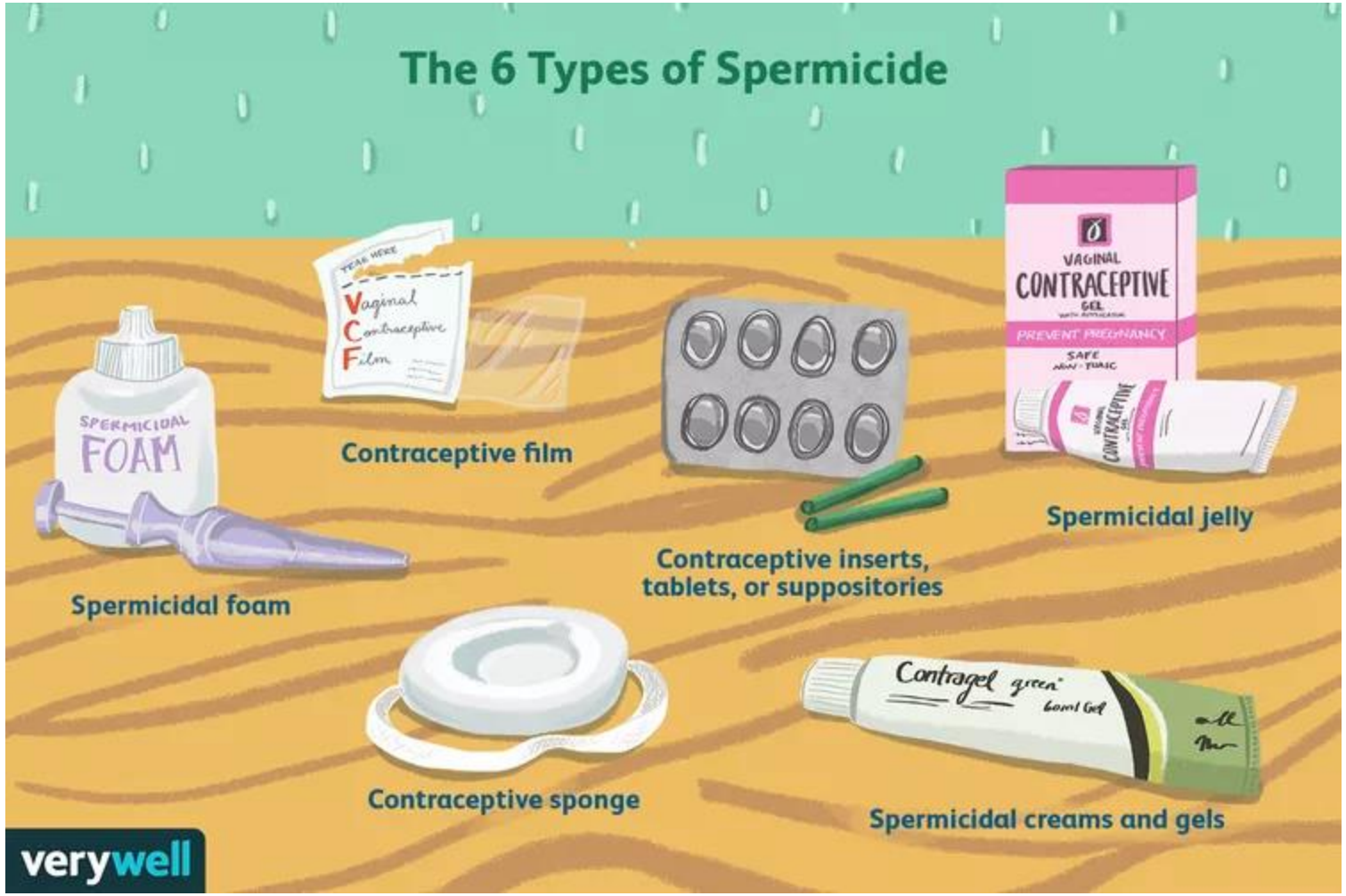
- The diaphragm is inserted before sexual intercourse and must remain in place for not less than 6 hours after intercourse.
- A spermicidal jelly is always used along with the diaphragm.
- The diaphragm holds the spermicide over the cervix.
- Side-effects are practically nil. Failure rate for the diaphragm with spermicide vary between 6 to 12 per 100 women-years.

- ADVANTAGES : The primary advantage of the diaphragm is the almost total absence of risks and medical contraindications.
- DISADVANTAGES : Initially a physician or other trained person will be needed to demonstrate the technique of inserting the diaphragm into the vagina and to ensure a proper fit.
- After delivery, it can be used only after involution of the uterus is completed.
- If the diaphragm is left in the vagina for an extended period, there is a remote possibility of a toxic shock syndrome.


Apply spermicide
Ovary
Uterus
Cervix
Bladder
Clitoris
Anus
Diaphragm in vagina

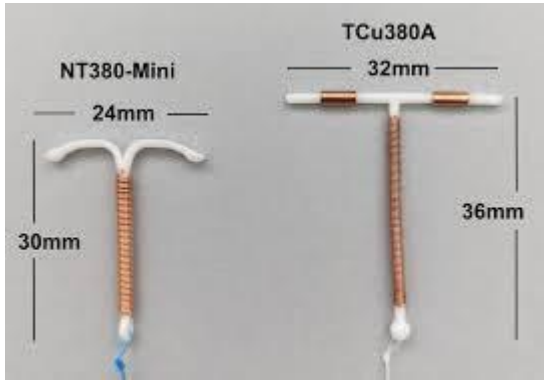
b. CHEMICAL METHODS

- In the 1960s, before the advent of IUDs and oral contraceptives, spermicides (vaginal chemical contraceptives) were used widely.
- They comprise four categories :
- a) Foams : foam tablets, foam aerosols
- b) Creams, jellies and pastes squeezed from a tube
- c) Suppositories inserted manually, and
- d) Soluble films - C-film inserted manually.

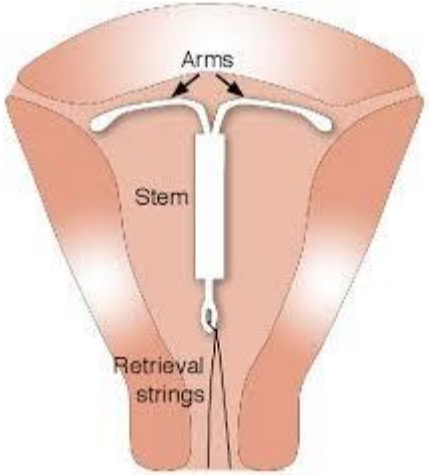

The 6 Types of Spermicide
TEAR HERE
Vaginal
Contraceptive
Film
Contraceptive film
SPERMICIDAL
FOAM
Spermicidal foam
Contraceptive inserts,
tablets, or suppositories
VAGINAL
CONTRACEPTIVE
GEL
PREVENT PREGNANCY
SAFE
Spermicidal jelly
Contragel green
Spermicidal creams and gels
Contraceptive sponge
verywell

- The commonly used modern spermicides are "surface-active agents" which attach themselves to spermatozoa and inhibit oxygen uptake and kill sperms.
- The main drawbacks of spermicides are :
- (a) they have a high failure rate
- (b) they must be used almost immediately before intercourse and repeated before each sex act
- (c) they must be introduced into those regions of the vagina where sperms are likely to be deposited.
- (d) they may cause mild burning or irritation.

INTRA-UTERINE DEVICES



- Types of IUD There are two basic types of IUD :
- non-medicated and medicated.
- Both are usually made of polyethylene or other polymers; in addition, the medicated or bioactive IUDs release either metal ions (copper) or hormones (progestogens).



- Advantages of copper devices
- Low expulsion rate
- increased contraceptive effectiveness
- effective as post-coital contraceptives, if inserted within 3-5 days of unprotected intercourse.

Hormonal device LNG-20 (Mirena)

- Is a T-shaped IUD releasing 20 mcg of levonorgestrel (a potent synthetic steroid).
- it has a low pregnancy rate (0.2 per 100 women) and less number of ectopic pregnancies.
- Is associated with lower menstrual blood loss and fewer days of bleeding than the copper devices.
- The hormonal devices would be particularly valuable for women with significant anemia.
- But these devices are more expensive.

Mechanism of action of IUDs

- the IUD causes a foreign-body reaction in the uterus causing cellular and biochemical changes in the endometrium and uterine fluids which impair the viability of the gamete and thus reduce its chances of fertilization, rather than its implantation.
- Copper IUD seems to enhance the cellular response in the endometrium It also affects the enzymes in the uterus, copper ions may affect sperm motility, capacitation and survival.
- Hormone-releasing devices increase the viscosity of the cervical mucus and thereby prevent sperm from entering the cervix, also· maintain high levels of progesterone in the endometrium and thus, relatively low levels of oestrogen, thereby sustaining an endometrium unfavourable to implantation

DURATION OF ACTION OF IUD

- The Cu-T -380A is approved for use for 10 years. However, the Cu-T -380A has been demonstrated to maintain its efficacy over at least 12 years of use.
- The levonorgestrel IUD can be used for at least 7 years, and probably 10 years.

Advantages The IUD

- (a) simplicity, i.e., no complex procedures are involved in insertion; no hospitalization is required
- (b) insertion takes only a few minutes
- (c) once inserted IUD stays in place as long as required
- (d) inexpensive
- (e) contraceptive effect is reversible by removal of IUD
- (f) virtually free of systemic metabolic side-effects associated with hormonal
- (g) highest continuation rate.
- (h) there is no need for the continual motivation required to take a pill daily or to use a barrier method consistently; only a single act of motivation is required.

IUD Contraindications

- ABSOLUTE :
- (a) suspected pregnancy
- (b) pelvic inflammatory disease
- (c) vaginal bleeding of undiagnosed aetiology
- (d) cancer of the cervix, uterus or adnexia and other pelvic tumours
  (e) previous ectopic pregnancy.

IUD CONTRAINDICATIONS(CONT.)

- RELATIVE :
- (a) anaemia.
- (b) menorrhagia.
- (c) history of PID since last pregnancy.
- (d) purulent cervical discharge.
- (e) distortions of the uterine cavity due to congenital malformations, fibroids.
- (f) unmotivated person.

IUD SIDE EFFECTS&COMPLICATIONS

- 1. Bleeding The commonest complaint of women fitted with an IUD (inert or medicated) is increased vaginal bleeding.
- It accounts for 10-20 per cent of all IUD removals.
- The bleeding may take one or more of the following forms : greater volume of blood loss during menstruation, longer menstrual periods or mid-cycle bleeding.
- Usually bleeding or spotting between periods settles within 1-2 months.
- The patient who is experiencing the bleeding episodes should receive iron tablets (ferrous sulphate 200 mg, three times daily).
- If the bleeding is heavy or persistent or if the patient develops anaemia despite the iron supplement, the IUD should be removed.

IUD SIDE EFFECTS&COMPLICATIONS

- 2. Pain is the second major side-effect leading to IUD removal.
- Pain may be experienced during IUD insertion and for a few days thereafter, as well as during menstruation.
- It may manifest itself in low backache, cramps in the lower abdomen and occasionally pain down the thighs.
- These symptoms usually disappear by the third month.
- If pain is intolerable, the IUD should be removed.

IUD SIDE EFFECTS&COMPLICATIONS

- 3. Pelvic infection Pelvic inflammatory disease (PID) is a collective term that includes acute, subacute and chronic conditions of the ovaries, tubes, uterus, connective tissue and pelvic peritoneum and is usually the result of infection.
- Risk associated with IUD use is greater among women with STD.
- The greater risk of PID with IUD use may be due to introduction of bacteria into the uterus during IUD insertion.
- Recent work has focused on PID as being caused by organisms ascending the IUD tail from the lower genital tract to uterus and tubes .
- The organisms include Gardnerella, Anaerobic streptococci, Bacteroides, Coliform bacilli and Actinomyces.
- The risk of PID appears to be the highest in the first few months after IUD insertion.

Pelvic inflammatory disease (PID)(CONT.)

- When PID is diagnosed, it should be treated promptly with broad-spectrum antibiotics.
- Most clinicians recommend removing IUD if infection does not respond to antibiotics within 24-48 hours.
- The risk of PID calls for proper selection of cases for IUD insertion, better sterilization and insertion techniques, and modified devices without tails.

IUD SIDE EFFECTS&COMPLICATIONS

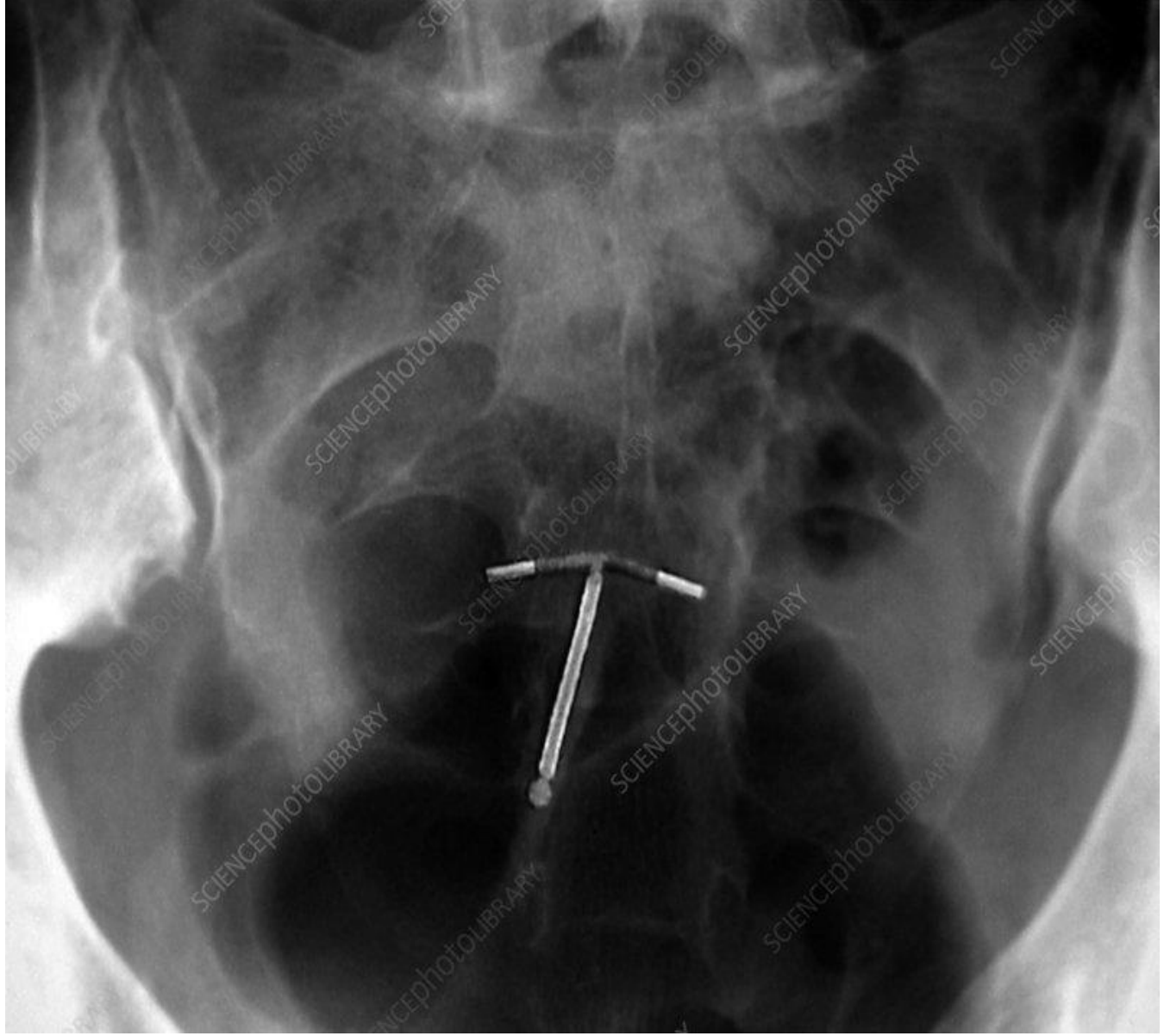
- 4. Uterine perforation
- The reported incidence ranges from 1:150 to 1: 9000 insertions , depending upon:
- the time of insertion, design of the IUD, technique of insertion and operator's experience.

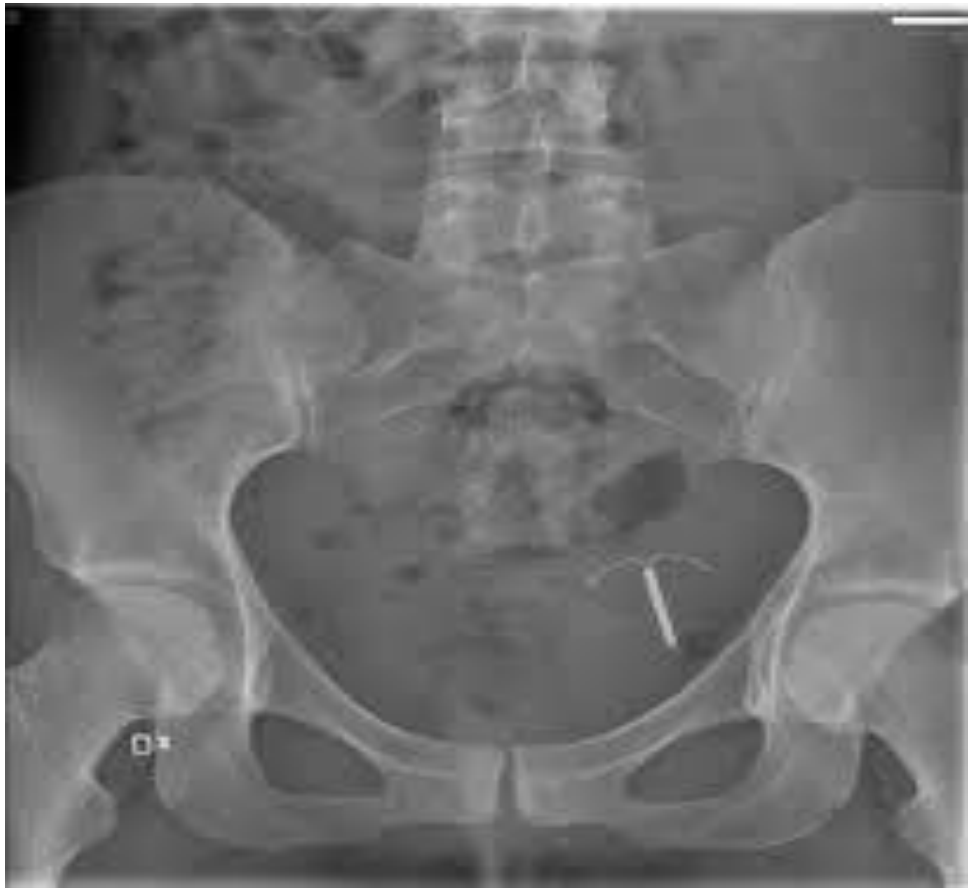
UTERINE PERFORATION(CONT.)

- The device may migrate into the peritoneal cavity causing serious complications such as intestinal obstruction.
- Copper devices produce an intense tissue reaction leading to peritoneal adhesions.
- Perforations occur more frequently when insertions are performed between 48 hours and 6 weeks postpartum.
- Interestingly, the perforation may be completely asymptomatic and discovered only when searching for a missing IUD.

UTERINE PERFORATION(CONT.)

- The conclusive diagnosis of perforation is usually made by a pelvic X-ray.
- Evidence suggests that any IUD that has perforated the uterus should be removed because the risks of intra-abdominal inflammatory response leading to adhesions or perforation of organs within the abdominal cavity outweigh the risks associated with removal.

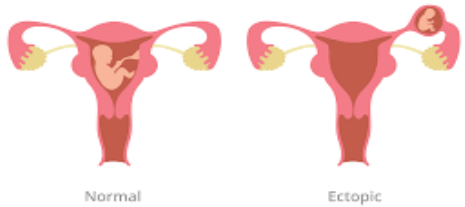




IUD SIDE EFFECTS&COMPLICATIONS

- 5. Pregnancy Considering all IUDs together, the actual use failure rate in the first year is approximately 3 per cent.
- About 50 per cent of uterine pregnancies occurring with the device in situ end in a spontaneous abortion.
- Removal of the IUD in early pregnancy has been found to reduce this abortion rate by half.
- In women who continue the pregnancy with the device in situ, a 4-fold increase in the occurrence of premature births compared with other women has been reported.

IUD SIDE EFFECTS&COMPLICATIONS



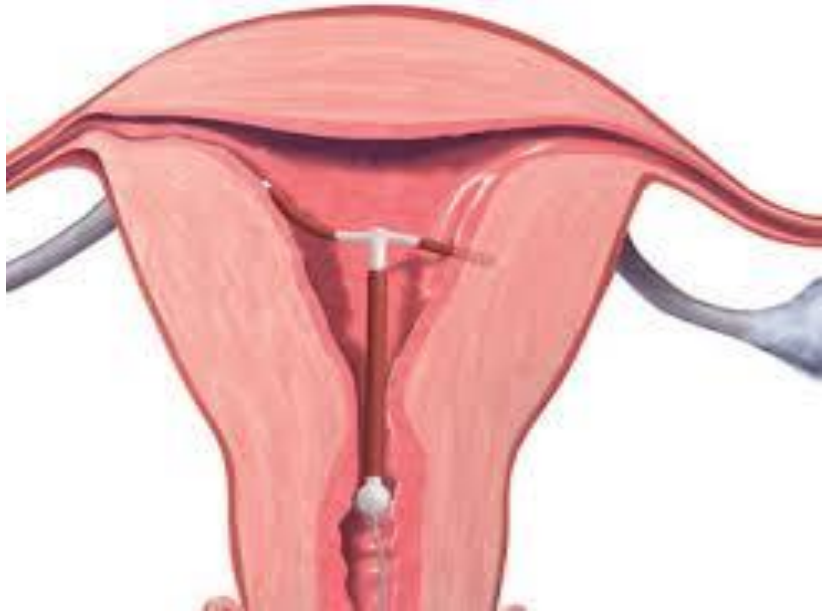
- 6. Ectopic pregnancy :
- The ectopic pregnancy rate per 1000 women year in levonorgestrel IUD and Cu-T-380A is about 0.2 as compared to non contraceptive users, where it is about 3-4.5.
- With levonorgestrel IUD the chances of ectopic pregnancy are less, because it is associated with a partial suppression of gonadotrophins with subsequent disruption of normal follicular growth and inhibition of ovulation in significant number of cycles.

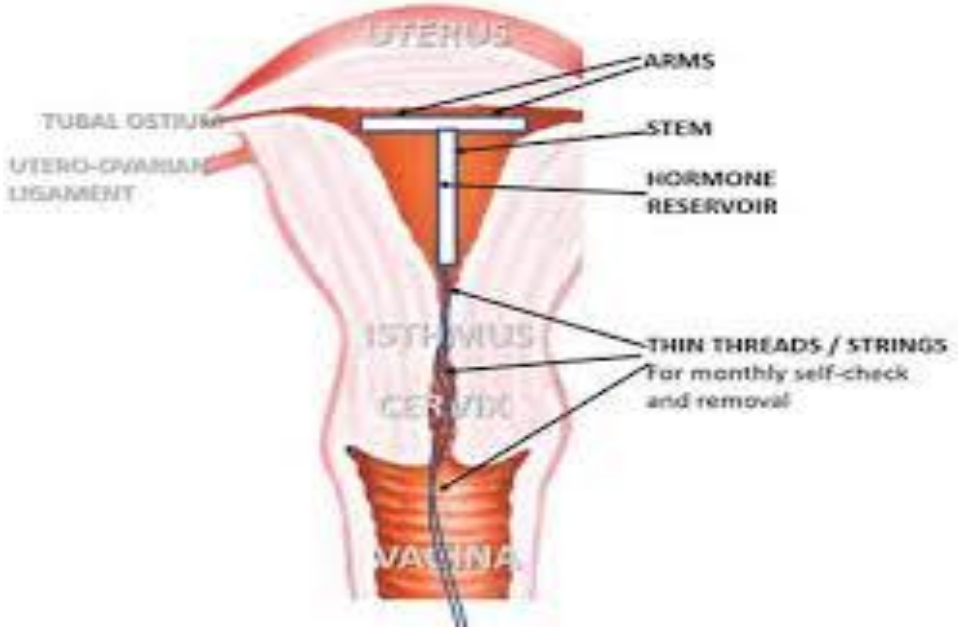
IUD SIDE EFFECTS&COMPLICATIONS

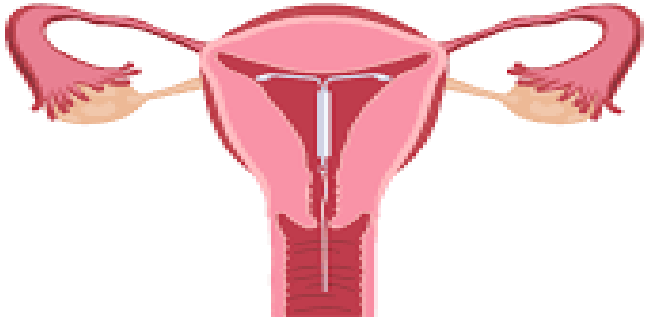
- 7. Expulsion:
- Expulsion rates vary between 12-20 per cent .
- Expulsion can be partial or complete.
- Partial expulsion is diagnosed on speculum examination by observing the stem of the IUD protruding through the cervix.
- Clinical skill, timing of insertion and the age and parity of the user all influence the likelihood of expulsion.
- An expulsion usually occurs during the first few weeks following insertion or during menstruation.

EXPULSION(CONT.)

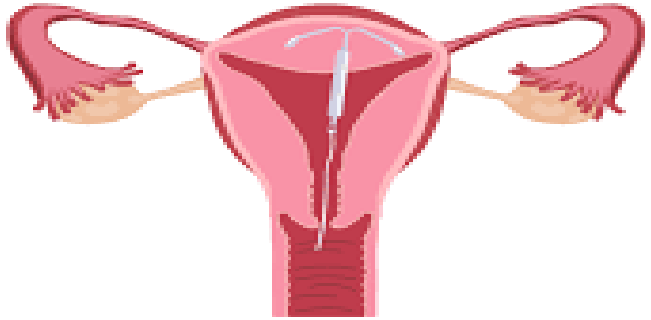
- Expulsion is most common among young women, nulliparous women and women who have a postpartum insertion.
- As many as 20 per cent of all expulsions go undetected.
- In general, expulsion in itself is not a serious problem, but if expulsion is unnoticed, pregnancy may occur.







Correct Mirena placement



Mirena migration

IUD SIDE EFFECTS&COMPLICATIONS

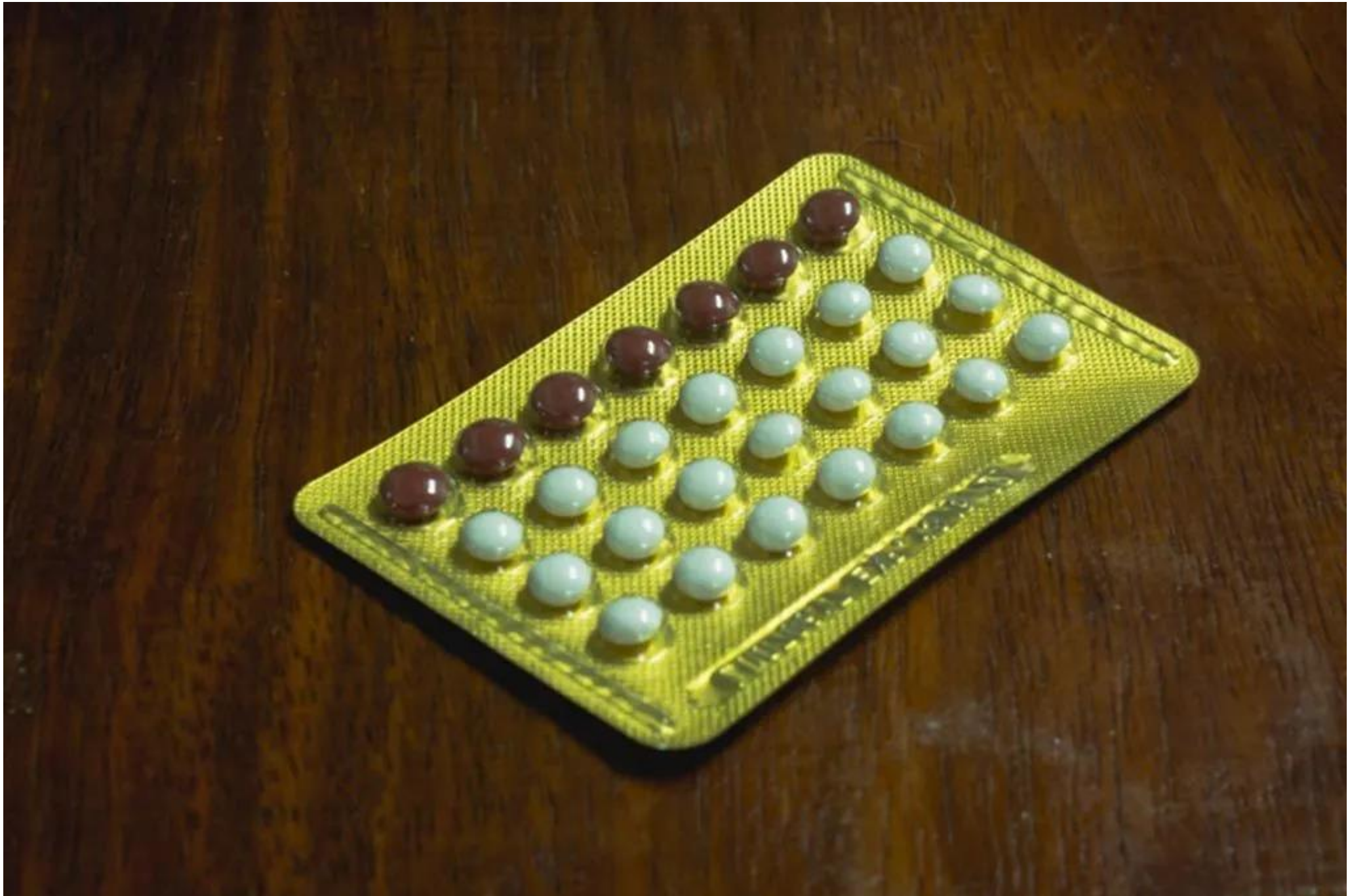
- 8. Fertility after removal:
- Fertility does not seem to be impaired after removal of a device provided there has been no episode of PID, whilst the device was in situ .
- Over 70 per cent of previous IUD users conceive within one year of stopping use.
- It is now established that PID is a threat to woman's fertility.
- There is no meaningful data available on the long-term use of IUD on subsequent fertility.

Hormonal contraceptives

- Classification :
- A. Oral pills:
- 1. Combined pill
- 2. Progestogen only pill (POP)
- 3. Post-coital pill
- B. Depot (slow release} formulations:
- 1. Injectables
- 2. Subcutaneous implants
- 3. Vaginal rings

1. COMBINED PILL

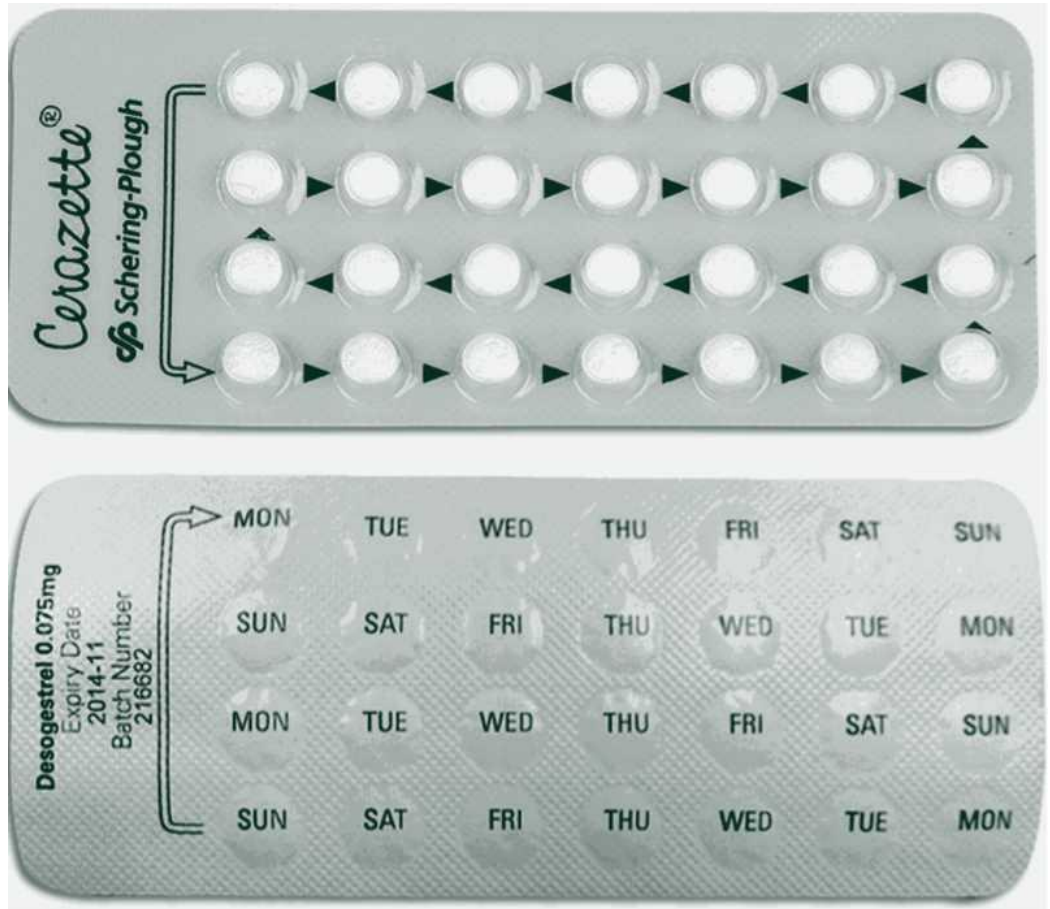
- most formulations of the combined pill contain no more than 30-35 mcg of a synthetic oestrogen, and 0.5 to 1.0 mg of a progestogen.
- The pill is given orally for 21 consecutive days beginning on the 5th day of the menstrual cycle followed by a break of 7 days during which period menstruation occurs.
- in a package of 28 pills (21 of oral contraceptive pills and 7 brown film coated 60 mg ferrous fumarate tablets)
- The bleeding which occurs is not like normal menstruation, but is an episode of uterine bleeding from an incompletely formed endometrium caused by the withdrawal of exogenous hormones.
- Therefore it is called "withdrawal bleeding" rather than menstruation.
- Further, the loss of blood which occurs is about half that occurring in a woman having ovulatory cycle.



- The pill should be taken everyday at a fixed time, preferably before going to bed at night.
- The first course should be started strictly on the 5th day of the menstrual period, as any deviation in this respect may not prevent pregnancy.
- If the user forgets to take a pill, she should take it as soon as she remembers, and that she should take the next day's pill at the usual time.

2. Progestogen-only pill (POP)

- This pill is commonly referred to as "minipill" or "micropill".
- It contains only progestogen, which is given in small doses throughout the cycle.
- The commonly used progestogens are norethisterone and levonorgestrel.
- The progestogen-only pills have a poor cycle control and an increased pregnancy rate.
- They could be prescribed to older women for whom the combined pill is contraindicated because of cardiovascular risks.
- The evidence that the progestogens may lower the high-density lipoproteins may be of some concern.


Cerazette®
Schering-Plough
Desogestrel 0.075mg
Expiry Date
2014-11
Batch Number
216682
MON TUE WED THU FRI SAT SUN
SUN SAT FRI THU WED TUE MON
MON TUE WED THU FRI SAT SUN
SUN SAT FRI THU WED TUE MON

3. Post-coital contraception (or "morning after")(emergency contraception)

- recommended within 72 hours of intercourse.
- Two methods are available: contraception is an unprotected
- (a) IUD : The simplest technique is to insert an IUD, if acceptable, especially a copper device within 5 days.
- (b) Hormonal : More often a hormonal method may be preferable.
- Levonorgestrel 0. 75 mg tablet is approved for emergency contraception.
- It is used as one tablet of 0.75 mg within 72 hours of unprotected sex and the 2nd tablet after 12 hours of 1st dose.

3. Post-coital contraception(emergency)(cont.)

- or
- Two oral contraceptive pills containing 50 mcg of ethinyl estradiol within 72 hours after intercourse, and the same dose after 12 hours.
- or
- Four oral contraceptive pills containing 30 or 35 mcg of ethinyl estradiol within 72 hours and 4 tablets after 12 hours.
- if the method fails, There is no evidence that foetal abnormalities will occur.
- Ulipristal acetate 30 mg orally as a single dose within 5 days.


Levonelle 1500
1500 microgram tablet
levonorgestrel


ellaOne 30 mg
tablet / comprimé
Ulipristal acetate
Ulipristal acétate


1 tablet
ellaOne 30 mg tablet
ulipristal acetate
Emergency contraception
Take one tablet as soon as possible after unprotected sex or contraceptive failure


PlanB
One-S
levonorgestrel 1.5 mg
emergency
PlanB
One-Step
PlanB
One-Step
emergency contraceptive
One Tablet. One Step.
oner you take it, the more effecti
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MODE OF ACTION OF ORAL PILLS

- The mechanism of action of the combined oral pill is to prevent the release of the ovum from the ovary.
- This is achieved by blocking the pituitary secretion of gonadotropin that is necessary for ovulation to occur.
- Progestogen-only preparations render the cervical mucus thick and scanty and thereby inhibit sperm penetration.
- Progestogens also inhibit tubal motility and delay the transport of the sperm and of the ovum to the uterine cavity

Adverse effects OF ORAL PILLS

- 1. Cardiovascular effects
- myocardial infarction, cerebral thrombosis and venous thrombosis, with or without pulmonary embolus.
- The risk increased substantially with age and cigarette smoking .
- The evidence was convincing that the cardiovascular complications were positively associated with the oestrogen content of the pill.

Adverse effects OF ORAL PILLS

- 2. Carcinogenesis: increased risk of cervical cancer with increasing duration of use of oral contraceptives.
- 3. Metabolic effects These have included the elevation of blood pressure, the alteration in serum lipids with a particular effect on decreasing high-density lipoproteins, blood clotting and the ability to modify carbohydrate metabolism with the resultant elevations of blood glucose and plasma insulin .
- These effects are positively related to the dose of the progestogen component .

Other adverse effects

- (i) Liver disorders : The use of the pill may lead to hepatocellular adenoma and gall bladder disease. Cholestatic jaundice can occur in some pill users.
- (ii) Lactation : Preparations containing a relatively high amount of oestrogen adversely affect the quantity and constituents of breast milk, and less frequently cause premature cessation of lactation.
- (iii) Subsequent fertility: In general, oral contraceptive use seems to be followed by a slight delay in conception .
- (iv) Ectopic pregnancies : These are more likely to occur in women taking progestogen-only pills, but not in those taking combined pills.

Common unwanted effects

- (i) Breast tenderness : Breast tenderness, fullness and discomfort have been observed in women taking oral pills.
- Breast engorgement and fullness are said to be dependent on progestogen; pain and tenderness are attributed to oestrogen.
- (ii) Weight gain : About 25 per cent of users complain of weight gain. It is usually less than 2 kg, and occurs during the first 6 months of use. This is attributed to water retention, in which case restriction of salt intake is usually effective.

Common unwanted effects OF ORAL PILLS

- (iii) Headache and migraine : Migraine may be aggravated or triggered by the pill.
- Women, whose migraine requires treatment with vasoconstrictors such as ergotamine, should not take oral pills.
- (iv) Bleeding disturbances : A small minority of women using oral contraceptives may complain of break-through bleeding or spotting in the early cycles.
- A few women may not have a withdrawal bleeding at the end of a cycle.
- Women should be forewarned of these possibilities.

non contraceptive health benefits OF ORAL PILLS

- Using the pill may give protection against at least 6 diseases:

1. benign breast disorders including fibrocystic disease and fibroadenoma.
2. Ovarian cysts.
3. Iron deficiency anaemia.
4. Pelvic inflammatory disease.
5. Ectopic pregnancy.
6. Ovarian cancer.

Contraindications of oral pills

- (a) Absolute :
- Cancer of the breast and genitals.
- Liver disease.
- Previous or present history of thromboembolism.
- Cardiac abnormalities.
- Undiagnosed abnormal uterine bleeding.
- Hyperlipidemia.

Duration of use of oral pills

- The pill should be used primarily for spacing pregnancies in younger women.
- Those over 35 years should go in for other forms of contraception.
- Beyond 40 years of age, the pill is not to be prescribed or continued because of the sharp increase in the risk of cardiovascular complications.

Contraindications of oral pills

- (b) Special problems requiring medical surveillance(RELATIVE)
- Age over 40 years;
- Smoking and age over 35 years;
- Mild hypertension;
- Chronic renal disease;
- Epilepsy;
- Migraine;
- Nursing mothers in the first 6 months;
- Diabetes mellitus;
- Gall bladder disease;
- History of infrequent bleeding.
- Amenorrhea.

B. DEPOT FORMULATIONS

- 1. Injectable contraceptives There are two types of injectable contraceptives. Progestogen-only injectables and the newer once-a-month combined injectables.
- a. DMPA: Depot-medroxyprogesterone acetate
- The standard dose is an intramuscular injection of 150 mg every 3 months.
- It gives protection from pregnancy in 99 per cent of women for at least 3 months.
- It exerts its contraceptive effect primarily by suppression of ovulation.
- However, it also has an indirect effect on the endometrium and direct action on the fallopian tubes and on the production of cervical mucus, all of which may play a role in reducing fertility.


DEPO-PROVERA®
150 mg/1 mL
medroxyprogesterone acetate
150 mg


Depo-Provera®
Contraceptive
Injection
medroxyprogesterone
acetate injectable
suspension, USP
150 mg/mL

DMPA

- Has been found to be a safe, effective and acceptable contraceptive.
- Another advantage is that it does not affect lactation.
- DMPA has proved acceptable during the postpartum period as a means of spacing pregnancies.
- good use among multiparas of age over 35 years who have already completed their families.

DMPA Administration

- The initial injection should be given during the first 5 days of the menstrual period.
- This timing is very important to rule out the possibility of pregnancy.
- Given by deep intramuscular injection into the gluteus maximus.
- The injection site should never be massaged following injections.
- May be given two weeks early or two weeks late

Side-effects

- Bleeding irregularity:
- Prolonged .
- Excessive.
- Amenorrhoea.

Fertility regain

- Studies showed that women discontinuing DMPA became pregnant some 5.5 months (average) after the treatment period.
- At 2 years, more than 90 per cent of previous users became pregnant

DMPA Contraindications

- cancer of the breast; all genital cancers.
- undiagnosed abnormal uterine bleeding.
- High blood pressure (systolic~ 160 mm Hg or diastolic~ 100)
- History of stroke or heart attack and current deep vein thrombosis.

COMBINED INJECTABLE CONTRACEPTIVES

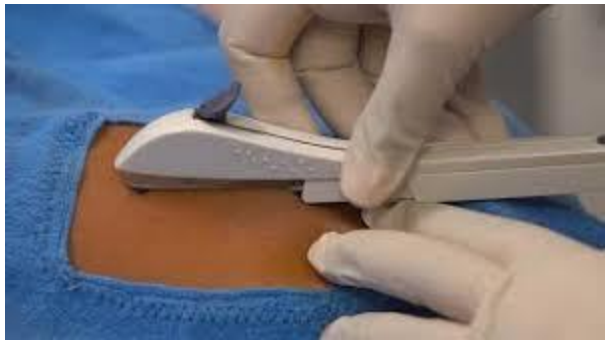
- These injectables contain a progestogen and an oestrogen.
- They are given at monthly intervals, plus or minus three days.
- Combined injectable contraceptives act mainly by suppression of ovulation.
- The cervical mucus is affected, mainly by progestogen, and becomes an obstacle to sperm penetration.
- Changes are also produced in endometrium which makes it unfavourable for implantation if fertilization occurs, which is extremely unlikely.

COMBINED INJECTABLE CONTRACEPTIVES CONTRAINDICATION

- Confirmed or suspected pregnancy.
- Past or present evidence of thromboembolic disorders.
- Cerebrovascular or coronary artery disease.
- Focal migraine.
- Malignancy of the breast.
- Diabetes with vascular complications.
- Combined injectables are not suitable for women who are fully breast feeding until 6 months postpartum.
- It is less suitable for women with risk factors for oestrogen.

2. Etonogestrel implant (Implanon NXT)

- This is a subdermal contraceptive implant lasting up to 3 years,
- Consisting of a single rod containing the progestogen etonogestrel.
- It inhibits ovulation and affects cervical mucous to prevent sperm reaching the upper genital tract.
- Irregular bleeding is the most common side effect.
- Twenty-two per cent of women are amenorrhoeic within 12 months.
- Several treatments (e.g. COCP; mefenamic acid; tranexamic acid) are safe to use to reduce troublesome bleeding in the short term.
- Approximately 20–25% of women request the implant to be removed within 12 months and it is important to provide information about expected bleeding patterns prior to insertion.
- It requires a minor surgical procedure to insert it and also to remove it.
- The pregnancy rate is the lowest of all contraceptives.




Implanon NXT

3. Vaginal rings

- Vaginal rings containing levonorgestrel have been found to be effective.
- The hormone is slowly absorbed through the vaginal mucosa, permitting most of it to bypass the digestive system and liver, and allowing a potentially lower dose.
- The ring is worn in the vagina for 3 weeks of the cycle and removed for the fourth


NUVARING
0.120 mg/0.015 mg per 24 hours
Vaginal delivery system,
etonogestrel and ethinylestradiol
3 sachets each containing 1 ring for vaginal use


For the Dispenser: Store refrigerated 2-8°C (36-46°F).
NDC 78206-146-03
NUVARING®
(etonogestrel/ethinyl estradiol vaginal ring)
delivers 0.120 mg/0.015 mg per day
For Vaginal Use
Keep out of the reach of children.
This product is intended to prevent pregnancy. It does not protect against HIV infection (AIDS) and other sexually transmitted diseases.
Rx only
Contains 3 Rings
©2023 Elsevier, Inc

Evra Patch (Ethinylestradiol / Norelgestromin)

OTHER CONTRACEPTIVE METHODS

- 1. Coitus interruptus This is the oldest method of voluntary fertility control.
- It involves no cost or appliances.
- It continues to be a widely practiced method.
- The male withdraws before ejaculation to prevent deposition of semen into the vagina.
- the failure rate with this method may be as high as 25 per cent due to precoital secretion of the male may contain sperm, and even a drop of semen is sufficient to cause pregnancy.

2. Safe period (rhythm method)

- the fertile period during which she should not have intercourse(assessing the time of ovulation)
- The drawbacks of the calendar method are :
- (a) a woman's menstrual cycles are not always regular. If the cycles are irregular, it is difficult to predict the safe period
- (b) it is only possible for this method to be used by educated and responsible couples with a high degree of motivation and cooperation
- (c) compulsory abstinence of sexual intercourse for nearly one half of every month
- (d) this method is not applicable during the postnatal period,
- (e) wrong calculations.

3. Natural family planning methods

- is applied to three methods:
- (a) basal body temperature (BBT) method
- (b) cervical mucus method,
- and (c) symptothermic method.
- The principle is the same as in the calendar method, but here the woman employs self-recognition of certain physiological signs and symptoms associated with ovulation as an aid to ascertain when the fertile period begins.
- For avoiding pregnancy, couples abstain from sexual intercourse during the fertile phase of the menstrual cycle.

4. Breast-feeding(lactational amenorrhoea,)

- lactation prolongs postpartum amenorrhoea and provides some degree of protection against pregnancy.
- once menstruation returns, continued lactation no longer offers any protection against pregnancy .
- by 6 months after childbirth, about 20-50 per cent of women are menstruating and are in need of contraception.

Permanent contraceptive methods

- Vasectomy :involves interruption or occlusion of the vas deferens, preventing the passage of sperm from the testes to the penis.
- The procedure is generally performed in an outpatient setting under local anaesthesia.
- It is important to confirm the absence of spermatozoa in the ejaculate 3 months after the operation, before ceasing other contraceptive methods.
- It takes about 20 ejaculations to clear the remaining sperm from the semen.
- For the average man undergoing vasectomy reversal, pregnancy rates range between 50 and 70%.
- This rate decreases as the interval between vasectomy and its reversal increases.

Permanent contraceptive methods

- Tubal ligation Female sterilization:
- is usually performed by mini-laparotomy or laparoscopy, at which time clips are applied to each fallopian tube.
- This is a potentially reversible method of contraception with 50% of women achieving pregnancy after reversal.
- Efficacy is >99.5%.

Vasectomy & Tubectomy