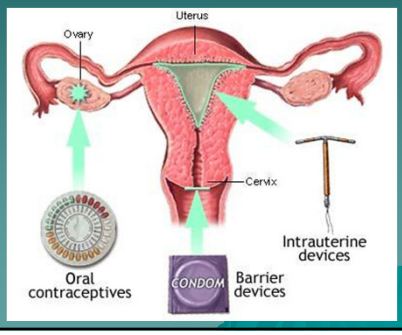
CONTRACEPTION



FEMALE CONTRACEPTION

Barrier Methods
- Diaphragm
- Cervical cap
- Female condom

Hormonal Methods
- Oral contraceptive - Combined oestrogen/ progestogen
  - Progestogen only
- Depot progestogens – Injections
  - Subcutaneous silicone implants
- Vaginal - Silicone rings releasing oestrogen & progestogen

FEMALE CONTRACEPTION

Intra Uterine Devices
- Inert
- Copper bearing
- Progestogen releasing.

Natural Methods
- Rhythm
- Breast feeding (while baby is totally breast fed)

Spermicides
- Creams, Films, Foams, Jellies, Pessaries, Sponges
- (All of these are mainly Nonoxynol based.)

FEMALE CONTRACEPTION

Surgical Methods

- Laparoscopic sterilisation - Rings
  - Clips
  - Bipolar diathermy
  - Laser
- Tubal ligation

Immunological Methods

- These are still at an investigative stage.

MALE CONTRACEPTION

- **Condom**
- **Vasectomy**
- Male oral contraception with androgens and with cotton seed oil
- Immunological contraception

Still at investigative stage.

Relative popularity of methods

(National Opinion Poll, 1990, Schering Healthcare. Women aged 16-44.)

Oral contraception	32%
No contraception	22%
Condoms	17%
Female sterilisation	12%
Male sterilisation	12%
IUCD	8%
Diaphragm/Cap	2%
Withdrawal	2%
Rhythm	0.5%

COMBINED ORAL CONTRACEPTIVE PILLS

Functions of oestrogen

- It is responsible for the follicular, proliferative phase of the menstrual cycle.
- Under it's influence the endometrium thickens and vascularity increases.
- The servical mucus increases and the pH rises to 8-9. The mucus is also enriched with protein and carbohydrate for spermatozoa.
- An increase in oestrogen just before mid cycle leads to an increase in LH and the follicle will then rupture and ovulation will take place.

Functions of oestrogen...

- Once the ovum is fertilised, oestrogen will stimulate the growth of milk ducts in the breasts and maintain lactation after the baby is born
- It is responsible for the physical and psychological development and behaviour of a female child.
- It thickens the vaginal mucosa and it promotes the cornification of the vaginal epithelium.

Functions of oestrogen…

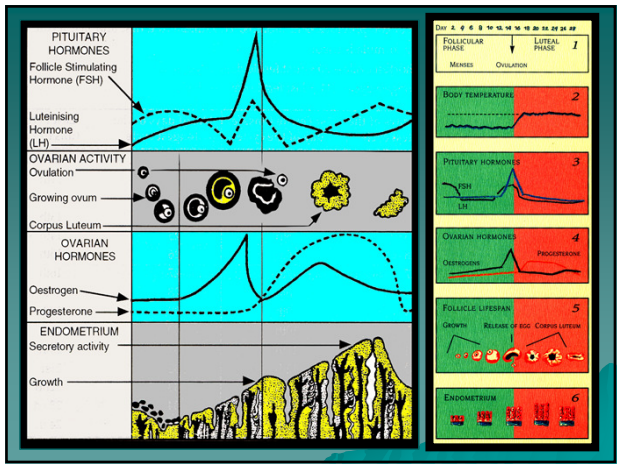
- It also induces liver LDL-receptors so that serum lipoproteins are cleared more rapidly.
- It decreases bone resorption and maintain bone mass in this way.

Functions of Progesterone

- Progesterone is secreted by the corpus luteum in the 2nd phase of the menstrual cycle under the influence of LH.
- It changes the endometrium from proliferative to secretory and is required for implantation and maintenance of pregnancy. It stimulates the development of alveoli in the milk ducts
- It can suppress both FSH and LH and then follicle growth and ovulation can not take place.

Functions of Progesterone…

- When progesterone is withdrawn, menstruation takes place.
- It is metabolised in the liver to pregnanediol and pregnanolone, conjugated with glucuronic acid and excreted in the urine.



COMBINED ORAL CONTRACEPTIVE PILLS

- It was first introduced in 1960
- It has been used by millions of women worldwide
- Two types of estrogens are used :ethinyl estradiole & mestranol. Mestranol is converted in the body to ethinyl estradiole
- Several progestins of varying potency are used in the combined OCP

Types of progestins in C OCP

- Estrane ➡ Norethindrone, ethynodiol diacetate
- Gonane ➡ Levonorgestrel, desogestrel, norgestimate (gonans more potent)

PROGESTINS IN COCP

- Progestins are also classified to 1st, 2nd, 3rd, generation progestins
- 2nd ➡ levonorgestril
- 3rd ➡desogestril & gestodene
- Norgestimate ➡partly converted to levonorgestril ➡included in 2nd or 3rd gp
- Newer progestins ➡ desogestril & norgestimate have little or no androgenic activity
- VTE is 2 folds higher in preparation containing 3rd generation progestins when compared to 2nd generation

COMBINED ORAL CONTRACEPTIVE PILLS

Dosage & regimen

- Estrogen ➡ 20-35µg/ day
- Better cycle control with higher estrogen dosage but the efficacy is the same
- Used for 3 wks with one wk gap when menstruation occurs

Formulations

- Monophasic ➡ contains fixed amount of estrogen & progestin
- Biphasic ➡ a fixed amount of estrogen, while the progestin increases in the 2nd half of the cycle
- Triphasic ➡ the amount of estrogen may be fixed or variable, while the amount of progestin increases in 3 equal phases

COMBINED ORAL CONTRACEPTIVE PILLS

Efficacy

- C OCP is highly effective 99.9% in preventing pregnancy. However the user failure rate is 3-8%
- 30% of women miss 3 or more pills in the 1st cycle of use
- 47% miss 1 or more pills
- ↑ body Wt may ↓ the efficacy of the pills (not proven)

Indication

- Any women seeking a reversible, reliable, coitally-independent method of contraception, in the absence of contraindications

COMBINED ORAL CONTRACEPTIVE PILLS

Mechanism of action

- Suppression of gonadotropin secretion ➡ inhibition of ovulation (main mechanism)
- Development of endometrial atrophy making it unreceptive to implantation
- Production of viscous Cx mucous that impede sperm transport
- Possible effect on the secretions & peristalsis of the fallopian tube interfering with ovum & sperm transport

COMBINED ORAL CONTRACEPTIVE PILLS

Absolute contraindications

- < 6 Wk postpartum if breastfeeding
- Smoker ≥ 15 cigarettes/day, > 35 Y of age
- HPT systolic ≥ 160 mm Hg or diastolic ≥ 100 mm Hg
- Current or past Hx of venous thromboembolism VTE
- Ischemic heart disease
- Hx of cerebrovascular accident
- Complicated valvular heart disease (pulmonary HPT, atrial fibrilation, subacute bacterial endocarditis)
- Migraine headache with focal neurological symptoms
- Current breast cancer
- Diabetes with retinopathy/ nephropathy/ neuropathy
- Severe liver cirrhosis
- Liver tumour (adenoma or hepatoma)

COMBINED ORAL CONTRACEPTIVE PILLS

Relative contraindications

- Smoker < 15 cigarettes /day >35 Y of age
- Adequately controlled HPT
- HPT systolic 140-159 mm Hg, diastolic 90-99 mm Hg
- Migraine headache > 35 Y of age
- Currently symptomatic gallbladder disease
- Mild liver cirrhosis
- Hx of C OCP related cholestasis
- Medications that might interfere with OCP metabolism

COMBINED ORAL CONTRACEPTIVE PILLS

Non-contraceptive benefits

- Cycle regulation
- ↓↓ menstrual flow ➡ ↓↓ anemia
- ↑↑ bone mineral density
- ↓↓ dysmenorrhea
- ↓↓ peri-menopausal symptoms
- ↓↓ acne
- ↓↓ hirsutism
- ↓↓ ovarian ca 50% ↓↓ after 5 Y of use
- ↓↓ endometrial ca 50% ↓↓
- ↓↓ risk of fibroids
- Possibly ↓ ovarian cysts
- Possibly ↓ benign breast disease
- Possibly ↓ colorectal ca
- ↓↓ incidence of salpingitis
- ↓↓ incidence or severity of premenstrual syndrome

SIDE-EFFECTS OF COMBINED OCP

Minor side-effects commonly occure during the 1st 3 cycles & may lead to unnecessary discontinuation

1. Irregular bleeding (breakthrough bleeding/ spotting)
   - 10-30% in the 1st month of use
   - improves with time over 3 cycles
   - amenorrhea 2-3% of the cycles

2. Breast tenderness & nausea
   - Improve with time
   - Less with lower estrogen dosage

SIDE-EFFECTS OF COMBINED OCP

3-Wt gain
- Placebo controlled trials have failed to show any association between wt gain & COCP

4-Mood changes
- Women report depression & mood changes
- Placebo controlled trials have failed to show any significantly increased risk of mood changes with COCP

RISKS OF COCP

1-Venous thromboembolism
- VTE 3-4 X higher in users than nonusers
- Absolute risk of VTE in COCP users – 1-1.5/10 000/year
- Risk of VTE is higher during the 1st year of use than subsequent years
- Incidence of VTE in nonpregnant women is 0.3/ 10000/year at 20-24 Y------0.6 at 40-44 Y
- Incidence of VTE in pregnancy is 13/ 10000 deliveries
- The risk is attributed to the estrogen component of the pill & decline with lower dosage

RISKS OF COCP

2- Myocardial infarction

- In the past with pills containing >50µg ethinyl estradiole --- 3X ↑↑ in MI
- Recent studies with pills containing < 50µg ethinyl estradiole ----- No significant ↑↑ risk

RISKS OF COCP

3-Stroke

- Some studies showed 2X ↑↑ risk of stroke
- Smoking & HPT ↑↑ risk of stroke

4-Gallbladder disease

- COCP ↑↑ secretion of cholic acid in bile ➡↑↑ incidence of gallstone formation
- No significant ↑↑ risk of gallstone formation in COCP users

5-Breast cancer

- Still controversial
- A large meta-analysis 1996 ➡ significant ↑ risk of breast ca in women currently taking the COCP(Relative Risk 1.24) & in the 1st 10 Y after discontinuing it

RISKS OF COCP

5-Breast cancer

- Cumulative breast ca risk up to age 35 is 2 / 1000 with COCP ---------- 3 / 1000
- It is not known whether this ↑ is due to the pills or due to delaying the 1st full term birth
- More recent study > 9000 women ➡➡ no significant ↑↑ in breast ca risk

➡➡No ↑↑ risk with different dosage of estrogen, longer periods of use, or with different progestin components

➡➡No ↑↑ risk in Pt with family Hx of breast ca

➡➡No ↑↑ risk in Pt who started using the pills at an earlier age

➡➡↑↑ risk in Pt who carry BRCA1, BRCA2 genes

RISKS OF COCP

6-Cervical cancer

- One study ➡↑↑ risk of Cx ca in long term COCP users who are HPV positive
- A review of 28 studies of women with Cx ca ➡↑↑ risk of Cx ca with ↑↑ duration of COCP use
- Probably due to ↑↑ risk of HPV (a major risk factor for cx ca) that might be related to sexual behavior which differs in users & non users of COCP
- Another study HPV + ve women follwed up for 10 years showed no increased risk

MYTHS & MISCONCEPTION

- Women on COCP should have periodic pill breaks

  Fact ➡this would ↑↑ risk of unwanted pregnancies & cycle iregularities

- COCP affects future fertility

  Fact ➡ fertility restored 1-3 M after stopping the pills

- COCP causes birth defects if a woman becomes pregnant while taking it

  Fact ➡There is no evidence that it causes birth defects

MYTHS & MISCONCEPTION

- COCP must be stopped in all women >35 Y

Fact ➡Healthy non-smoking women can continue taking the pills untill menopause

- COCP causes acne

Fact ➡ it improves acne due ↓ circulating free androgens

INITIATION

Patient assessment

- A thorough Hx to exclude contraindications, smoking & medications
- BP
- Pelvic exam not mandatory before prescribing COCP
- No routine lab screening is required

Counselling

- Instructions on how to use the pills
  - ➡ To start in the 1st 5 days of the cycle

COUNSELLING

- Women who use 21 –day preparation should be cautioned not to exceed the 7 day pill-free interval between packs
- Discussing what to do if a pill is missed
- Information about side-effects, risks & non-contraceptive benefits of COCP
- Addressing common myths & misconceptions
- Discussing warning signs & when to come to the hospital
- The use of COCP in a continuous fashion
- Vaginal administration of COCP ➡ avoids 1st pass metabolism by the liver ➡ less side-effects
- COCP must be stopped 4 wks prior to major surgery or users should be given antithrombotic prophylaxis

TROUBLESHOOTING

1-Breakthrough bleeding

- To continue on the same pills with the expectation that it will improve with time (rather than switching to another preparation)
- If bleeding persists beyond 3 M (or new onset of bleeding in a long term user) rule out other causes of bleeding:
  - -irregular taking of the pills
  - -pregnancy
  - -infections
  - -uterine or Cx pathology
  - -malabsorption/ diarrhea , vomitting
  - -concomitant use of medications

TROUBLESHOOTING

Management of breakthrough bleeding

- Oral estrogens: premarine 1.25 mg or estradiole -17 ß /7 days
- Change the another preparation with different progestin

2-Missed pills

- Take the pill as soon as you remember (this means taking 2 in 1 day)
- If 2 pills in a row missed in the 1st 2 wks of the pack ➡ take 2 /day for 2 days
- If 2 pills in a row missed in the 3rd wk of the pack ➡ through the remainder of the pack & start a new one / use back up contraception in the first 7 days of the new pack
- If 3 pills in a row missed ➡ follow steps above
- If intercourse occurred after missing a pill ➡ use emergency contraception

TROUBLESHOOTING

3-Amenorrhea

- It occurs in 2-3% of COCP users
- Pregnancy should be ruled out
- It is not dangerous ➡ no need for Rx
- If not acceptable by Pt ➡ change preparation

➡Add oral estrogen for 10 days

4-Chloasma

- Darkening of the facial skin
- Changing to another preparation will not help
- It may never completely disappear
- Use of sunscreen to prevent further darkening

TROUBLESHOOTING

5-Breast tenderness & galactorrhea

- Often resolves with continued use
- ↓ caffeine intake may help
- ↓ estrogen content
- Galactorrhea is rare ➡ if it happens ➡ check prolactin level

6-Nausea

- ↓ with time
- Taking the pill with food or bedtime
- ↓ estrogen content
- If it occurs in a long time user ➡rule out pregnancy

7-Pregnancy

- Pills must be stopped immediately
- There is no ↑ risk of birth defects

Metabolism & Drug interactions

- Ethinyl estradiole is metabolized at several sites:
  1-Sulphated at the intestinal wall
  2-Hydroxylated in the liver then conjugated with glucuronides & pass to enterohepatic circulation
- Anticonvulsants (phenytoin or carbamazepine)
  ➡ women should use 50 µg E estradiole pill
  ➡Monitor phenytoin level as COCP may inhibit its metabolism
- Rifampicin & griseofulvin ➡contraceptive filure
- Other antibiotics do not appear to affect the efficacy of COCP

TRANSDERMAL CONTRACEPTIVE PATCH

- Delivers 150µg norgestimate & 20 µg E estradiole daily
- One patch is applied weekly for 3 wks followed by one patch-free-wk
- Women weighing more than 90 kg ➡↑ risk of pregnancy
- Mechanism of action similar to COCP
- Irregular bleeding in the 1st M of use is more 18% for the patch than COCP 11% / Amenorrhea is rare
- Breast symptoms are more 22% in the 1st 2 cycles of the patch use than COCP use
- Local skin reaction 20%

PROGESTIN ONLY HORMONAL CONTRACEPTION

INJECTABLE PROGESTIN

DEPOT MEDROXYPROGESTRONE ACETATE (DMPA)

- Introduced in 1967 & used by millions of women worldwide
- Highly effective with a failure rate < 0.3% / year

Mechanism of action

- Inhibiting the secretion of pituitary gonadotropins ➡ suppression of ovulation
- ↑↑ viscosity of Cx mucous
- Induces endometrial atrophy

DMPA INDICATIONS

- Any women seeking reliable, reversible, coitally independent method of contraception in the absence of contraindications
- Women who have difficulty complying with other methods / it does not require daily attention
- Women with contraindication to estrogens
- Women >35 Y who smoke
- Women with migraine headache
- Women who are breastfeeding
- Women with endometriosis
- Women with sickle cell disease
- Women taking anticonvulsant medications
- Mentally handicapped women

DMPA CONTRAINDICATIONS

Absolute contraindications

- Pregnancy
- Unexplained vaginal bleeding
- Current breast ca

Relative contraindications

- Severe liver cirrhosis
- Active viral hepatitis
- Benign hepatic adenoma

DMPA NON-CONTRACEPTIVE BENEFITS

- Amennorrhea (55-60% at 12 M / 68% at 24 M) with subsequent reduction in dysmenorrhea & anemia
- ↓↓ risk of endometrial ca
- ↓↓ symptoms associated with endometriosis, PMS, & chronic pelvic pain
- ↓↓ incidence of seizures
- Possible ↓↓ risk of PID
- Possible ↓↓ incidence of sickle cell crisis

DMPA SIDE-EFFECTS

1- Menstrual cycle disturbance

- Irregular bleeding ➡ ↓ in frequency & amount over time
- Abnormally heavy or prolonged occurred only in 1-2%
- Amennorrhea 55-60% at 12 M
  68% at 24 M

2-Hormonal side effects

- Headache 17%
- Acne
- ↓↓ libido
- Nausea
- Breast tenderness

DMPA SIDE-EFFECTS

3-Weight gain

- 56% ↑↑ Wt (mean gain 4.1 kg) ➡ possibly through appetite stimulation & a mild anabolic effect
  - 2.5 kg in 1st Y
  - 3.7 kg in 2 Y
  - 6.3 kg in 4 Y
- 44% ↓ Wt or maintained (mean loss 1.7 kg)

4-Mood effects

- Prospective studies did not demonstrate ↑ depressive symptoms
- Some women discontinue use because of mood changes

DMPA RISKS

1-Delayed return of fertility

- An average of 9 months delay before restoration of full fertility after last injection
- Rate of conception 50% at 10 M, 90% at 24 M

2-Reduction in bone mineral density

- A mean loss of BMD at the lumbar spine 0.87-3.5%
- Does not induce osteoporosis
- It improves after discontinuation of use
- Comparison of past users to controls did not demonstrate any deference

3-VTE, CVD, Stroke ➡ No ↑ risk

DMPA DOSAGE & ADMINISTERATION

- 150 mg IM every 12 Wks
- Started during the 1st 5 days of menses or within 5 days of stopping COCP
- Effective within 24 hrs of injection if given during the 1st 5 days of the cycles
- If given later than D5 of the cycle ➡ back up method of contraception must be used for 1 wk

DMPA TROUBLESHOOTING

1- Menstrual cycle disturbance

- If irregular bleeding persists after the 1st 6 M of use ➡ rule out other causes of abnormal bleeding

Management options

- ↑↑ DMPA dosage ➡ 225-300 mg for 2-3 injections
- ↓↓ interval between dosage
- Supplemental estrogen therapy :

➡0.625 conjugated equine estrogen po –28 days

➡1-2 mg 17ß-estradiole po –28 days

➡Transdermal estrogen 50-100 µg 17ß-estradiole patch for 25 days

- Nonsteroidal anti-inflammatory ➡ ibuprofen 400-800 mg bd for 10 days
- Adding COCP for 1-3 M

DMPA TROUBLESHOOTING

2-Late injection

- <14 wks since last injection it can be given
- ≥ 14 wks since last injection
  -ve serum ß hcg, no intercourse for last 10 days
  ➡ give the injection
  ➡ back up contraception must be used for 2 wks
- ≥ 14 wks since last injection
  -ve serum ß hcg,intercourse within the last 10 D
  ➡ give the injection
  ➡ back up contraception must be used for 2 wks
  ➡Repeat serum ß hcg –2 wks
  ➡Not teratogenic if inadvertently given during pregnancy

ORAL PROGESTINS
PROGESTIN ONLY PILL / MINIPILLS

- Package contains 28 tab
- Started on the 1st day of the menstrual cycle/ or any day if pregnancy excluded
- Must be used at the same time every day within 3 hrs
- A back up contraception must be used for 7 days
- Norethindrone 0.35 mg ➡ micronor
- Must be used continuously ➡ no pill-free interval
- Perfect use failure rate ➡ 0.5%
- Typical use failure rate ➡ 5-10% (It must be taken the same time every day)
- It can be used immediately postpartum with no effect on lactation

PROGESTIN ONLY PILL

Indications

- It can be used for any women seeking reliable, reversible, coitally independent method of contraception in the absence of contraindications
- Women with contraindication to estrogen
- Women > 35 Y who smoke
- Women having migraine headache with neurological symptoms
- Women who have unwanted side-effects of COCP
- Breast-feeding women

PROGESTIN ONLY PILL

Mechanism of action

1-Main mechanism is alteration of Cx mucous

- ↓↓ volume of mucous
- ↑↑ viscosity
- alter its molecular structure

➡Little or no sperm penetration

➡Sperm motility is impaired ➡ ↓↓ fertilization

2- Ovulation is suppressed in 60% of the women

3-Endometrial changes ➡ ↓↓ implantation

PROGESTIN ONLY PILL CONTRAINDICATIONS

Absolute Contraindications

- Pregnancy
- Current breast cancer

Relative Contraindications

- Active viral hepatitis
- Liver tumors

PROGESTIN ONLY PILL

Non contraceptive benefits

- ↓ menstrual flow
- 10% amenorrhea
- ↓ dysmenorrhea, PMS

Side-effects

- Irregular bleeeding

➡ spotting –12% ➡ 1st month

--3% ➡ 18 months

➡40 % continue to have regular cycles

- Hormonal side-effects

Headache, bloating, acne, breast tenderness

POP

Risks

- Not associated with any major morbidity
- No ↑ risk of VTE, stroke or MI

Myths & misconception

- It can only be used with breast feeding

Fact ➡ It can be used in any women seeking reliable, reversible method of contraception

- POP is not an effective method of contraception

Fact ➡ When used correctly it is safe & effective with a failure rate of only 0.5%

POP TROUBLESHOOTING

1-Irregular bleeding

- A common side effect
- Pregnancy, infection & genital pathology must be ruled out

Rx options

- Non steroidal anti-inflammatory for 10 days
- Switching toCOCP
- Adding a short course of estrogen

➡ 0.625 mg conjugated equine estrogen (premarine) for 28 days

➡1-2 mg micronized 17ß-estradiole—28 days

➡Transdermal 50-100 µg 17ß-estradiole patch –25 days

- Antiprogestinic agents ➡ mifepristone

POP TROUBLESHOOTING

2-Missed pill

- To be taken as soon as possible
- Next pill to be taken at the regular time
- If delayed > 3hrs ➡ use back up contraception for 48 hrs
- If 2 or more pills missed in a row ➡ 2 pills/day for 2 days ➡back up contraception for 48 hrs
- Emergency contraception must be used if intercourse occurred after a missed pill

3- Drug interactions ➡ anticonvulsants may ↓↓ effectiveness of POP

INTRAUTERINE CONTRACEPTIVE DEVICES IUCD

IUCD

- Nonmedicated IUCD (Multiload)
- Copper IUD(Nova T)
- Levonorgestrel – releasing IUD (Mirena)

Efficacy

- Failure rate of Nova T ➡ 1.26 % /year
  ----------Mirena ➡ 0.09 % /year
- Ectopic pregnancy rate ➡0.25 %/year
  ----------Mirena ➡0.02 %/year
- Effective for 5 years

IUCD MECHANISM OF ACTION

- Prevention of fertilization ➡the chief mechanism
- Inhibition of implantation
- Presence of foreign body & copper ➡biochemical & morphological changes in the endometrium ➡adversely affect sperm transport
- Copper ion have direct effect on sperm mobility ➡ ↓↓ in its ability to penetrate Cx mucous
- Levonorgestrel releasing devices ➡ weak foreign body reaction & endometrial decidualization & glandular atrophy ➡estrogen & progestrone receptors are ↓↓ ➡Cx mucous becomes thick & impermeable to sperms ➡ovulation may be inhibited in some women

INDICATIONS FOR IUCD

- In the absence of contraindications may be considered for any woman seeking a reliable, reversible, coitally independent method of contraception
- Women seeking long term birth control
- A method requiring less compliance
- Women with contraindications to estrogen
- Breast feeding women
- Copper IUCD used for postcoital contraception within 7 days
- LNG- IUCD ➡↓↓ menstrual flow & cramping ➡suitable for women with menorrhagia & dysmenorrhea

IUCD CONTRAINDICATIONS

Absolute contraindications

- Pregnancy
- Current, recurrent or recent (within 3 M) PID or sexually transmitted disease
- Puerperal sepsis
- Immediate post septic abortion
- Severely distorted uterine cavity
- Unexplained vaginal bleeding
- Cx or endometrial ca
- Malignant trophoblastic disease
- Copper allergy ➡Copper -IUCD
- Breast ca ➡ LNG -IUCD

IUCD CONTRAINDICATIONS

Relative contraindications

- Risk factor for sexually transmitted diseases or HIV
- Impaired response to infections:
  - -HIV +ve women
  - -Women on corticosteroid Rx
- 48hrs- 4 wks postpartum
- Ovarian ca
- Benign gestational trophoblastic disease

IUCD SIDE EFFECTS

1-Bleeding

Copper / nonmedicated IUCD

- Irregular menstrual bleeding
- ↑↑ amount of menstrual bleeding 65% in copper IUCD users
- NSAID or tranexamic acid ➡↓↓menstrualblood loss
- The days of bleeding or spotting ↓↓ overtime 13 days inth 1st months ➡ 6 days at 1 year
- Discontinuation due to bleeding ➡20%

LNG-IUCD

- ↓↓menstrualblood loss 74-97%
- Spotting 16 days at 1 M ➡↓↓ 4 days at 12 M
- Discontinuation due to bleeding ➡14%
- Amenorrhea 16-35% at 12 M

IUCD SIDE EFFECTS

2-Pain or dysmenorrhea

- 6% discontinue use due to pain
- Pain may be physiological
- LNG-IUCD ➡↓↓ dysmenorrhea

3-Hormonal LNG-IUCD

- Depression
- Acne
- Headache
- Breast tenderness
- Low incidence ,maximal at 3 M then ↓↓
- No change in Wt

IUCD SIDE EFFECTS

4-Functional ovarian cysts/ LNG-IUCD

- 30% of users
- Resolve spontaneously

IUCD RISKS

1-Uterine perforation
- A rare complication at insertion
- 0.6-1.6/1000 insertion

Risk factors
- Postpartum insertion
- Inexperienced operator
- Immobile uterus
- Extremely ante or retro –verted uterus

2-Expulsion
- 2-10% in the 1st year of use
- 5 year expulsion ➡ 5.8-6.7
- Risk factors: postpartum insertion, nulliparity,previous expulsion(30% chance)

IUCD RISKS

3-Infection
- Risk is ↑↑ only in the 1st few months after insertion
- Inverse relation between infection & time since insertion
- Risk of PID 3.8 in 1st month
  Baseline risk at 4 M

4-Flure
- If a woman become pregnant with an IUCD ➡ exclude ectopic
- Abortion is ↑↑ in women pregnant with IUCD in place
  Copper IUCD ➡abortion 75% if left in situ
  Live birth 89% if IUCD removed
- Preterm delivery ↑↑ in women pregnant with IUCD in place

INITIATION

- Counselling
- Inserted any time during a menstrual cycle once pregnancy excluded
- During menses ➡ exclude pregnancy & mask insertion related bleeding
- Infection & expulsion ↑ with insertion during menses
- It can be removed any day of the menstrual cycle
- If there is mucpurulent discharge Cx swabs must be taken & insertion delayed
- Antibiotic prophylaxis is not indicated

FOLLOW UP

A follow up visit must be scheduled in 6 wks then yearly

Women must be instructed to come if;

- IUCD thread can not be felt
- She feels the lower end of the IUCD
- ? Pregnant
- Abdominal pain, fever or unusual discharge
- Pain or discomfort during intercourse
- Sudden change in menstrual period
- Wants to remove the device or concieve

TROUBLESHOOTING

1-Lost string

- Speculum exam
- Exclude pregnancy
- Cx canal explored
- U/S
- Plain X ray

2- Pregnancy

- Exclude ectopic
- If she wishes to continue the pregnancy ➡ remove IUCD
- If string missing ➡ u/s ➡ if in the uterus ➡ no attempt to remove it

TROUBLESHOOTING

3-Amenorrhea /delayed menses

- Exclude pregnancy
- 35% of LNG –IUCD users have amenrrhea

4-Pain & abnormal bleeding

- Exclude pregnancy, partial expulsion, perforation
- NSAID may help
- Bleeding ↓ overtime
- If it persists or worsen ➡ removal

5-Difficulty removing IUCD

- Paracervical block
- Cx dilatation

EMERGENCY CONTRACEPTION

- Copper IUCD can be inserted up 7 days after intercourse
- Levonorgestrel 0.75 mg , 2doses 12 hrly or 1.5 mg single dose ➡ similar efficacy
- Yuzpe method ➡ 2 doses 100µg E estradiole & 500 µg levonorgestrel (Ovral)
- Hormonal contraception must be started as soon as possible max 5 days
- Women should be evaluated for pregnancy if menses does not occur after 21 days
- Mechanism of action ➡Hormonal contraception ➡interferes with ovulation

➡other mechanisms could be interference with sperm mobility or transport, endometrial receptivity, fertilization or zygot development

EMERGENCY CONTRACEPTION

Effectiveness

- Yuzpe ➡ 75% reduction in pregnancy(8➡2) pregnancy rate 3.2%
- LNG ➡89% reduction pregnancy rate 1.1%
- Effectiveness ➡↓↓ with ↑↑ delay between intercourse & contraception
- IUCD more effective ➡98.7%

Side effects

- LNG have lower incidence of nausea(23 vs 50%), vomitting (5.6vs 18.8%), dizziness (11.2vs16.7%), fatigue (16.9vs28.8%)than Yuzpe