Updates on Contraceptive Technology Part 1

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Key Facts about family planning/contraception

- 214 million women of reproductive age in developing countries who want to avoid pregnancy are not using a modern contraceptive method. (unmet need for modern contraception
- Some family planning methods, such as condoms, help prevent the transmission of HIV and other sexually transmitted infections.
- Family planning / contraception reduces the need for abortion, especially unsafe abortion.
- Family planning reinforces people's rights to determine the number and spacing of their children.
- By preventing unintended pregnancy, family planning /contraception prevents deaths of mothers and children.

Main benefits of family planning/contraception

- Secures the well being and autonomy of women
- Supports the health and development of communities
- Prevents unplanned pregnancy and pregnancy-related health risks of women
- Prevents adolescent pregnancy
- Reduces infant mortality and prevents HIV/AIDS transmission to newborns
- Empowers people and enhances education
- Slows population growth

Unmet need for contraception

Definition

- Women with unmet need are those who are **fecund and sexually active** but are **not using any method of contraception**, and report **not wanting any more children or wanting to delay the next child**.
- The concept of unmet need points to the gap between women's **reproductive intentions** and their **contraceptive behavior**.

Unmet need is especially high among groups such as.

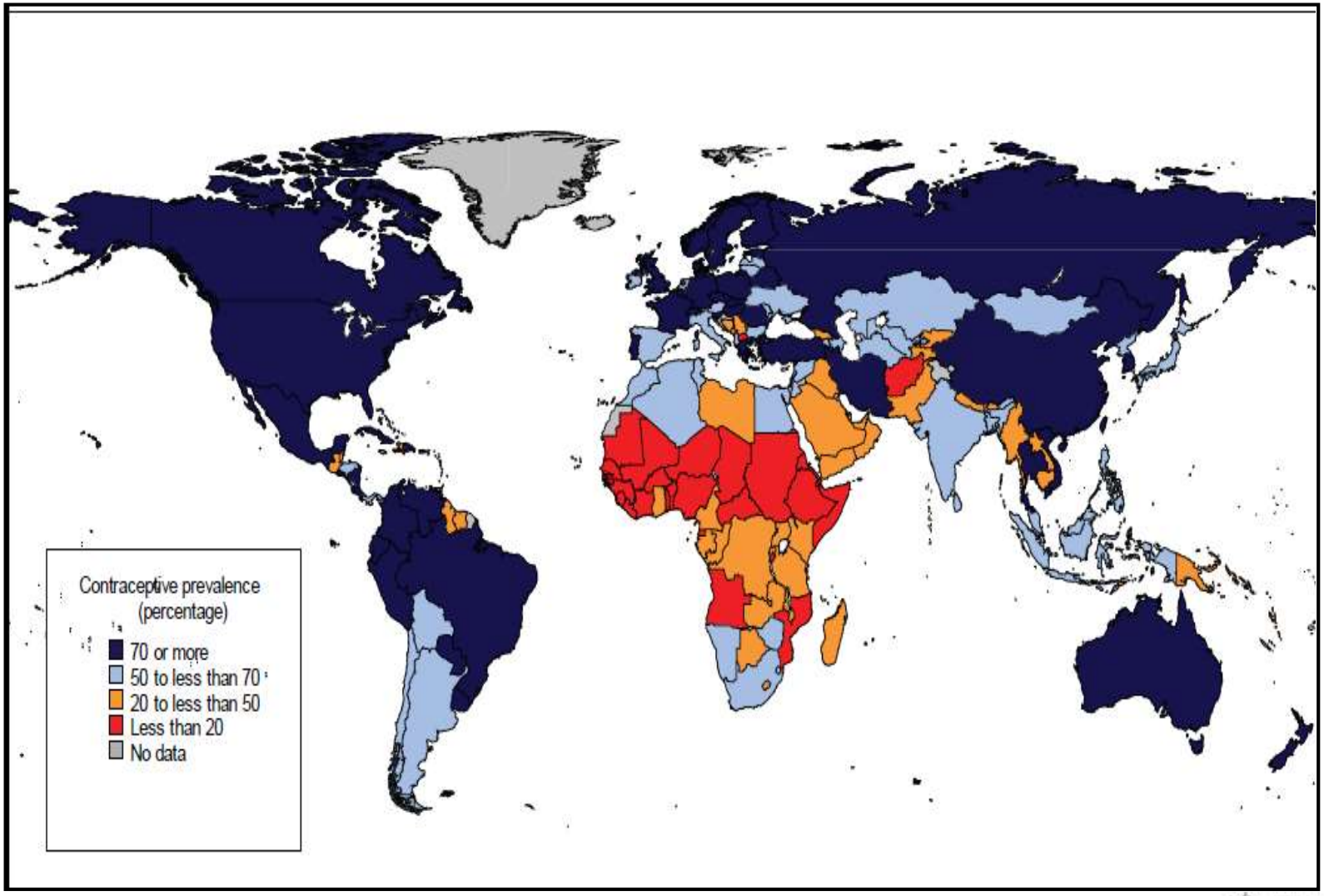
- Adolescents
- Migrants
- Urban slum dwellers
- Refugees
- Women in the postpartum period

Reasons for unmet need for modern FP/ C

- limited choice of methods;
- limited access to contraception, particularly among young people, poorer segments of populations, or unmarried people;
- fear or experience of side-effects;
- cultural or religious opposition;
- poor quality of available services;
- users and providers bias
- gender-based barriers.

World contraceptive use

Percentage of women using some method of contraception among those aged 15-49 who are married or in a union



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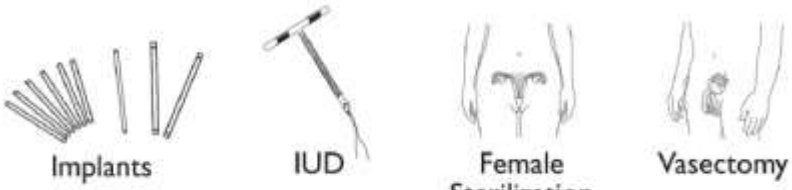
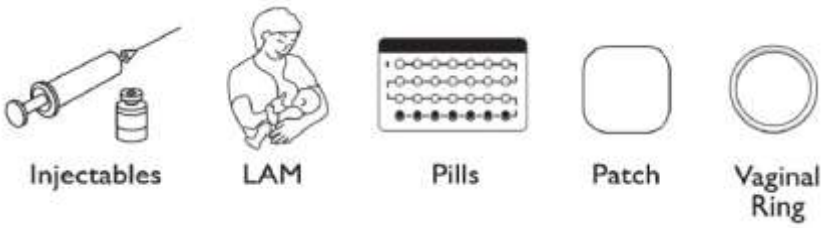
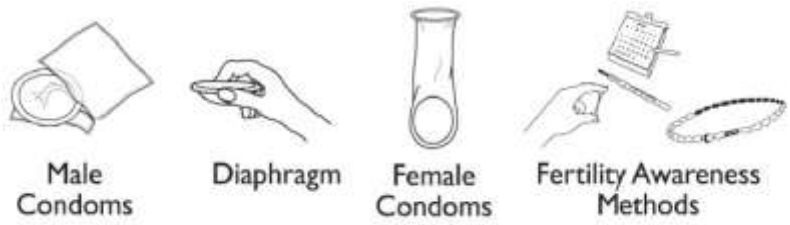
Comparing Effectiveness of Family Planning Methods

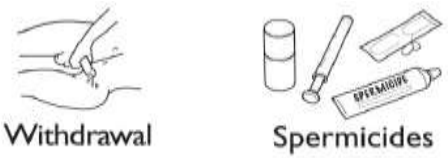
More effective

Less than 1 pregnancy per 100 women in one year









Less effective

About 30 pregnancies per 100 women in one year

How to make your method more effective

Implants, IUD, female sterilization: After procedure, little or nothing to do or remember

Vasectomy: Use another method for first 3 months

Injectables: Get repeat injections on time

Lactational Amenorrhea Method (for 6 months): Breastfeed often, day and night

Pills: Take a pill at the same time each day

Patch, ring: Keep in place, change on time

Condoms, diaphragm: Use correctly every time you have sex

Fertility awareness methods: Abstain or use condoms on fertile days. Standard Days Method and Two-Day Method may be easier to use.

Withdrawal, spermicides: Use correctly every time you have sex

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Outline and objectives

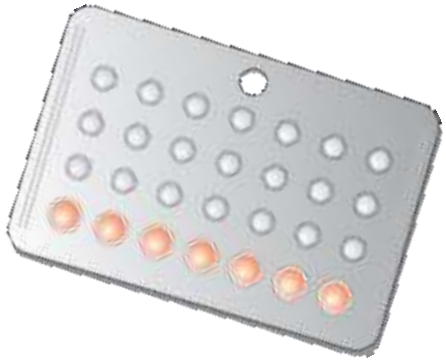
- Description of the method
- Mechanism of action
- Effectiveness
- Eligibility criteria
- Benefits and side effects
- Interventions for associated effects

Methods

- Combined oral contraceptives
- Injectable contraceptives, progestin-only
- Injectable contraceptives, combined
- Hormonal implants

- IUDs (copper bearing)
- LNG IUS
- Male and female condoms
- Other barrier methods
- Fertility awareness, lactational amenorrhea
- Emergency contraception
- Tubal libation and vasectomy
- Other methods

Combined Oral Contraceptive Pills (COCs)



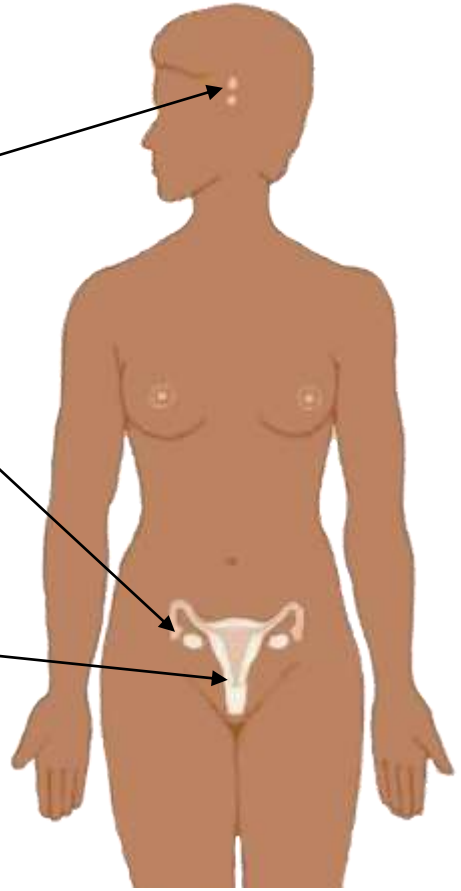
What are COCs? Traits and types

Content	Combination of two hormones: estrogen and progestin
Phasic	Monophasic, biphasic, triphasic
Dose	Low-dose (most common): 30-35 µg of estrogen or less High-dose: 50 µg of estrogen (used mostly for emergency contraception)
Pills per pack	21: all active pills (7-day break between packs) 28: 21 active + 7 inactive pills (no break between packs)

COCs: Mechanism of action

Suppresses hormones responsible for ovulation

Thickens cervical mucus to block sperm



COCs have no effect on an existing pregnancy.

COCs: Characteristics

- Safe and more than 99% effective if used correctly
- May be stopped at any time
- Rapid return to fertility
- Do not interfere with sex
- Controlled by the woman
- Have health benefits
- Not as effective when not used correctly (92%)
- Require daily intake
- Do not provide protection from STIs/HIV
- Have side effects and rare adverse health risks

Source: Hatcher, 2007; WHO, 2010; CCP and WHO, 2011.

COCs: Side effects

Non-menstrual

- Nausea
- Weight change
- Dizziness
- Mild headaches
- Breast tenderness
- Mood changes

Menstrual

- Breakthrough light bleeding and spotting
- Amenorrhea

Side effects are not experienced by all users. They are not harmful but may be unpleasant.

Source: Ory, 1982; CCP and WHO, 2011.

COCs: Health benefits

Non-menstrual

- Protection from ovarian and endometrial cancers
- Decreased symptoms of endometriosis
- Reduced risk of functional ovarian cysts, ectopic pregnancy and symptomatic PID

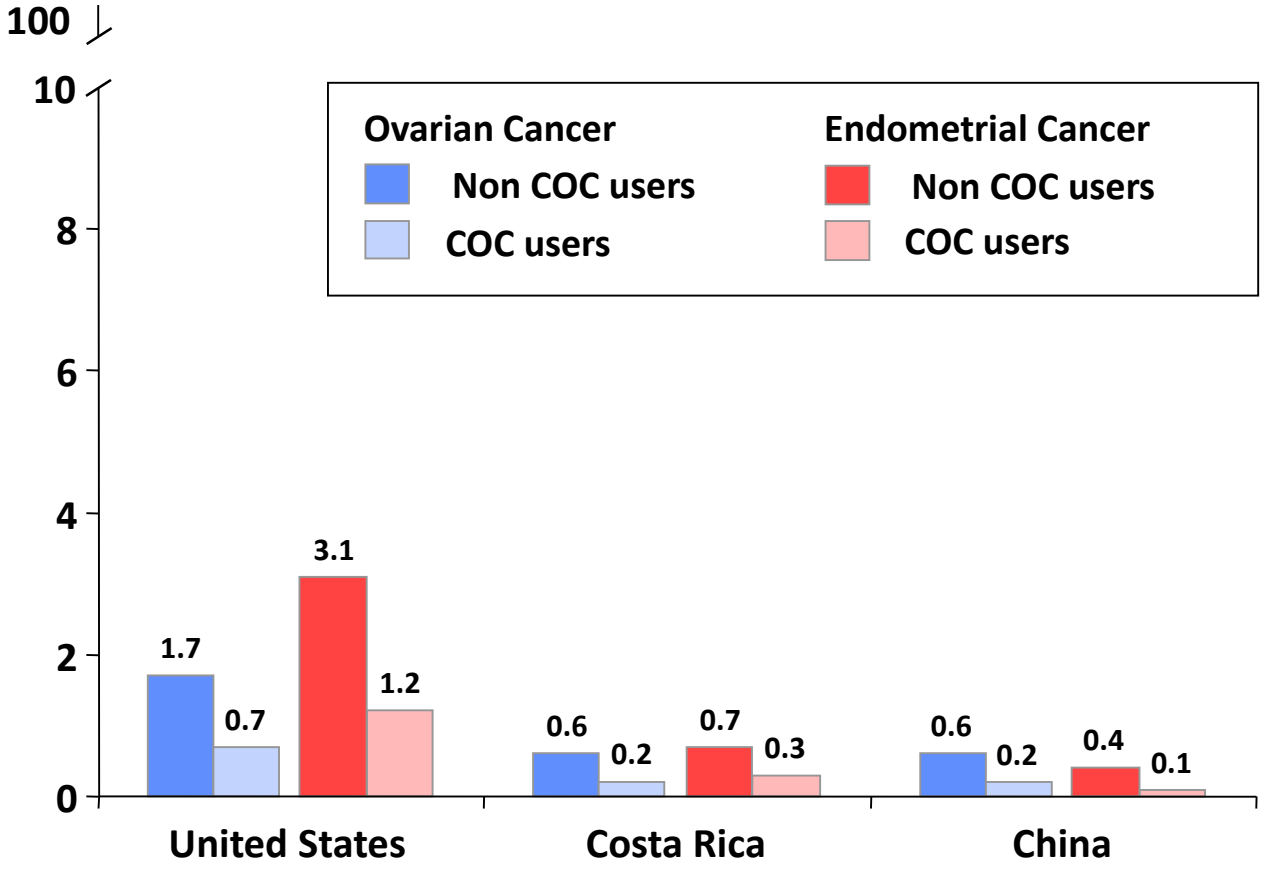
Menstrual

- Reduced symptoms of premenstrual syndrome
- Decreased bleeding during menses
- Reduced discomfort during menses

Source: Ory, 1982; CCP and WHO, 2011.

Ovarian and endometrial cancer protection effect of COC use

Lifetime risk of acquiring ovarian or endometrial cancer after 8+ years of COC use
Number per 100 women



Reduces risk by more than 50%.

Protection develops after 12 months of use and is present for at least 15 years.

Source: Petitti and Porterfield, 1992; CASH Study 1987.

COCs: Health risks

- Risk of blood clots due to COC use is limited and concentrated among women who have additional risk factors (hypertension, diabetes, smoking).
- Screening for existing risk factors is important.
- Pregnancy presents a higher risk of blood clots than COC use does.

COC users and risk of blood clots

Estimates of venous thromboembolism per 100,000 woman-years

	Incidence	Relative Risk
Young women in the general population	4–5	1
Low-dose COCs	12–20	3–4
High-dose COCs	24–50	6–10
Pregnant women	48–60	12

Estimated number of heart attacks per million woman-years

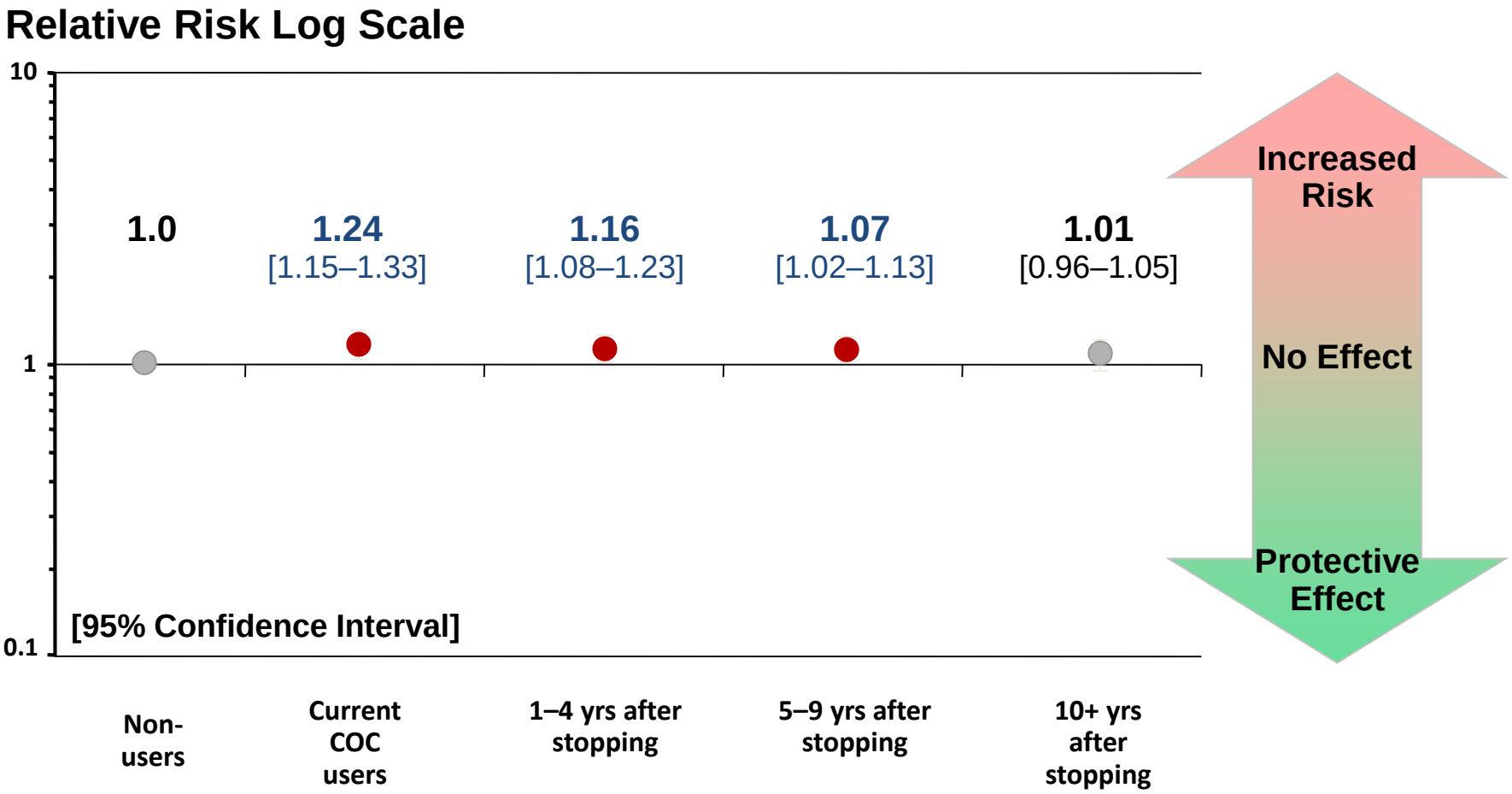
	Age 20-24	Age 30-34	Age 40-44
Healthy non-COC user	0.14	1.7	21.3
Healthy COC user	0.34	4.2	53.2
COC user who smokes	1.6	20.4	255
COC user with ↑ BP	2.0	25.5	319

Source: WHO, 1998; Speroff, 2005.

COCs: Health risks - breast cancer

- No overall increase in breast cancer risk among women who ever used COCs.
- Very slight increase in breast cancer risk in current COC users and within 10 years of discontinuation.

Relative risk for breast cancer among COC users and non-users



Source: Collaborative Group on Hormonal Factors in Breast Cancer, 1996; Milne, 2005; Silvera, 2005 .

COCs: Health risks – cervical cancer

- Small increase in risk of cervical cancer among women with HPV who use COCs more than five years.
- COC users should follow the same cervical screening schedule as other women.

Who can initiate COCs

WHO Category 1 and 2 examples

WHO Category	Conditions (selected examples)
Category 1	menarche to 39 yrs; nulliparous; endometriosis; endometrial or ovarian cancer; uterine fibroids; family history of breast cancer; varicose veins; irregular, heavy, or prolonged bleeding; anemia; STI/PID; hepatitis (chronic/carrier)
Category 2	≥40 yrs; breastfeeding ≥6 months postpartum; with superficial venous disorders; uncomplicated diabetes; cervical cancer; unexplained vaginal bleeding; undiagnosed breast mass; known dyslipidemia

Who should not initiate COCs

WHO Category 3 examples

WHO Category 3 Conditions	
	Postpartum: Breastfeeding between 6 weeks and 6 months Non-breastfeeding <21 days
	Vascular conditions: Hypertension (history of or BP 140-159/90–99) Migraine without aura (older than 35 yrs)
	Liver conditions: Symptomatic gall bladder disease (including medically-treated)
	Drug interactions: Use of rifampicin, rifabutin, ritonavir

Source: WHO, 2010; Sekar, 2008.

Who should not initiate COCs

WHO Category 4 examples

WHO Category 4 Conditions	
	Breastfeeding: <6 weeks postpartum
	Smoking: >15 cigarettes/day and >35 yrs old
	Vascular conditions: Hypertension (≥160/≥100) Migraines with aura Ischemic heart disease or stroke Diabetes with vascular complications Deep venous thrombosis (history or acute) Pulmonary embolism (history or acute)
	Rheumatic disease: lupus
	Liver conditions: Acute hepatitis Severe liver disease and most liver tumors
	Breast cancer: current or within 5 yrs

Source: WHO, 2010.

COC use by women with HIV

WHO Eligibility Criteria	
Condition	**Category**
HIV-infected	1
AIDS	1
ARV therapy (which does not contain ritonavir)	1
Ritonavir/ ritonavir-boosted PIs (as part of ARV regimen)	2

- Women with HIV or AIDS can use without restrictions
- Women on ARVs other than ritonavir can use COCs safely
- May now be used by women who take ritonavir (now category 2)
- Using low-dose COCs is appropriate
- Condom use should be encouraged in addition to COCs

Source: WHO, 2010; Sekar, 2008.

When to initiate COCs

- If starting during the first 5 days of the menstrual cycle, no backup method needed
- After day 5, rule out pregnancy and use backup method for the next 7 days
- Pregnancy can be ruled out if the woman:
  - Is fully breastfeeding, has no menses and her baby is less than 6 months old
  - Has abstained from intercourse since last menses or delivery
  - Had a baby in the past 4 weeks
  - Started monthly bleeding within the past 7 days
  - Had a miscarriage or an abortion in the past 7 days
  - Is using a reliable contraceptive method consistently and correctly
- Negative pregnancy test or pelvic exam (if none of the above apply)

Source: WHO, 2010.

When to initiate COCs (continued)

- After miscarriage or abortion
  - If within 7 days after miscarriage or abortion, no backup method needed
  - If more than 7 days after, rule out pregnancy, use backup method for 7 days
- Switching from hormonal method
  - May start immediately, no backup method needed (with injectables, initiate within reinjection window)
- Switching from non-hormonal method
  - If starting within 5 days of start of menstrual cycle, no backup method needed
  - If starting after day 5 of cycle, use backup method for 7 days
- After using emergency contraceptive pills
  - initiate next day, use backup method for 7 days

Source: WHO, 2010.

How to take COCs: Missed pills

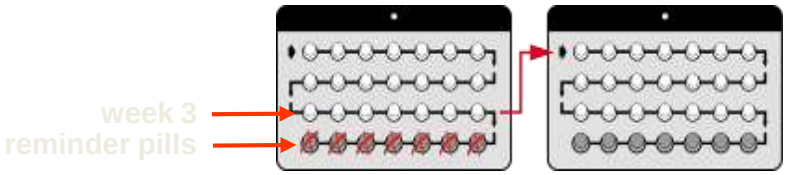
Miss 1 or 2 active pills in a row or start a pack 1 or 2 days late:

- Always take a pill as soon as possible
- Continue to take one pill every day
- No need for additional protection

Miss 3 or more active pills in a row or start pack 3 or more days late:

- Take a pill as soon as possible, continue taking 1 pill each day, and use condoms or avoid sex for the next 7 days

- If these pills were missed in week 3, ALSO skip the reminder pills and start a new pack



Source: WHO, 2010

Correcting misconceptions

COCs:

- Do not build up in a woman's body. Women do not need a "rest" from taking COCs.
- Must be taken every day, whether or not a woman has sex that day.
- Do not make women infertile.
- Do not cause birth defects or multiple births.
- Do not change women's sexual behavior.
- Do not collect in the stomach. Instead, the pill dissolves each day.
- Do not disrupt an existing pregnancy.

Non-menstrual problems

Counseling and reassurance are key

Problem	Action/Management	
Common headaches	Reassure client: usually diminish over time; take painkillers	If side effects persist and are unacceptable to client: if possible, switch pill formulations or switch to another method
Nausea and vomiting	Take pills with food or at bedtime	
Weight change	Inform about healthy eating habits and exercise	

Source: CCP and WHO, 2011.

Bleeding changes

Problem	Action/Management	
Irregular vaginal bleeding	Reassure client: reinforce correct pill taking and review missed pill instructions; ask about other drugs that may interact with COCs; administer short course of non-steroidal anti-inflammatory drugs	If side effects persist and are unacceptable to client: if possible, switch pill formulations or switch to another method
Amenorrhea	Reassure client: no medical treatment necessary	

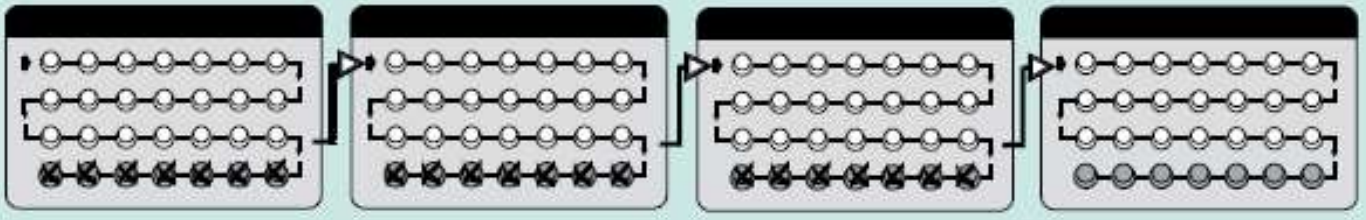
Source: CCP and WHO, 2011.

Extended use COCs

- Some users do not follow the usual cycle of 3 weeks on and 1 week off, rather take pills for 12 weeks without a break, followed by 1 week off.
- Have vaginal bleeding only 4 times a year or none at all.
- Reduces side effects (headaches, PMS, mood changes, bleeding) during the week without pills.

Extended use COCs

Extended Use Instructions

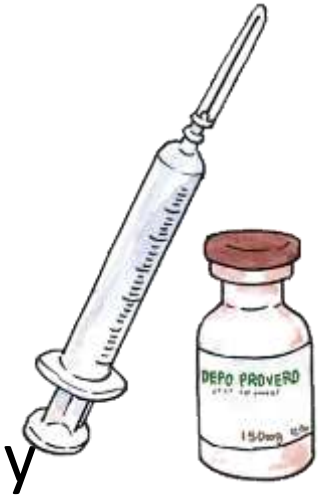


- Skip the last week of pills (without hormones) in 3 packs in a row. (21-day users skip the 7-day waits between the first 3 packs.) No backup method is needed during this time.
- Take all 4 weeks of pills in the 4th pack. (21-day users take all 3 weeks of pills in the 4th pack.) Expect some bleeding during this 4th week.
- Start the next pack of pills the day after taking the last pill in the 4th pack. (21-day users wait 7 days before starting the next pack.)

Progestin-Only Injectable Contraceptives: DMPA and NET-EN

What are progestin-only injectables?

- Contraceptives administered by deep intramuscular (150ug) or subcutaneous injection (104 ug)
- Contain progestin—similar to the natural hormone progesterone
- Hormone released into bloodstream slowly



Source: CCP and WHO, 2010.

Types of progestin-only injectables

- DMPA (depot medroxyprogesterone acetate)
  - Injection every 13 weeks
- NET-EN (norethisterone enanthate)
  - Injection every 8 weeks

Have similar effectiveness and safety characteristics and eligibility criteria

Source: CCP and WHO, 2010; Kingsley, 2010.

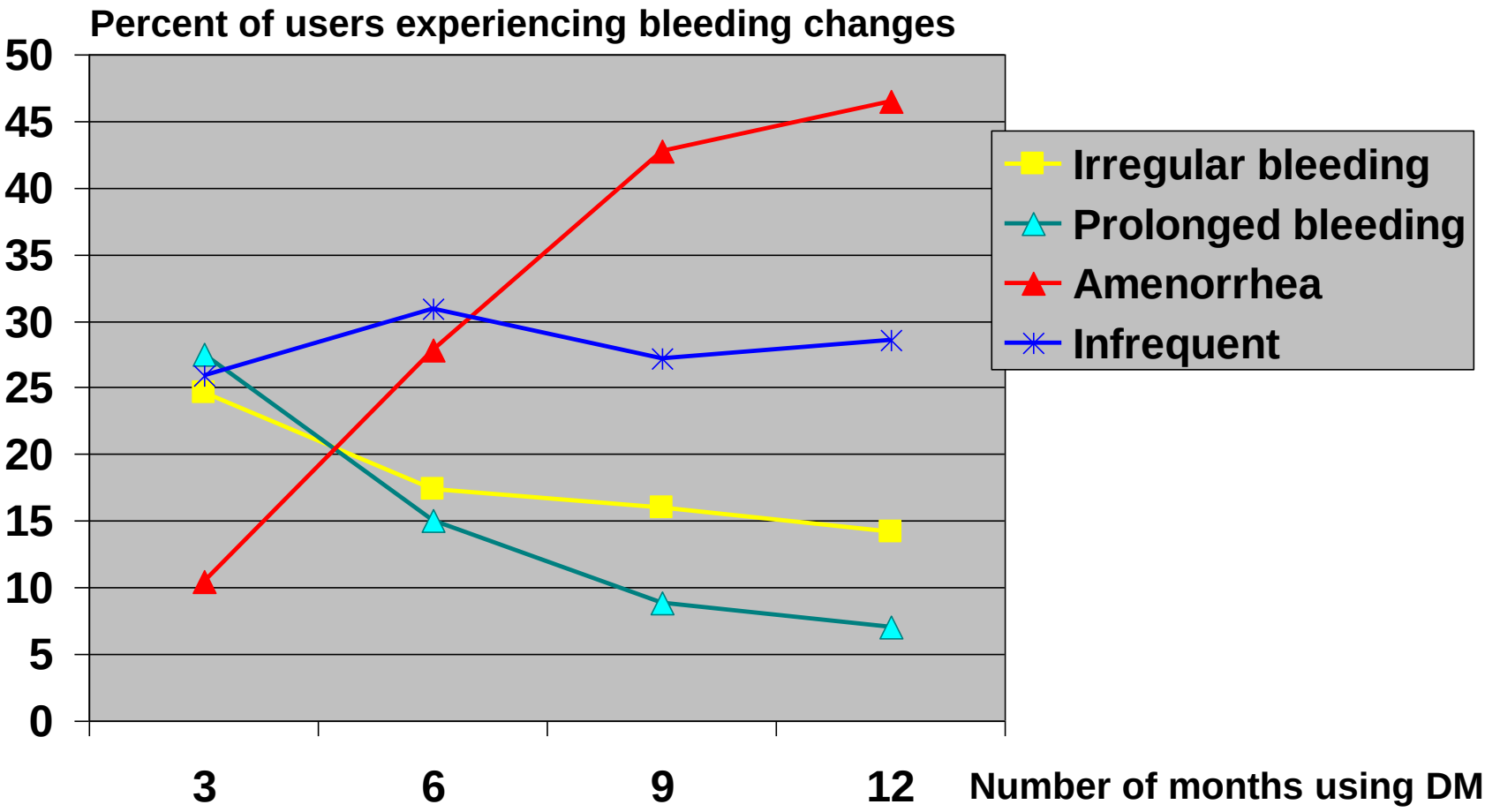
Characteristics of progestin-only injectables

- Safe and highly effective
- Easy to use
- Can be discontinued without provider's help
- Can be provided outside of clinics
- Can be used by breastfeeding women
- Can be used privately
- Provide non-contraceptive health benefits

- Delay return to fertility
- Provide no protection from STIs/HIV

Source: CCP and WHO, 2011

DMPA: Menstrual bleeding changes



Source: WHO, 1987.

Other possible side effects

- Weight gain: Average 1–2 kg per year
- Less common:
  - Headaches
  - Dizziness
  - Abdominal bloating/ discomfort
  - Mood changes
  - Changes in sex drive
- Loss of bone density

One third of users discontinue during the first year because of side effects.

Source: CCP and WHO, 2011; WHO, 1983.

Effect of DMPA on bone density

- DMPA users have lower bone density than non-users
- Women initiating DMPA use as adults regain most lost bone following discontinuation
- Long-term effect in adolescents unknown
  - Possibility of osteoporosis
  - Long-term studies are needed
  - Generally acceptable to use

Source: Cromer, 1996; Cundy, 1994; WHO, 2010.

Comparing DMPA and NET-EN side effects

- No significant difference in:
  - ☑ Proportion of clients who experienced vaginal bleeding/spotting events
  - ☑ Duration of vaginal bleeding/spotting events at 12 and 24 months
  - ☑ Changes in body weight
  - ☑ Changes in blood pressure
  - ☑ Frequency of discontinuation at 12 months
  - ☑ Reasons for discontinuation

- Women who receive appropriate counselling are more likely to continue using injectables.

Source: Draper et al., 2006.

Injectables and risk of breast cancer

- Recent large study found no increased risk of breast cancer in current or past DMPA users regardless of age and duration of use.

- Little research has been done on NET-EN.

Source: Strom et al, 2004

Health benefits of DMPA and NET-EN

DMPA

- Helps protect against endometrial cancer and uterine fibroids
- May help protect against symptomatic PID and iron-deficiency anemia
- Reduces sickle cell crises in women with sickle cell anemia
- Reduces symptoms of endometriosis (pelvic pain, irregular bleeding)

NET-EN

- Helps protect against iron-deficiency anemia

Source: CCP and WHO, 2011; Manchikanti, 2007.

Who can use DMPA or NET-EN

WHO Category 1 and 2 examples

WHO Category	Conditions (selected examples)
Category 1	Age 18–45 years, nulliparous, smoking (any amount, any age), breastfeeding after 6 weeks postpartum, postabortion, acute or chronic hepatitis, STI, HIV/AIDS
Category 2	Age <18 years or >45, mild hypertension (BP <159/99 mmHg), non-vascular diabetes, prolonged or heavy bleeding, history of DVT

Source: WHO, 2010.

Who should not use DMPA or NET-EN

WHO Category 3 and 4 examples

WHO Category	Conditions (selected examples)
Category 3	Breastfeeding before 6 weeks postpartum, severe hypertension (≥160/≥100 mmHg), unexplained vaginal bleeding (before evaluation) acute DVT/PE, complicated diabetes, severe liver disease
Category 4	Current breast cancer

Source: WHO, 2010.

When to initiate injectables

- Anytime a provider is reasonably certain a woman is not pregnant:
  - **Started menstrual period in the past 7 days**
  - **Fully breastfeeding, no menses, baby is less than 6 months**
  - **No intercourse since last menses or delivery**
  - **Had a baby in the past 4 weeks**
  - **Had miscarriage or abortion in past 7 days**
  - **Is using reliable contraceptive method consistently, correctly**

- Negative pregnancy test or pelvic exam (if none of the above apply)

Source: WHO, 2010.

When to initiate injectables

(continued)

- First 7 days of menstrual cycle, no backup method
- After day 7 of menstrual cycle, rule out pregnancy and use backup method for 7 days
- Postpartum:
  - Not breastfeeding: Immediately
    (Rule out pregnancy after 4 weeks postpartum)
  - Breastfeeding: At or after 6 weeks postpartum

Source: WHO, 2010.

When to initiate injectables

(continued)

- Postabortion or post-miscarriage: Immediately, without backup method

- Switching from a hormonal method: Immediately, if it was used consistently and correctly
  - Switching from another injectable:
    Can have new injectable when repeat injection would have been given; no backup method needed

- After using ECPs: At same time as ECPs, or within 7 days after start of menses, use backup method

Source: WHO, 2010.

Correcting misconceptions

Progestin-only injectables:

- Can stop monthly bleeding, but this is not harmful
  - Blood is not building up inside the woman
  - It is similar to not having menses during pregnancy
  - Usually not a sign of pregnancy
- Do not disrupt an existing pregnancy
- Do not make women infertile

Management of progestin-only injectables side effects

Bleeding changes

Counseling and reassurance are key

Problem	Action/Management	
Irregular bleeding (spotting or light bleeding at unexpected times that bothers the client)	• Reassure client that this is common and not harmful • Recommend a 5-day course of mefenamic acid (500 mg 2 times per day after meals) • Or 40 mg valdecoxib daily for 5 days, beginning when irregular bleeding starts	If side effects persist and are unacceptable to client, help her choose another method
Amenorrhea	Reassure client: no medical treatment necessary	

Source: CCP and WHO, 2011.

Management of progestin-only injectables side effects

Bleeding changes

Counseling and reassurance are key

Problem	Action/Management
Heavy or prolonged bleeding (twice as much as usual or longer than 8 days)	• Reassure client that this is common, not harmful • Recommend 5-day course of mefenamic acid (500 mg 2 times per day after meals); or 40 mg valdecoxib daily for 5 days; or COCs daily for 21 days; beginning when heavy bleeding starts • Suggest iron tablets and foods high in iron to prevent anemia • Consider underlying conditions if heavy bleeding continues or starts after several months • If bleeding becomes a health threat, of if the woman wants, help her choose another method

Source: CCP and WHO, 2011.

Other side effects

Problem	Action/Management
Common headaches, dizziness	Reassure and suggest painkillers; evaluate headaches that worsened after starting injectables. Dizziness: consider local remedies
Abdominal bloating/discomfort	Reassure; suggest local remedies. Refer for care if abdominal pain is severe.
Changes in mood or sex drive	Ask about changes in life that could affect mood or sex drive, including relationship changes. Give support as appropriate. For serious mood changes, refer for care.
Weight gain	Inform about healthy eating habits and exercise

Source: CCP and WHO, 2011.

DMPA Injection Schedule

- Injection every 13 weeks
- Can be up to 2 weeks early or 4 weeks late

Source: WHO, 2010

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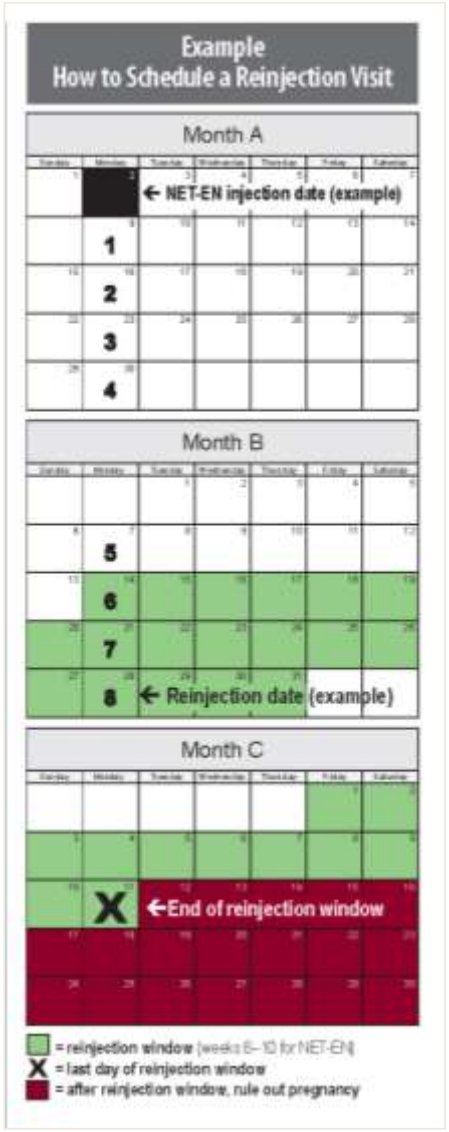
NET-EN Injection Schedule

- Injection every 8 weeks
- Can be up to 2 weeks early or 2 weeks late



Source: WHO, 2010

Combined Injectable Contraceptives

Combined injectables

Also known as monthly injectables

Two formulations available

1. Medroxyprogesterone acetate (MPA) 25mg + estradiol Cypionate 5 mg

   Cyclofem, cyclo-provera, Lunelle, Novafem, Feminena

2. Norethisterone enanthate (NET-EN) 50 mg

   + estradiol valerate 5 mg

   Mesigyna, Norigynon

Combined injectables

- Function largely like COCs
- Work primarily by preventing ovulation
- Less than 1 pregnancy per 100 women using monthly injectables over the first year (5 per 10,000 women), among women who receive their injections on time

Characteristics of combined injectables

- Do not require daily action
- Can be used privately
- Injections can be stopped at any time
- Good for spacing births

- Slightly delayed return to fertility
- No protection against sexually transmitted infections or HIV

Combined injectables:
Differences from Progestin-only injectables

- Less progestin
- Contains an estrogen
- More regular bleeding, fewer bleeding disturbances. Amenorrhea possible
- Requires monthly (4-weekly) injections; can be up to 7 days early or late.

Combined injectables: Side effects

- Changes in bleeding patterns
  - Lighter bleeding, fewer days of bleeding
  - Irregular bleeding
  - Infrequent bleeding
  - Prolonged bleeding
  - Amenorrhea
- Weight gain
- Headaches
- Dizziness
- Breast tenderness

Combined injectables: Health risks and benefits

- Safe and suitable for nearly all women
- Long-term studies are limited
- Benefits and risks similar to those of COCs
  - Less effect on blood pressure, blood clotting, lipid metabolism, and liver function

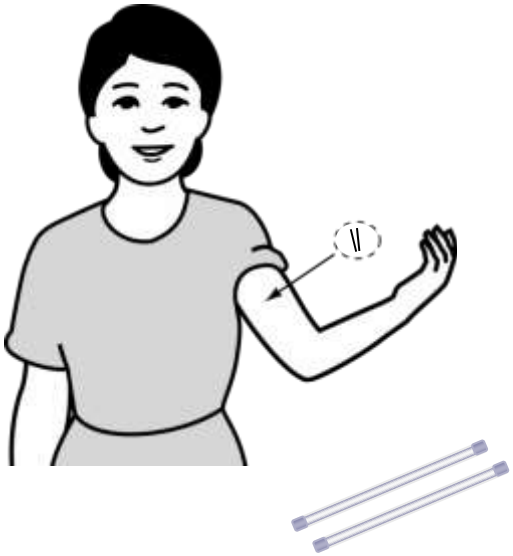
Correcting misconceptions

Monthly injectables:

- Can stop monthly bleeding, but this is not harmful; blood does not build up inside the woman
- Are approved for marketing
- Do not make women infertile
- Do not cause early menopause
- Do not cause birth defects or multiple births
- Do not cause itching
- Do not change women's sexual behaviour

Progestin-Only Implants

What are implants?

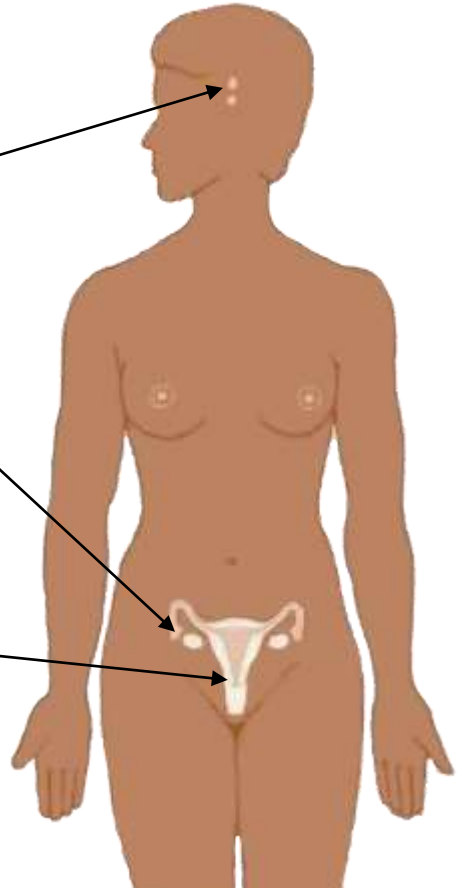


- Progestin-filled rods that are inserted under the skin
  - Jadelle: 2-rod system, effective for 5 years
  - Sino-implant (II): 2-rod system, effective for 4 years (possibly 5)
  - Implanon: 1-rod system, effective for 3 to 5 years
  - Norplant: 6-capsule system, effective for 5 years (possibly 7); no longer manufactured but few women are still using it
- Long acting reversible contraception

Implants: Mechanism of action

Suppresses hormones responsible for ovulation

Thickens cervical mucus to block sperm



Implants have no effect on an existing pregnancy.

Implants: Characteristics

- Very safe and 99.95% effective
- Easy to use
- Fertility returns without delay when removed
- Can be used by breastfeeding women
- Offer health benefits

- Have side effects
- Require minor surgery to insert and remove
- Cannot be initiated and discontinued without provider's help
- Provide no protection from STIs/HIV

Source: Hatcher, 2007; WHO, 2010; CCP and WHO, 2011.

Implants: Menstrual side effects

Many women experience changes in bleeding patterns, such as:

- Light bleeding/spotting
- Irregular bleeding
- Prolonged bleeding
- Infrequent bleeding
- Amenorrhea

Bleeding changes usually diminish after the first year of implant use.

Source: Shoupe, 1991; CCP and WHO, 2011; Mansour et al., 2008.

Menstrual bleeding patterns in users of two-rod implants

Data from Singapore study of 100 users:

Bleeding Pattern	Year 1	Year 5
Normal	32.6%	69.4%
Amenorrhea	21.1%	1.6%
Prolonged bleeding	12.6%	6.5%
Frequent bleeding	5.3%	3.2%
Infrequent bleeding	9.5%	1.6%
Irregular bleeding	10.5%	12.9%

Nine women discontinued due to menstrual changes.

Source: Biswas et al., 1996.

Menstrual bleeding patterns in Implanon users

Data from 11 clinical trials; two years of use:

Bleeding Irregularity	Frequency (%)
Amenorrhea	22.2%
Infrequent bleeding	33.6%
Prolonged bleeding	17.7%
Frequent bleeding	6.7%

The discontinuation rate due to menstrual changes was 11.3%.

Source: Mansour et al., 2008.

Implants: Non-menstrual side effects

Some women may experience:

- Headaches
- Abdominal pain
- Acne (can worsen or improve)
- Weight change
- Breast tenderness
- Dizziness
- Mood changes
- Nausea

There are no known health risks associated with implant use.

No significant metabolic effects

Researchers found that Jadelle or Implanon use resulted in no significant changes in:

- ✓Lipid metabolism
- ✓Carbohydrate metabolism
- ✓Liver function
- ✓Blood pressure
- ✓Blood clotting

Source: Dorflinger L. 2002.

Complications from implant use are uncommon or rare

- Infection at insertion site
  - If occurs, most likely within the first 2 months
- Difficult removal
  - Rare if inserted properly and removed by a trained provider
- Expulsions
  - Rare; most occur within the first 4 months

Source: CCP and WHO, 2011.

Implants: Health benefits

- Reduced risk of symptomatic pelvic inflammatory disease (PID)
- Reduced risk of iron-deficiency anemia
- Reduced risk of ectopic pregnancy
  - 6 per 100,000 in implant users
  - 650 per 100,000 in women using no contraception

Source: CCP and WHO, 2011; Task Force for Epidemiological Research on Reproductive Health, 1998.

Who can initiate implant use

WHO Category 1 and 2 examples

Implants are safe for nearly all women.

WHO Category	Conditions (selected examples)
Category 1	Adolescents, nulliparous, breastfeeding after 6 weeks postpartum, heavy smokers, complicated valvular heart disease, endometriosis, endometrial or ovarian cancer, thyroid disorders, STI, HIV/AIDS
Category 2	**Breastfeeding before 6 weeks postpartum**, Blood pressure ≥160/100, history of DVT/PE, diabetes with vascular complications, heavy or prolonged vaginal bleeding patterns, multiple risk factors for CVD, antiretroviral therapy

Source: WHO, 2010

Who should not initiate implant use

WHO Category 3 and 4 examples

A small number of women may not be able to use implants.

WHO Category	Conditions (selected examples)
Category 3	acute DVT/PE, unexplained vaginal bleeding, history of breast cancer, severe liver disease and most liver tumors, certain cases of systemic lupus *Continuation only:* ischemic heart disease, stroke, migraine with aura
Category 4	Current breast cancer

Source: WHO, 2010.

When to initiate implant use

- Anytime a provider is reasonably certain a woman is not pregnant
- Pregnancy can be ruled out if any of these situations apply:
  - Is fully breastfeeding, has no menses, and baby is less than 6 months
  - Abstained from intercourse since last menses or delivery
  - Had a baby in the past 4 weeks
  - Started monthly bleeding within the past 7 days (5 days for Implanon)
  - Had a miscarriage or abortion in the past 7 days (5 days for Implanon)
  - Is using a reliable contraceptive method consistently and correctly
- If none of the above apply, pregnancy can be ruled out by pregnancy test, pelvic exam, or by waiting till next menses

Source: WHO, 2010.

When to initiate implant use

(continued)

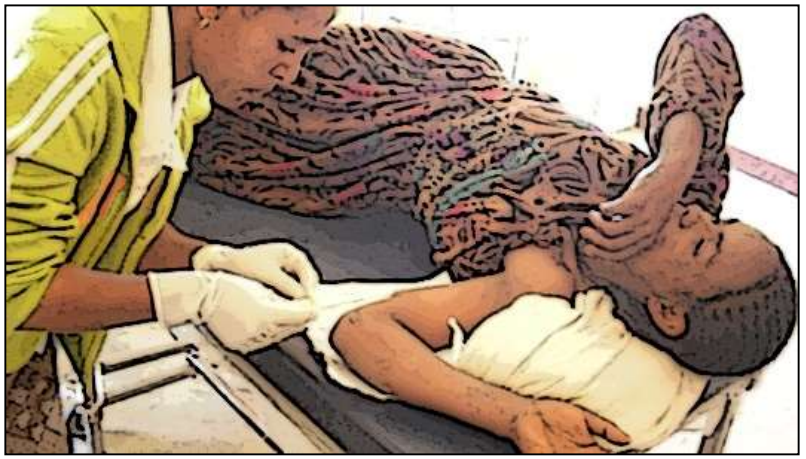
- First 7 days of menstrual cycle (5 days for Implanon), no backup method needed
- After 7th day of menstrual cycle (5th for Implanon), rule out pregnancy and use backup method for 7 days
- Postpartum
  - Not breastfeeding: immediately (no need to rule out pregnancy until 4 weeks postpartum)
  - Breastfeeding: category 2 if less than 6 weeks post partum, category 1, for more than 6 weeks

Source: WHO, 2010.

When to initiate implant use

(continued)

- Postabortion or miscarriage: immediately; without backup
- Switching from a hormonal method: immediately if it was used consistently and correctly
  - Injectable users can have implants inserted within the reinjection window; without backup
- After using emergency contraceptive pills:
  - Insert within 7 days after start of next menstrual period (5 days for Implanon); provide with backup method during interim



Source: WHO, 2004 (updated 2008).

Management of implant side effects

Bleeding changes

Counseling and reassurance are key.

Problem	Action/Management	
Irregular bleeding	• Reassure the client that this is common and not harmful • Recommend a 5-day course of ibuprofen (up to 800 mg 3 times per day for 5 days) • If no relief, offer COCs for 3 weeks • If bleeding is heavy, iron tablets may prevent anemia	If side effects persist and are unacceptable to the client, help her choose another method
Amenorrhea	Reassure the client: no medical treatment necessary	

Source: CCP and WHO, 2011.

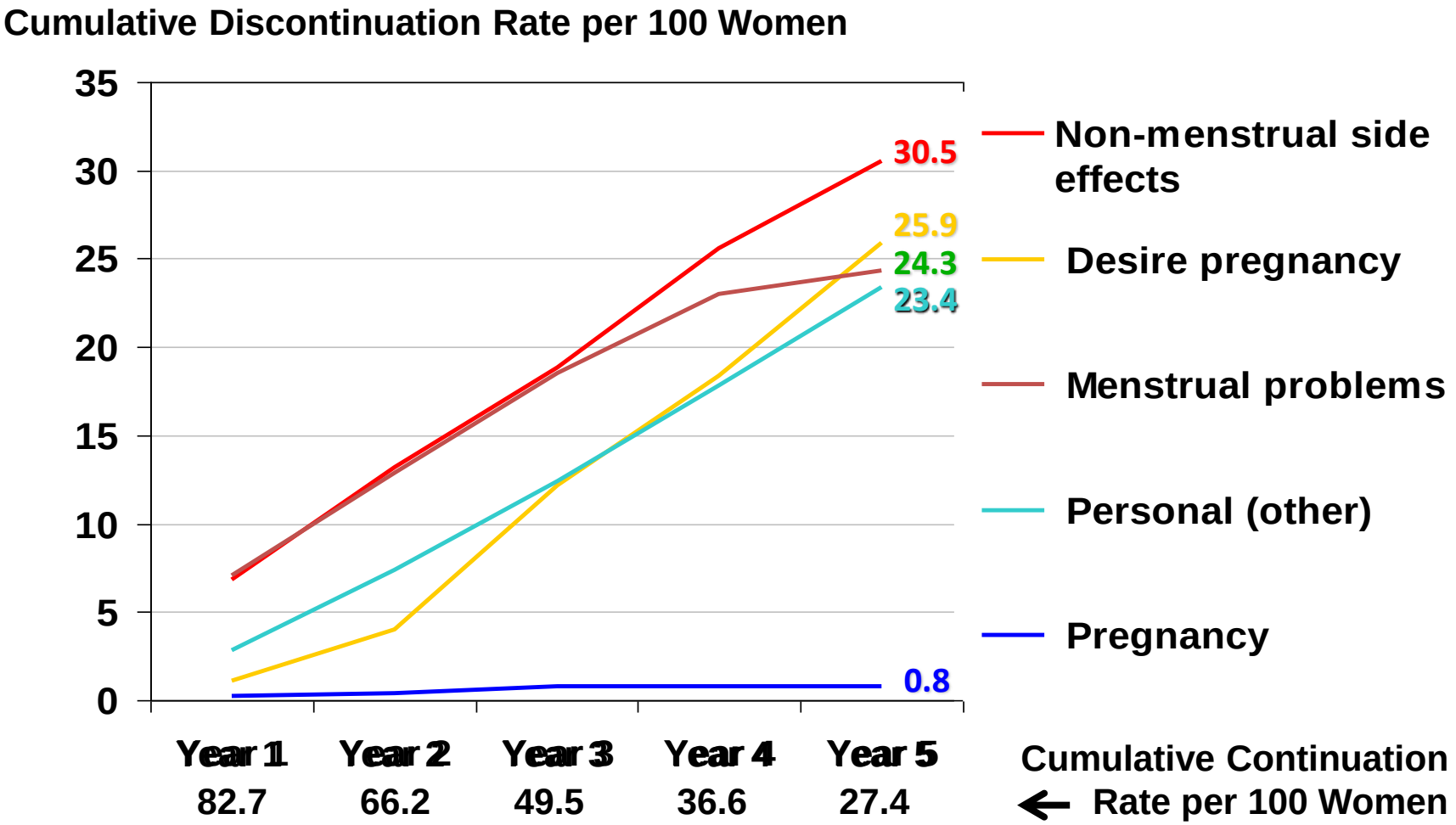
Management of implant side effects:

Non-menstrual problems

Problem	Action/Management	
Common headaches	Reassure and suggest painkillers; evaluate headaches that worsened since implant initiation	If side effects persist and are unacceptable to the client, counsel about nonhormonal methods
Mild abdominal pain	Reassure; suggest painkillers; follow-up if needed	
Breast tenderness	Recommend a supportive bra, compresses, or analgesics	
Weight change	Inform about healthy eating habits and exercise	

Source: CCP and WHO, 2011.

Jadelle: Discontinuation rates and reasons for discontinuation



Source: Sivin et al., 1998.

Problems related to insertion

Problem	Action/Management
Pain after insertion or removal	• Check that the bandage or gauze is not too tight; replace bandage; avoid pressing on site • Give painkillers for a few days
Infection	• Clean the infected area • Give antibiotics for 7–10 days • Remove implants if no improvement
Abscess	• Clean, cut open, and drain the abscess • Treat the wound • Give antibiotics for 7–10 days • Remove implants if no improvement

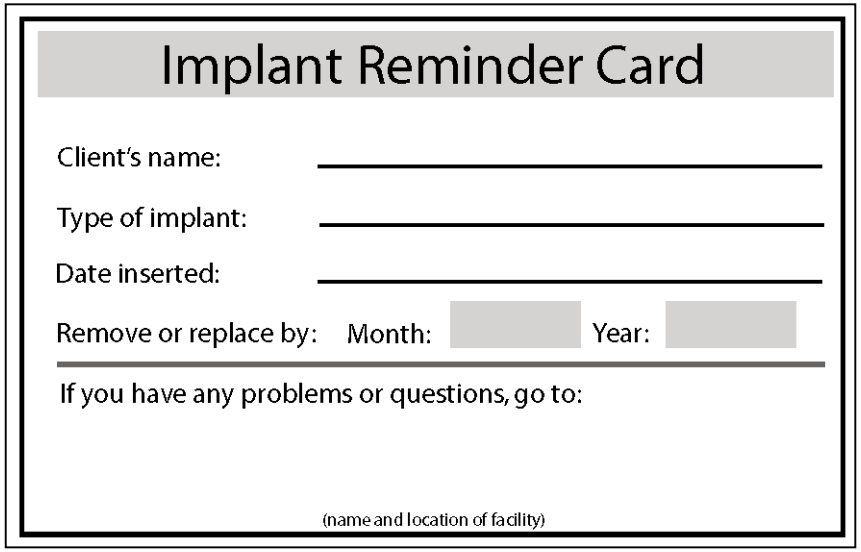
Source: CCP and WHO, 2011.

Correcting misconceptions

- Hormones do not remain in a woman's body after implants are removed
- Absence of monthly bleeding due to implants is not harmful
- Implants:
  - Do not make women infertile
  - Do not move to other parts of the body
  - Significantly reduce a woman's risk for ectopic pregnancy

Key counseling topics

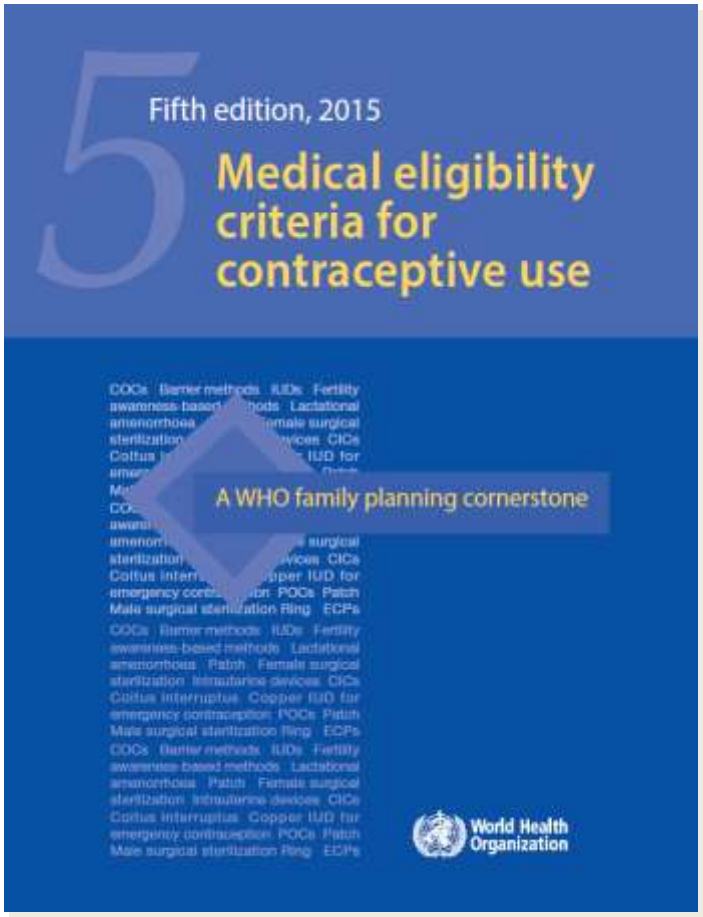
- Explain the insertion and removal procedure
- Provide post-insertion instructions
- Explain the length of protection and when to return for removal or replacement
- Describe reasons to return for follow-up



Acknowledgments and references

- Main References:
  - Family Planning – A Global Handbook for Providers (https://www.fphandbook.org/)
- Acknowledgements
  - Family Health International
  - Knowledge for Health
  - Institute of Reproductive Health

Medical eligibility criteria for contraceptive use (MEC)

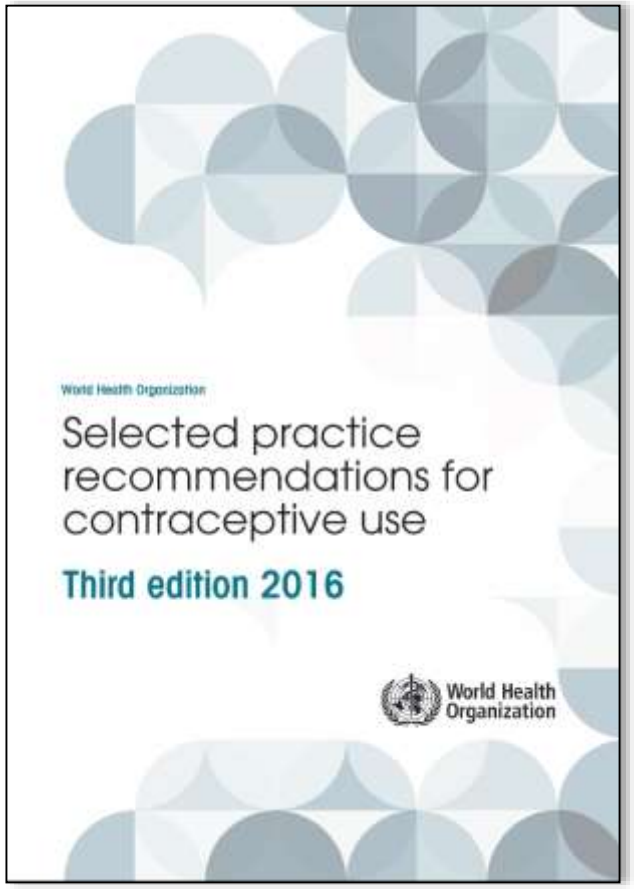


Previous editions
1996, 2000, 2004, 2009

Purpose: Who can safely use contraceptive methods, given health conditions

- Offers ≈ 2000 recommendations for 25 methods
  - pre-existing medical conditions
  - personal characteristics
  - certain health problem
- Developed through consensus driven process during 3 consultations
  - Systematic review of scientific evidence
  - Adhered to WHO procedures for guideline development
- http://www.who.int/reproductivehealth/publications/family_planning/MEC-5/en/

Selected practices recommendation for contraceptive use (SPR)



Previous editions 2001, 2004

Purpose: How to safely use contraceptive methods, once deemed to be medically appropriate

User-friendly presentation of information

- By contraceptive method, not by question
- Most effective methods presented first
- Topics listed sequentially according clinical relevance
  - method initiation, exams/tests, management of problems, follow-up

- http://www.who.int/reproductivehealth/publications/family_planning/SPR-3/en/

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