

**CURRENT HORMONAL  
CONTRACEPTION  
- LIMITATIONS**

# Oral Contraceptives - Features

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





# 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

\* DVT – Deep Vein Thrombosis  
PE- Pulmonary edema

### PROGESTOGENIC

- Headaches
- Breast tenderness
- Hypertension

### ANDROGENIC

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



# “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

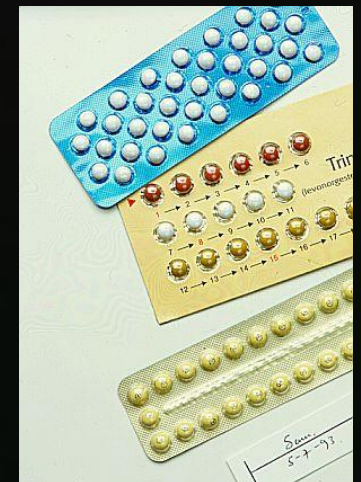
# COCs – Long-Term Effects

- 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
- } **Risk is Less**
- Pills cause mild pro-coagulative changes - hepatic production of clotting factor VII & IX, ↑ fibrinogen

## Same changes occur in pregnancy

- Pregnancy - limited duration
- OC pills - prolonged use



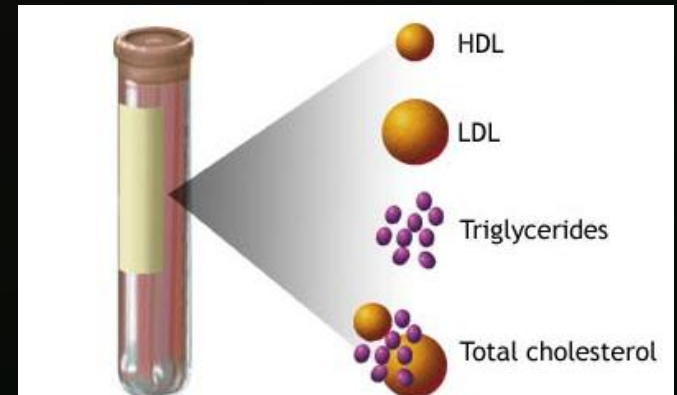
# Cardiovascular Effects

- 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’**

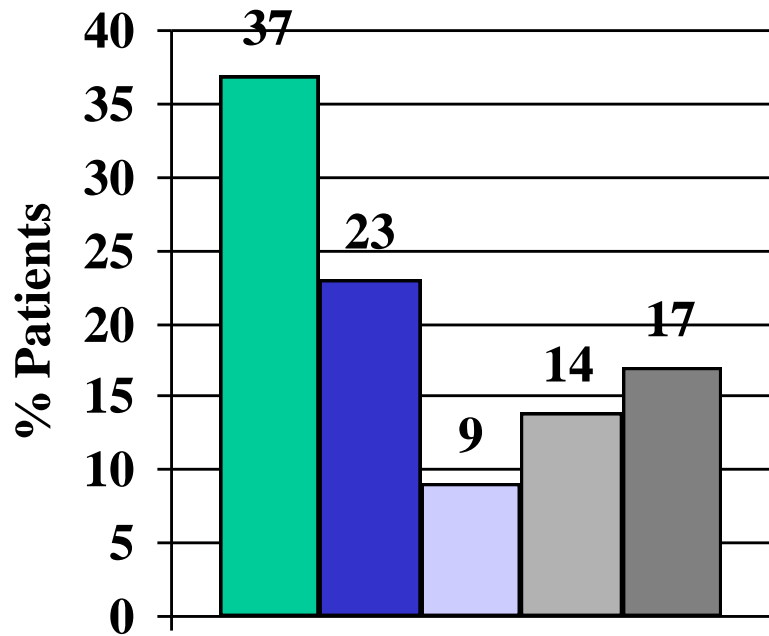
# Discontinuation of OCs\*



- 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



# OCs Discontinuation – Reasons



- Side effects
- No need
- Clinician recommended
- Method related
- Others - unspecified

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

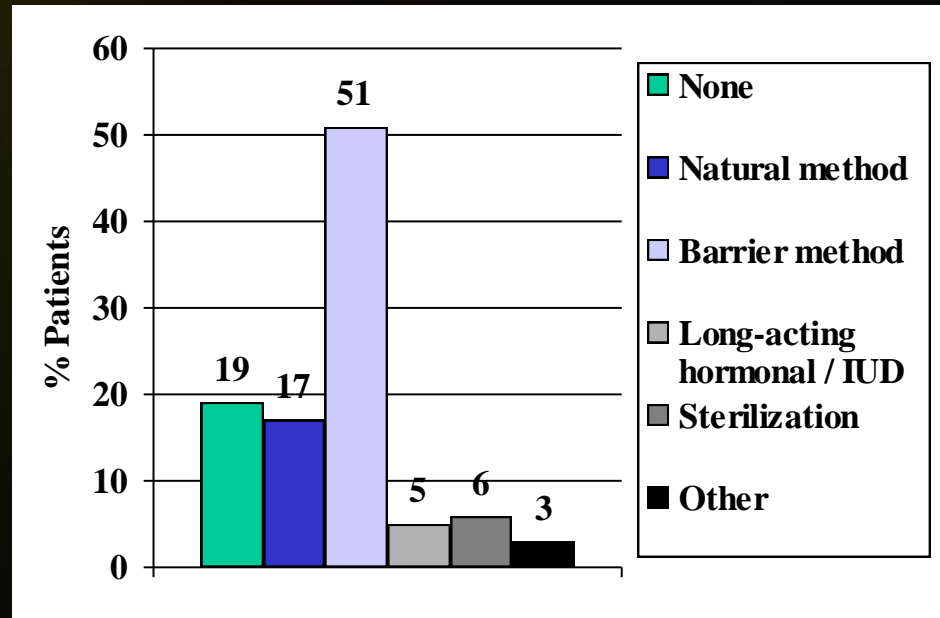
# OCs Discontinuation – Reasons\*



- 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

# 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



# 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