HORMONAL CONTRACEPTION

- CURRENT PRACTICES

Oral Contraceptive Pills

- First introduced in 1960
- Have undergone considerable modifications since then
- Have been used by millions of women worldwide
- Two major types
  - Combined oral contraceptives (COCs), also called "The Pill"
    - Contain estrogen and progestin
    - Most widely used
  - Progestin only pills (POPs), also called "Mini Pill"
    - Contain no estrogen
    - Good choice for lactating women

COCs – Usage

Initiate :

Anytime provider is reasonably sure woman is not pregnant

- Preferably, first 7 days of menstrual cycle
- After 7th day, use back-up method for 7 days
- Postpartum :
  - Not breastfeeding – delay 3 weeks
  - Breastfeeding – delay 6 months or till breastfeeding is discontinued

Schedule :

- Take 1 pill each day
- 21-day packs – 7-day break
- 28-day packs – no break

Switching & Discontinuing

- Switch to another method or quit any time
- Recommend finishing pill pack
- If necessary, use back-up until new method becomes effective
- Fertility returns rapidly

COCs – Side Effects

Mechanistic Classification

ESTROGENIC

- Nausea, vomiting
- Bloating, edema
- Irritability
- Breast tenderness & increased breast size
- Cyclic weight gain
- Cyclic headaches
- Thromboembolic events (DVT/PE)*
- Telangiectasis
- Chloasma

PROGESTOGENIC

- Headaches
- Breast tenderness
- Hypertension

ANDROGENIC

- Oily skin, acne
- Hirsutism
- ↑ appetite, weight gain
- Depression, fatigue
- Rash, pruritus
- ↑ LDL-C, ↓HDL-C

* DVT – Deep Vein Thrombosis
PE- Pulmonary edema

Non-Menstrual Side Effects - Management

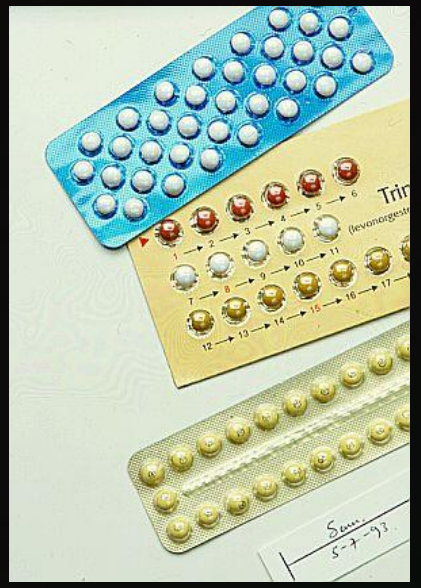
Problem	Action / Management	
Any client concerns →	Provide counseling →	If side effects persist and are unacceptable to client : switch to another method
Dizziness, nausea →	Reassure client, Usually diminish over time →	
Nausea →	Take pills with food or at bedtime →	
Weight gain →	Inform about healthy eating and exercise →	

Menstrual Side Effects: Management

Problem	Action / Management	
Unexplained vaginal bleeding or amenorrhea of a suspicious nature →	Assess cause (consider pregnancy or disease) →	Treatment based on assessment
Amenorrhea →	Reassure client; No medical treatment necessary →	If side effects persist and are unacceptable to client : Switch to another method
Breakthrough bleeding →	Reassure client ; Reinforce correct pill taking →	
Prolonged bleeding →	Administer non-steroidal anti-inflammatory → Use pill with more potent progestin → Use higher dose COC (1-3 cycles) →	

Non-contraceptive Beneficial Effects

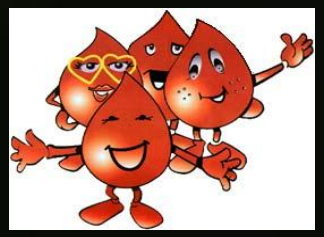
- Reduces risk of :
  - Benign breast disease
  - Ovarian and endometrial cancer
  - Functional ovarian cysts
  - Ectopic pregnancy
  - Symptomatic pelvic inflammatory disease
- Menstrual improvements



COCs – Beneficial Effects

Improvement in Menstrual Symptoms

- Decrease amount of flow and days of bleeding
- Reduce risk of anemia
- Decrease symptoms of painful menstruation
- Decrease symptoms of endometriosis
- Reduce symptoms of premenstrual syndrome

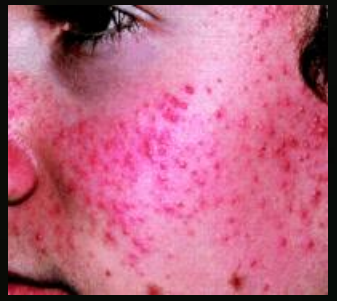



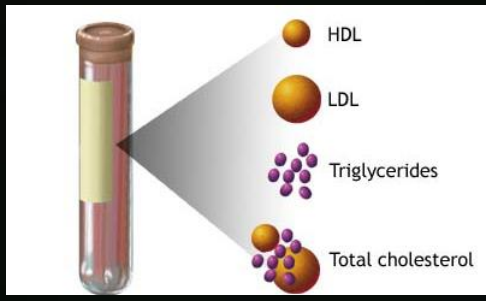
Choosing a COC

- All COCs available for clinical use similarly effective
- Variations do occur in side effects
  - Preparations with 20 μg EE associated with lower incidence of estrogenic side effects (nausea, breast tenderness or bloating) compared to higher-dose estrogen COCs
  - These may result in bleeding pattern disturbance

Choosing a COC

- Acne and hirsutism associated with androgenic progestin can be eliminated by using an OC containing progestin with low androgenicity (e.g. Desogestrel) or with antiandrogenic activity (e.g.drospirenone or cyproterone acetate)
- This will also minimise any possible adverse metabolic side effects e.g. adverse effects or lipid profile (↑LDL-C & ↓HDL-C) or glucose intolerance





Choosing a COC

- A recent study* found a 43% increase in incidence of gestational diabetes among women who used an androgenic progestin–based contraceptive during the 5-year period before pregnancy
- Formulations with 2nd generation progestins (norgestrel/ levonorgestrel) show higher discontinuation rates than those with 3rd generation progestins (desogestrel)

* (Diabetes Care, 2007; 30: 1062-68)

Emergency Contraceptive Pills

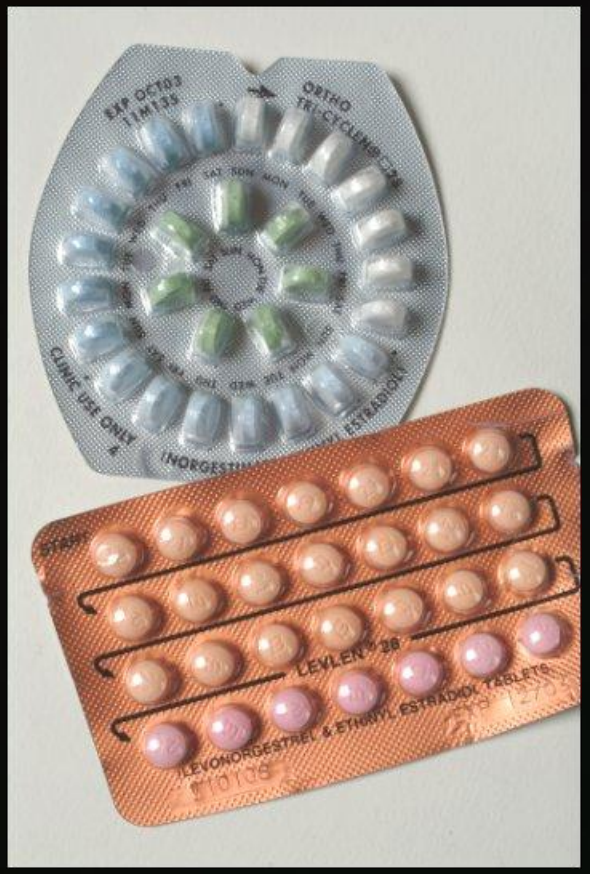
- Precise mechanism of action not known
- Not recommended for routine use
- Recommended only when
  - Other methods not used correctly e.g. with a COC, extending hormone free interval > 7 days or missed pills regularly
  - Condom breaks / slips
- No known serious complications
- No known effect on the fetus

Emergency Contraceptive Pills

- A progestin–only pill preferred
- A COC is an alternative method – can be used at any time during the cycle
- Dosage
  - Take 4 low-dose pills at once within 72 hours
  - Repeat after 12 hours
- Nausea & vomiting may occur
  - Repeat dose if vomiting occurs within 2 hours
  - Give anti-emetic 30 min before the first dose of OCP

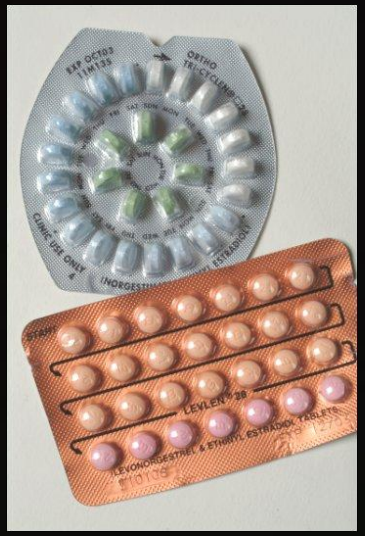
Progestin-only Pills – POPs

- Contain no estrogen
  - Especially suitable for lactating women
  - Suitable for women in whom estrogen is contraindicated
  - Perimenopausal women
  - Diabetics, hypertensives, smokers
- Contain less progestin per pill compared to COCs
- All pills in the pack active (28-pill pack)
  - No pill–free period



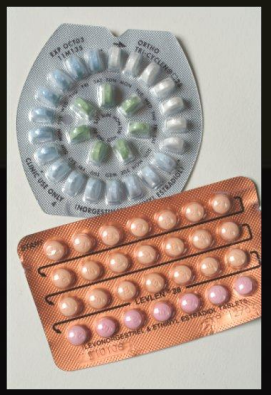
Progestin – Only Pills

- Progestins used as POPs
  - Levonorgestrel (30 μg)
  - Desogestrel (75 μg)
  - Norethisterone (350 μg)
  - Ethynodiol diacetate (500 μg)
- Mechanism of action



	PRIMARY	SECONDARY
Desogestrel	Inhibition of ovulation	Thickening of cervical mucus
Other POPs	Thickening of cervical mucus	Inhibition of ovulation

Initiating POPs



- Postpartum
  - Breast-feeding – begin after 3 weeks
  - Not breast-feeding - begin immediately
- Other women
  - Any time if she is not pregnant
  - Preferably in the first 7 days of menstrual cycle
  - After 7th day, use back-up method for 2 days

How to take POPs

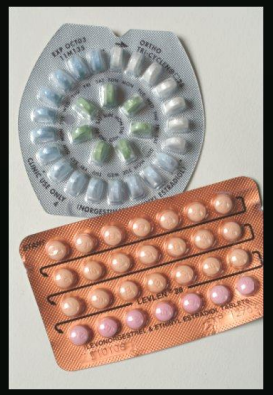
- Schedule
  - Take 1 pill each day
  - Within 3 hours of same time each day*
  - No break between packs

- Missed Pill(s)
  - Take most recent missed pill as soon as possible
  - Abstain or use back-up method for 48 hours
  - Take next pill at regular time

*- with POPs other than desogestrel; with desogestrel a tolerance time of 12 hours is permissible

Switching & Discontinuing POPs

- Breastfeeding women :
  - Use POP as long as desired
  - Should not switch from POPs to COCs during first 6 months postpartum
- Non-breastfeeding women :
  - May switch from POPs to another method any time
  - Use back-up or abstain for 7 days if necessary
- Quit pills any time; fertility returns rapidly



Side effects - POPs

Not experienced by all users, not harmful, may be unpleasant

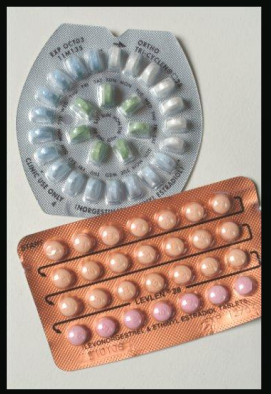
Non – Menstrual

- Persistent ovarian follicles
- Weight gain *
- Nausea *
- Dizziness *
- Acne *
- Breast tenderness *
- Headaches *
- Mood changes *

Bleeding

- Breakthrough bleeding
- Prolonged bleeding
- Spotting
- Irregular cycles
- Amenorrhea

* Less common /intense than COC effects



Bleeding Problems - POPs

Breastfeeding Women	Non-Breastfeeding Women
Irregular bleeding less common than non-breastfeeding women	Irregular bleeding, amenorrhea, or mixtures of regular and irregular bleeding and amenorrhea are common
Amenorrhea more common than non-breastfeeding women	

Bleeding Problems - Management

Problem	Action / Management	
Unexplained vaginal bleeding or amenorrhea suspicious nature →	Assess cause → (consider pregnancy or disease)	Treatment based on assessment
Lower abdominal pain with vaginal bleeding →	Rule our ectopic pregnancy → (refer to higher level provider if necessary)	
Amenorrhea →	Reassure client→ No medical treatment necessary →	If side effects persist and are unacceptable to client : switch to another method
Breakthrough bleeding →	Reassure client; reinforce correct pill taking → Give non-steroidal anti-inflammatory drugs → Give lower-dose COCs (1-3 cycles) →	

Non-menstrual Side Effects - Management

Problem	Action / Management	
Any client concerns	Provide counseling →	If side effects persist and are unacceptable to client : switch to another method
Nausea →	Take pills with food →	
Weight gain →	Inform about healthy eating and exercise →	
Persistent ovarian follicles →	Leave alone, usually disappear →	

COCs or POPs – The Choice

COCs

- Safe for almost everyone
- More effective than POPs in typical use
- Require daily pill-taking
- Regular cycles

POPs

- Preferred during breast-feeding
- Synergy with lactation enhances effectiveness
- Daily pill-taking more strict than COCs*
- Irregular bleeding common*

* Less a problem for breast-feeding women

Injectable Contraceptives

- 150 mg medroxyprogesterone acetate IM every 3 months
- Contraceptive level maintained for 14 weeks
- Failure Rate: 3% in typical use
- Mechanism:
  - Thickens cervical mucus
  - Blocks the LH surge
  - Initiate treatment during the first week of menses

Injectable Contraceptives

- **Advantages**
  - Long acting
  - Estrogen-free
  - Safe in breast-feeding
  - Can be used in sickle-cell disease and seizure disorder
  - Pt. does not have to take daily
  - Increases milk quality in nursing mothers
- **Disadvantages**
  - Irregular bleeding (70% in first year)
  - Breast tenderness
  - Weight gain
  - Depression
  - Slow return of menses after stopping use
  - Decreases HDL-C
  - Decreases BMD