CURRENT HORMONAL CONTRACEPTION

- LIMITATIONS
# Oral Contraceptives - Features

<table>
<thead>
<tr>
<th>MERITS</th>
<th>DEMERITS</th>
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<tbody>
<tr>
<td>Up to 99.9% efficacy if used correctly and consistently</td>
<td>Incorrect use /missed pills may reduce efficacy (typical use efficacy : 97%)</td>
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<tr>
<td>Reversible method – rapid return of fertility</td>
<td>Need daily use</td>
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<tr>
<td>Offer non-contraceptive health benefits</td>
<td>No protection against STDs</td>
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<tr>
<td>Safe: serious complications rare</td>
<td>“Nuisance” side-effects may be seen early in the course of treatment</td>
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<td>Ease of administration</td>
<td>Need prompt repurchase of subsequent packs</td>
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<td>Use independent of intercourse</td>
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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
“Nuisance” Side Effects

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

**Non-Menstrual**
- Weight gain
- Nausea
- Dizziness
- Acne
- Breast tenderness
- Headaches
- Mood change

**Bleeding**
- Amenorrhea
- Breakthrough bleeding
COCs – Long-Term Effects

- Severe adverse effects are rare
- Slight increase in risk concentrated among a subgroup of women with particular characteristics
COCs – Long-term Concerns

- Development of Cancer – breast & cervical
- Cardiovascular risks, BP, Stroke
- Venous Thromboembolic phenomena (DVT, PE)
- Obesity – weight gain
COCs & Cancer Risk

NO DIRECT RELATIONSHIP

- Breast Cancer - Slight increased incidence
- Cervical Cancer - Slight and questionable
- Endometrial - Decreased chances
- Ovarian - Decreased chances
- Liver - Increased (adenomas)
COCs & Breast Cancer

- Collaborative Data On 53,297 women with breast cancer; 100,239 women without breast cancer
- Relative Risk (RR) for current users - 1.24
- Decreased risk (RR= 1.16) in women who had stopped OC
- Tumors were small, localized
- Detected early because of surveillance

**MESSAGE** – Annual palpation/Breast Self Examination

Sonomammography/ Mammography as required
COCs & Cervical Cancer

• Precancer detected, not invasive cancer

• OC for > 5 years – RR = 2.1

• Type of women who use COCs have similar life style as precancer patients

• Risk factors: smoking, promiscuity, Sexually Transmitted Infections
COCs & Cervical Cancer

Message:

• Proper counseling
• Smoking is a risk factor
• Pap smear:
  Initial - before COC Rx
  Annual - during use
  Annual - for 5 years after use
• Treat STI & Precancer

PREVENT INVASIVE CANCER
COCs & Cancer Risk

- Don’t worry about cancer for short term use of up to 2 years
- Be regular with usual cancer detection measures
- Remember benefits / protection
Cardiovascular Effects

- Age < 35 years
- Normotensive
- Non smoker
- Non-diabetic
- Pills cause mild pro-coagulative changes - hepatic production of clotting factor VII & IX, ↑ fibrinogen

Risk is Less

Same changes occur in pregnancy
- Pregnancy - limited duration
- OC pills - prolonged use
Cardiovascular Effects

- Low-dose estrogen pills carry minimal CV risk
- Newer progestins (desogestrel & gestodene) may reduce heart attack & stroke risk
- Increased risk of venous thromboembolism with newer progestins reported to be due to confounding factors & patient selection bias
Metabolic Effects

- High-dose pills associated with mild abnormality in carbohydrate metabolism; monitor blood glucose in diabetics.
- Low-dose pills – No significant effects on carbohydrate or lipid metabolism.
- 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.

* (Diabetes Care, 2007; 30: 1062-68)
COCs – Long Term Effects: Conclusions

• Morbidity / Mortality associated with pregnancy is far higher than with oral contraceptives

  Unwanted pregnancies are far more risky
  - may lead to unsafe abortions

‘Abortion more dangerous than contraception’
Discontinuation of OCs*

- Despite their well established efficacy & safety, many patients prematurely discontinue OCs
  - About one-third to half the women discontinue OCs within 1 year
  - Most of these discontinuations seen in the first 2 months, & up to 6 months
  - Discontinuation rates high (50%) among adolescents & new starters (32%)
  - Many discontinuations (42%) occur without informing the physician

*- Am J Obstet Gynecol 1998; 179: 577-82
OCs Discontinuation – Reasons

- Side effects leading to discontinuation:
  - Bleeding irregularities (12%)
  - Nausea (7%)
  - Weight gain (5%)
  - Mood changes (5%)
  - Breast tenderness (4%)
  - Headaches (4%)

* - Am J Obstet Gynecol 1998; 179: 577-82
OCs Discontinuation – Reasons*

• Myths & Beliefs also account for many discontinuations of OCs
  – Women in China believe that OCs make them fat & hairy
  – Women in U.K. feel that hormones are bad for them

• These women then use less reliable barrier methods even after experiencing method failure & unwanted pregnancy

* - Human Reprod 2000; 15: 1865-71
What Happens to Women Who Discontinue OCs?*

- Only 11% shifted to other reliable methods
- Almost one-fifths did not adopt any contraceptive method
- 68% shifted to less reliable methods – a serious health issue!
- About 44% returned to OCs after 6 months

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* - Am J Obstet Gynecol 1998; 179: 577-82
Conclusions

• Discontinuation of OCs mainly due to side effects & concern about long-term risks

• Increasing OC Continuation Rates by:
  – Pretreatment counseling
  – Education of the patients about various contraceptive methods
  – Regular follow-up & education during these visits
  – Choosing an OC pill:
    • With minimal potential for side effects that may lead to patient dissatisfaction & discontinuation
    • That improves the patient well-being & promotes compliance