

Selection of Oral Contraceptive Pills

Seine Chiang, MD

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- 1. What is the primary way that OCPs prevent pregnancy?** Progestin in OCPs prevents LH surge and thus inhibits ovulation.
- 2. What is the advantage of biphasic and triphasic OCPs, compared to their monophasic counterparts, if any?** Biphasic and triphasic OCPs have slightly lower total monthly progesterone dose, compared to their equivalent monophasic counterparts. However, there is little evidence that they have any *clinical* advantage over the monophasic pills.

3. What are contraindications for OCP use?

Thromboembolic disorders, coronary or cerebrovascular disease, uncontrolled hypertension, markedly impaired liver function or history of hepatomas, known or suspected breast cancer, markedly elevated triglycerides ($>350\text{mg/dL}$), known or suspected pregnancy, and smoking in persons older than 35 years. All smokers should be aware of the increased risk of thromboembolism with use of OCPs, and combination OCPs should not be prescribed to smokers older than 35 years, especially if a better alternative for contraception is available. In most women, the benefits outweigh the risks

The following questions represent common questions that patients will ask during your counseling on the use of OCP. How would you answer these?

4. Doesn't taking OCPs increase my risk of breast cancer? No clear evidence that OCP use for any duration of time increases a woman's risk of breast cancer. In 1996 a large meta-analysis involving more than 53,000 women concluded that OCP users did not have a clear increase breast cancer risk. OCPs may increase diagnosis and detection of existing breast cancer.

5. Are there any other benefits of taking OCPs, in addition to contraception? Yes-Prevention of endometrial/ovarian cancers, benign breast disease, follicular cysts, PID, ectopic pregnancy, and improvement in androgenic side effects (acne) and menstrual symptoms (menorrhagia, metrorrhagia, dysmenorrhea). Some studies suggest OCPs may prevent rheumatoid arthritis exacerbations and increase bone mineral density (≥ 30 mcg estrogen pills but not seen with 20 mcg estrogen pills).

6. Are 30 and 35 mcg pills more effective than 20 or 25 mcg OCPs? No – all OCPs have comparable efficacy if taken correctly by the average healthy woman. Remember, it is the progesterone in OCPs that is primarily responsible for the contraceptive effect, not the estrogen. Compliance is key!

7. What are the most common side effects that I can expect if I take OCPs? Common side effects include nausea, breast discomfort, breakthrough bleeding, and occasional amenorrhea. Most of these side effects lessen significantly after the first few months of use, except for amenorrhea which increases with prolonged use. It occurs in about 1% of those taking OCPs for 1 year and in up to 5% of patients who have been using these agents for several years. A negative pregnancy test or BBT 36.8°C (98°F) can confirm this diagnosis and reassure the patient and physician.

8. When should I start my pills and how long before it is effective? If the patient starts OCPs on the first day of menses, rather than the Sunday after menses begins, contraceptive efficacy will begin that month and she should not require back-up method.

9. I just had a miscarriage – when should I begin taking my OCPs? If the patient had a pregnancy loss prior to 12 wks gestation, she should begin OCPs immediately after loss.

10. I just had a baby two days ago, should I take OCPs and if so, when should I start?

- Nonlactating: Begin combination OCPs 3 weeks postpartum
- Lactating: Mini-pill 6 weeks postpartum and change to OCPs when the patient introduces supplemental feeding OR begin OCPs at 3 months if breastfeeding exclusively.

11. If I am 50 years old, perimenopausal and taking OCPs, when should I stop OCPs and switch to HRT? Which one has more estrogen?

The estrogen in OCPs is synthetic ethinyl estradiol and is 3-4 times greater than the estrogen dose in traditional HRT regimens (conjugated estrogen or 17 beta estradiol). For perimenopausal women, optimal time to change from OCPs to HRT may be difficult to determine. Speroff recommends checking annual FSH after age 50 on day 6 or 7 of the pill-free week. If the FSH is >30-40 mIU/mL in our lab, consider changing to HRT.

12. What should I do if I miss a pill? Use back-up protection for the next 7 days plus the following:

- a. If 1 pill is missed, take that pill immediately and the next pill at the usual time.
- b. If 2 pills are missed during the first 2 wks of the cycle, take 2 pills per day for the next 2 days and then resume the usual schedule. This should provide sufficient progesterone to prevent LH surge, even if a dominant follicle may be present.
- c. If 2 pills are missed during the 3rd week of the cycle or if miss 3 or more pills during the pack, take 1 pill per day until completion of the 3rd week, discard the placebos, and begin the next pack of pills immediately.

13. Prior to prescribing OCPs, what is the minimum evaluation that you should perform?

- d. Complete history to determine if patient has any contraindications
- b. Screening blood pressure
- c. Women under 40 with strong FHx of hypertriglyceridemia, diabetes, or CAD, or women over 40, consider obtaining lipid profile prior to instituting OCPs.

Pelvic exam and pap smear are NOT NECESSARY prior to instituting OCP use. ACOG recommends that screening pap smear should be obtained within 3 yrs of beginning sexual activity or by age 21.

However, consider urinary LCR tests for GC and Chlamydia if patient is sexually active and under age 25. Follow-up in 3 months after starting OCPs to assess compliance and address side effects.

13. Summary of General Prescribing Principles

- a. **Combination OCPs should be 1st choice of all the reversible contraceptive options because of contraceptive and noncontraceptive health benefits, unless:**
-Clear contraindication, compliance issues, intolerable side effects
- b. **All OC formulations provide equivalent contraceptive efficacy if taken correctly.**
- c. **No proven clinical advantages for triphasics when compared to monophasics.**
- d. **If patient is on an OCP previously and had done well, restart comparable pill.**
- e. **New starts: 30-35 mcg pill containing 3rd generation progestins (norgestimate, desogestrel, Drospirenone). Low androgenic side effects, good cycle control, and improved lipid profile may all contribute to compliance.**
Drospirenone
- f. **If switching due to side effects, change after 3 month trial and change to formulation with different progestin, not to lower dose of same progestin.**

References:

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3. Sherif K. Benefits and risks of oral contraceptives. Am J Obstet Gynecol 1999;180(6 Pt 2):S343-8
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Contraceptive Agents

Agent	Estrogen	Progestin	Androgenicity
Injectables / Other			
Norplant (6 capsules) q 5 yrs	N/A	Levonorgestrel 0.030 mg / day	2
Norplant II (2 capsules q 5 yrs)	N/A	Same	2
Depo Provera 150 mg / 12 wks	N/A	Medroprogesterone acetate (MPA) 150 mg	3
Lunelle Cyclofem Q 4 weeks CycloProvera	Estradiol cypionate 5 mg	MPA 25 mg	
Mesigyna q 4 wks	Estradiol valerate 5 mg	Norethisterone enanthate 50 mg	
Nuva Ring q 4 weeks	Ethinyl estradiol (EE2)	Etonogestrel	
Seasonale	30 mcg ethinyl estradiol	Levonorgestrel 0.15 mg	3
Progestin-Only Pill			
Ovrette	N/A	0.075 mg Norgestrel	2
Mircronor Nor Q.D.	N/A	0.35 mg Norethindrone	3
Plan B 1 tab q 12 hrs x 2 doses		Levonorgestrel 0.75 mg	3
High Dose OCPs			
Demulen 1/50 Zovia 1/50	50 mcg EE2	Ethinodiol 1 mg	2
Ovcon 50	“ “	Norethindrone 1 mg	2
Genora 1/50 OrthoNovum 1/50 Norinyl 1+50 Nelova 1/50, Necon 1/50	Mestranol 50 mcg	Norethindrone 1 mg	2
Ovral, Ogestrel	“ “	Norgestrel 50 mcg	3
Preven 2 tabs q 12 x 2 doses	50 mcg EE2	Levonorgestrel 0.25 mg	3
Monophasic OCPs			
Brevicon, Modicon, Nelova .5/35, Necon .5/35	35 mcg EE2	Norethindrone 0.5 mg	1
Ovcon 35	“ “	Norethindrone 0.4 mg	1
Ortho-cyclen	“ “	Norgestimate 0.25 mg	1
Demulen 1/35, Zovia 1/35	“ “	Ethinodiol 1 mg	1
OrthoNovum 1/35 Genora 1/35, Nelova 1/35, Norinyl 1+35, Necon 1/35	“ “	Norethindrone 1 mg	2
Yasmin	“ “	Drospirenone 3 mg	1
Desogen, Ortho-Cept, Apri	30 mcg EE2	Desogestrel .15 mg	1
Loestrin 1.5/30	“ “	Norethindrone acetate 1.5 mg	3
Lo/Ovral, Low-Ogestrel	“ “	Norgestrel 0.3 mg	3
Nordette, Levlen, Levora	“ “	Levonorgestrel 0.15 mg	3
Loestrin 1/20	20 mcg EE2	Norethindrone acetate 1 mg	2
Alesse, Levlite	“ “	Levonorgestrel 0.1 mg	3
Combination Biphasic			
Mircette	20 mcg “ (21 d), 10 mcg (5 d) EE2	Desogestrel .15 mg	1
OrthoNovum 10/11	35 mcg EE2	0.5 mg (10 d), 1 mg (11 d) Norethindrone	2
Jenest 28	“ “	0.5 mg (7 d), 1 mg (14 d) Norethindrone	2
Triphasic OCPs			
OrthoTri-Cyclen	35 mcg EE2	Norgestimate 0.18 / 0.215 / 0.25	1
Cyclessa	25 mcg EE2	0.1 / 0.125 / 0.15 mg desogestrel	1
Ortho-Novum 777, TriNorinyl	35 mcg EE2	Norethindrone 0.5 / 1 / 0.5	2
Triphasil, Tri-Levlen, Trivora	30/40/30 EE2	Levonorgestrel 0.05 / 0.075 / 0.125	2
Estrostep 28	20/30/35 EE2	Norethindrone 1 mg	2

Progestin Androgenic Activity

Low (1)	Moderate (2)	High (3)
<ul style="list-style-type: none"> • Norgestimate • Desogestrel • Norethindrone 0.4-0.5 mg • Drospirenone 	<ul style="list-style-type: none"> • Levonorgestrel triphasics • Norethindrone 1.0 mg • Norethindrone acetate 1.0 mg • Ethynodiol diacetate 1.0 mg 	<ul style="list-style-type: none"> • Norgestrel 0.3 mg • Norethindrone acetate 1.5-2.5 mg • Levonorgestrel 0.15 mg