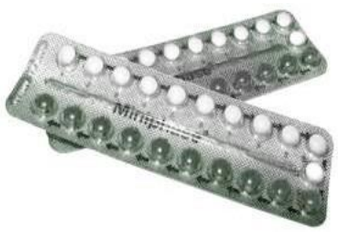
Chapter 4:
COMBINED HORMONAL CONTRACEPTIVES:
Pills, Patches, Rings, and Injectables

WHAT ARE COMBINED HORMONAL CONTRACEPTIVES (CHCs)?

CHCs are drugs that contain hormones (estrogen and progestogen) similar to those naturally found in a woman's body. These drugs are regularly administered to prevent conception.



HOW DO CHCs WORK?

- CHCs suppress ovulation or the release of an egg from the ovary.
- The estrogen in CHCs creates a negative feedback mechanism that tricks the brain into thinking that the body has enough hormones that the ovaries no longer need to produce an egg. This phenomenon prevents follicular development, which is necessary for ovulation. Pregnancy cannot occur without a released egg.
- Aside from preventing follicular rupture during ovulation, the progesterone in CHCs makes the cervical mucus thick and impairs the entry of sperm into the uterus.

HOW EFFECTIVE ARE CHCs?

CHCs are 99.7% effective in preventing pregnancy when used properly. With typical use, the effectiveness rate is lower at 92.0%.

HOW CAN CHCs BE ADMINISTERED?

The drugs may be administered orally, transdermally, transvaginally, or intramuscularly. CHC injectables are discussed in a separate section.

WHAT ARE THE ADVANTAGES OF USING CHCs?

- Safe, as proven through extensive studies
- Convenient and easy to use
- Makes menstrual cycles regular and predictable
- Reduces heavy menstrual bleeding
- Reduces symptoms of gynecologic conditions, such as painful menses and endometriosis
- Reduces the risk of ovarian and endometrial cancer
- Reversible, rapid return of fertility after discontinued use
- Does not interfere with intercourse

WHAT ARE THE DISADVANTAGES OF USING CHCs?

- Often used incorrectly and inconsistently, lowering its effectiveness
- Has side effects such as nausea, dizziness, or breast tenderness, which are not generally harmful but cannot be tolerated by some women
- May pose health risks for some women
- Offers no protection against sexually transmitted infections (STIs), including human immunodeficiency virus (HIV)
- Effectiveness may be lowered when taken with certain drugs, such as rifampicin and most anticonvulsants
- May suppress lactation
- Requires regular resupply
- Combined oral contraceptives (COCs) require daily intake

WHO CAN USE CHCs?

- CHCs are appropriate for most women who want a highly effective and easily reversible method for preventing pregnancy and for those who are not at risk of cardiovascular complications.
- The WHO MEC screening checklist for CHCs (Table 6) should be used to determine the eligibility of the clients and the suitability of the method.

- COCs have been used for more than 50 years. The other CHCs utilized through different delivery systems are relatively new.
- The WHO MEC Working Group concluded that the evidence available for COCs applies to other CHCs because of the lack of definitive evidence.

Table 6. MEC categories for CHCs

Category 1: Use the method without restriction.

- Menarche to 40 years old
- Women who may or may not have given birth
- More than 42 days postpartum
- Any time post-abortion
- Past ectopic pregnancy
- History of pelvic surgery
- Minor surgery without immobilization
- Varicose veins
- Epilepsy
- Depressive disorders
- Women with irregular vaginal bleeding patterns
- Diagnosed with benign ovarian tumor, endometriosis, severe dysmenorrhea
- Cervical ectropion
- Benign breast disease or family history of cancer
- Women with gestational trophoblastic disease, endometrial cancer, or ovarian cancer
- Among women with uterine anatomical abnormalities (e.g., fibroids)
- Current or history of PID or STIs such as HIV/AIDS
- Schistosomiasis
- Tuberculosis
- Malaria
- History of gestational diabetes
- Any thyroid disorder
- Chronic or carrier viral hepatitis
- Mild liver cirrhosis
- Thalassemia or iron-deficiency anemia
- Current use of nucleoside reverse transcriptase inhibitors, broad-spectrum antibiotics, antifungal, or antiparasitics

Category 2: Generally use the method but with more than the usual follow-up.

- Women more than 40 years old
- Breastfeeding women, more than six months after childbirth
- Non-breastfeeding women, 21 to 42 days postpartum
- Women who smoke and are less than 35 years old
- Body mass index of more than or equal to 30 kg/m^2
- History of high blood pressure during pregnancy
- Family history of deep vein thrombosis/pulmonary embolism
- Major surgery WITHOUT prolonged immobilization
- Superficial thrombophlebitis
- Known hyperlipidemia
- Uncomplicated valvular heart disease
- Systemic lupus erythematosus with negative antiphospholipid antibodies
- Continued use in women with non-migrainous headache
- Initiation of method in women with migraine, without aura, aged less than 35 years
- Unexplained vaginal bleeding prior to evaluation
- Women diagnosed with cervical intraepithelial neoplasia or cervical cancer prior to treatment
- Undiagnosed breast mass
- Diabetes, without vascular disease
- Asymptomatic or symptomatic gall bladder disease treated with cholecystectomy
- History of pregnancy-related cholestasis
- Benign liver tumors such as focal nodular hyperplasia
- Sickle cell disease
- Current use of non-nucleoside reverse transcriptase inhibitors

WHO CANNOT USE CHCs?

Category 3: Do not use the method unless no other appropriate method is available under close supervision.

- Breastfeeding women, six weeks to six months after childbirth
- Non-breastfeeding women, less than 21 days postpartum, without other risk factors for VTE
- Non-breastfeeding women, more than 21 days postpartum, with other risk factors for VTE
- Women who smoke less than 15 cigarettes/day and are more than 35 years old
- Multiple risk factors for arterial cardiovascular disease such as old age, smoking, diabetes, and hypertension
- History of hypertension, in which blood pressure CANNOT be evaluated
- Adequately controlled hypertension, in which blood pressure CAN be evaluated
- Have increased blood pressure (systolic of 140 mm Hg to 159 mm Hg or diastolic of 90 mm Hg to 99 mm Hg)
- Initiation of method in women with migraine, without aura, aged more than 35 years
- History of breast cancer with no evidence of disease in the last five years
- Diabetes with nephropathy, retinopathy, neuropathy, or other vascular diseases
- Known hyperlipidemias
- Symptomatic gall bladder disease
- History of COC-related cholestasis (for COC, patch, and ring users)
- Initiation of method in women with acute or flare viral hepatitis
- Current use of ritonavir-boosted protease inhibitors, anticonvulsant therapies
- Current use of rifampicin/rifabutin therapy (for COC, patch, and ring users)

Category 4: Do NOT use the method.

- Breastfeeding women, less than six months after childbirth
- Women who smoke more than 15 cigarettes/day, aged more than 35 years (for COC, patch, and ring users)
- Have high blood pressure (systolic of more than or equal to 160 mm Hg or diastolic of more than or equal to 100 mm Hg)
- Hypertension with vascular disease
- History or currently diagnosed with DVT/PE on anticoagulant therapy
- Major surgery with prolonged immobilization
- Known thrombogenic mutations
- Current or history of ischemic heart disease or stroke
- Complicated valvular heart disease
- Women diagnosed with systemic lupus erythematosus and with positive (or unknown) antiphospholipid antibodies
- Migraine with aura at any age
- Diagnosed with breast cancer
- Severe liver cirrhosis (for COC, patch, and ring users)
- Liver tumors such as hepatocellular adenoma or malignant hepatoma (for COC, patch, and ring users)

WHAT ARE THE IMMEDIATE AND LASTING EFFECTS OF CHC USE?

CHCs have the following effects:

- Reduces menstrual bleeding and helps prevent iron deficiency anemia, which is common and often serious in the Philippines (especially in remote areas).
- Decreases the risk of cancers of the uterine lining and the ovary. The protective effect develops after a year of use, increases with duration of use, and persists for at least 15 years after discontinuation.
- Prevents ectopic pregnancy, which can be life-threatening. This effect is caused by the action (ovulation cessation) of estrogen–progestin contraceptives.
- Regulates menstrual patterns, relieves the symptoms of acne, and reduces the risk of benign breast disease.
- Does not increase the risk of developing breast cancer.

WHAT ARE THE SIDE EFFECTS OF CHC USE?

Some women on CHCs experience the following:

- Nausea or vomiting (usually occurs during the first few cycles)
- Weight changes
- Breast tenderness
- Abdominal cramps
- Skin discoloration
- Bladder and vaginal infections

Others report the following:

- Changes in sex drive (either increased or decreased)
- Loss of scalp hair
- Intolerance to contact lenses (due to water retention)

Many of the aforementioned complaints disappear after the first few cycles of use. Menstrual cycles often become regular within three months from CHC initiation.
However, new formulas are likely to cause the following menstrual irregularities.

- Spotting
- Breakthrough bleeding (which should be reported to a doctor)
- Lack of menstrual period altogether (rare)

In some women, side effects unique to the transvaginal ring and transdermal patch are increased vaginal secretions and skin irritation, respectively. Clients should be asked to return to the clinic for any symptom.

WHAT ARE THE POTENTIAL COMPLICATIONS AND ADVERSE EFFECTS OF CHC USE?

- Only a few life-threatening complications can be attributed to CHCs, and these complications can be reduced by the proper initial screening of clients.
- The most serious side effect of CHC use is an increased risk of cardiovascular disease, specifically blood clots, heart attacks, and strokes. However, even these complications occur less frequently because of the low hormone content in CHCs and the early screening of women with high risk.
- Healthy users of low-dose CHCs have a three- to sixfold higher risk of developing venous thrombosis compared with healthy women who do not use COCs. Nevertheless, the absolute risk remains minimal.
- Research has shown that certain types of progestins (such as desogestrel and gestodene) may slightly increase the risk of venous thrombosis and other cardiovascular complications among CHC users.
- Women who use low-dose CHCs and who do not smoke, do not have high blood pressure, or do not have diabetes are not at increased risk of heart attack or stroke when compared with non-users.

IS A REFERRAL NEEDED? HOW AND WHEN?

Only a few life-threatening complications can be attributed to CHC use. These complications can be reduced by the proper initial screening of the client.

The following signs and symptoms require medical attention:

- Jaundice
- Abdominal pain (severe constant pain)
- Chest pain (severe constant pain) or shortness of breath
- Headaches (intense pain that starts or becomes worse after starting the pills)
- Eye problems (brief loss of vision, seeing flashes of light or zigzag lines)
- Severe arm or leg pain (difficulty in moving)

When these symptoms occur, clients are instructed to return to the clinic or go directly to referral facilities.

WHAT ARE THE DRUG INTERACTIONS OF CHCs?

- The effectiveness of CHCs is not affected by most broad-spectrum antibiotics.
- Some medications can reduce the effectiveness of CHCs. These medications include the following:
  - Certain antimicrobials (rifampicin)
  - Anticonvulsants, such as phenytoin (Dilantin), carbamazepine, barbiturates (Phenobarbital), primidone, topiramate, oxcarbazepine, and lamotrigine
  - Some antiretroviral drugs (ARVs)
- ARVs can increase or decrease the bioavailability of steroid hormones in CHCs. Thus, consistent condom use should be recommended to compensate for any possible reduction in contraceptive effectiveness as well as to prevent STI or HIV transmission.
- Protease inhibitors and ritonavir protease inhibitors may generally decrease the effectiveness of CHCs.

WHEN CAN A WOMAN SWITCH AND DISCONTINUE CHCs?

- The client may switch any time without finishing her current cycle of CHCs.
  - A woman who wants to prevent pregnancy but wants to stop CHCs should consider starting another contraceptive method before discontinuing CHCs.
  - A woman who wants to switch from CHCs to progestin-only contraceptives (POCs) should begin immediately after her last hormonally active day on CHC.
  - A woman switching to a certain contraceptive method may need a backup method until the effectivity of the new method. However, when a woman begins another hormonal method within five days after taking her last active pill, she does not need a backup method.

WHAT HAPPENS WHEN THE CLIENT STOPS USING CHCs?

- Fertility returns rapidly.
- Temporary spotting or bleeding may be experienced by the client.

HOW IS CHC SUPPLY MANAGED?

- Clients must be informed about where to go for resupply of contraceptives.
- Clients should be provided with enough supply of contraceptive pills to ensure the continuity of use.

IS FOLLOW-UP NEEDED? HOW AND WHEN?

- Clients should be advised to return to the clinic three months after the initial visit and then annually thereafter. Clients should be encouraged to return quarterly for resupply and for proper recording/reporting.
- Clients should return to the clinic for any problems or questions that may arise at any time.
- During the annual follow-up, a physical and pelvic examination may be performed as part of good medical practice. Cervical and breast cancer screening procedures are usually undertaken.

WHAT COUNSELING TIPS SHOULD BE PROVIDED TO THE CLIENT?

The following points must be emphasized:

- Correct use of the method, including instructions for missed pills.
- Signs and symptoms that require the attention of a health provider.
- The fact that CHCs do not protect the client against STIs, including HIV, and that use of condoms is necessary.
- Smoking increases the risk of serious circulatory disorders. Women who intend to use CHCs should be advised to quit smoking.

The absence of any bleeding or spotting during the seven-day hormone-free period may be a sign of pregnancy