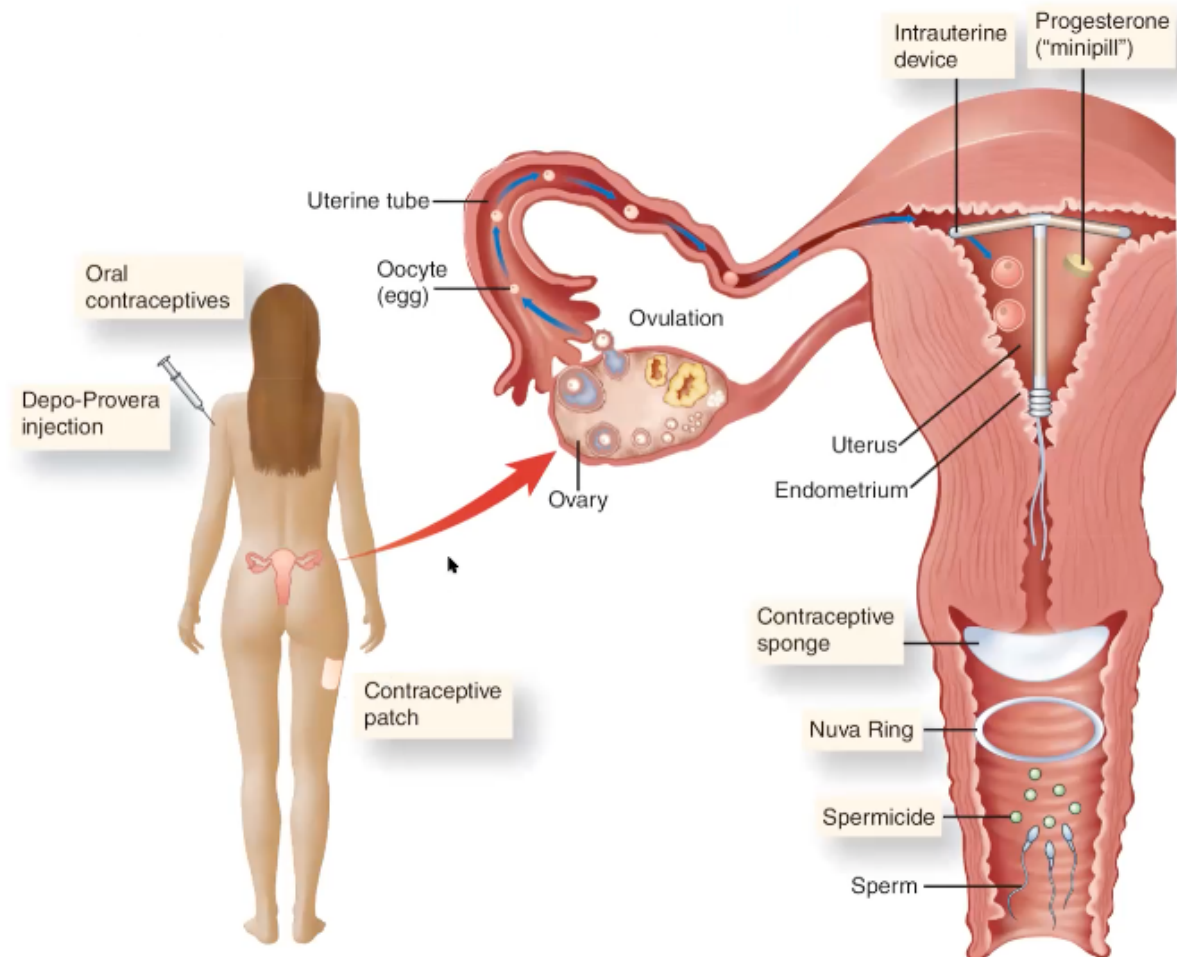


Birth Control and Hormone Therapy

Factors that influence decisions

- Effectiveness of chosen method
- Age
- Adverse effect
- Ease of use
- Ability to adhere to required regimen
- Pre-existing medical conditions
- Cultural or religious beliefs
- Sterilization can be an option if people decide they do not want anymore children



Combination of Oral contraceptives

- Actions of estrogen-progestin
 - Prevent ovulation by
 - Giving negative feedback to pituitary
 - Suppressing secretion of follicle-stimulating hormone (FSH)
 - Suppressing secretion of luteinizing hormone (LH)
 - Without secretion of LH and FSH, follicle cannot mature = ovulation prevented

Types:

- Monophasic
 - Constant dose of estrogen and progestin
- Biphasic
 - Amount of estrogen remains constant
 - Amount of progestin increased toward end of cycle
- Triphasic
 - Estrogen and progestin vary in three phases
- Four-phase
 - Estradiol valerate and dienogest
- Extended-regimen
 - Instead of inert tablets for 7 days, patients take low dose estrogen

Adverse effects

- 5% of women will develop HTN
- Breast tenderness
- Nausea
- Bloating
- Chloasma
 - Darkened pigmentation on forehead, temples, cheeks, and upper lip
- Abnormal uterine bleeding – may need a pill adjustment

Progestin-Only oral contraceptives

- Often called minipills
- Less effective at preventing ovulation
- Prevent pregnancy by causing a thick, viscous cervical mucus at the entrance to uterus
 - Discourages sperm penetration
 - Inhibit implantation of fertilized egg
 - Taken daily
 - No placebo tablets
 - Failure rate 1% to 4%
- Benefits
 - option for patients at high risk for estrogen-related adverse effects
 - Unlike estrogens, progestins not associated with increased risk of
 - Thromboembolic events
 - Breast cancer

Long Acting Reversible Injectables

- Novel delivery method
- Delivery methods
 - Transdermal patch
 - Vaginal ring
 - Depot injection
 - Depo-provera
 - Single deep IM injection provides 3 months of contraceptive protection
 - Subdermal implant

- *Nexplanon*
- Intrauterine device
 - *Mirena, kyleena, Skyla* hormonal iuds
 - Paragard, oldest product and nonhormonal. Larger, and can perforate uterus

Common Side Effects with Birth Control Pills

- Spotting between periods
- Possible weight gain
- Breast swelling or tenderness
- Nausea or upset stomach
- Mood changes

Serious Side Effects with Birth Control Pills

- Blurred vision
- Severe stomach pain
- Severe headache
- Swelling or pain in the legs
- Chest pain, heart attack, blood clots, stroke

Other warnings and side effects exist for birth control pills. It is important to review the specific [consumer information](#) for the birth control of your choice and discuss any questions or concerns with your healthcare provider. [Generic options](#) of birth control pills may be available; check with your pharmacist for cost-savings.

Tell your healthcare provider about all other medications you take, including prescription, over-the-counter, vitamin and herbal supplements. Certain medications may make your birth control less effective. Be sure you have complete [drug interaction review](#) each time you start a new medication.

Table 1: Common Birth Control Pills

Generic Name	Example Proprietary Name(s)	Description
desogestrel and ethinyl estradiol	Apri, Azurette, Bekyree, Caziant, Cesia, Cyclessa, Cyred, Desogen, Emoquette, Enskyce, Isibloom, Juleber, Kalliga, Kariva, Kimidess, Pimtrea, Reclipsen, Simliya, Velivet, Viorele, Volnea	Combination progestin and estrogen pill; some packs may be triphasic
dienogest and estradiol valerate	Natazia	Quadruphasic progestin and estrogen pill

Generic Name	Example Proprietary Name(s)	Description
<u>drospirenone and ethinyl estradiol</u>	Gianvi, Jasmiel, Lo-Zumandimine, Loryna, Nikki, Ocella, Syeda, Yasmin, Yaz, Zarah, Zumandimine	Drospirenone-containing birth control pills may be associated with a higher risk for rare but serious blood clots (DVT, PE) compared to other progestin-containing pills.
<u>drospirenone and ethinyl estradiol and levomefolate</u>	Beyaz, Safyral, Tydemy	Drospirenone-containing birth control pills may be associated with a higher risk for rare but serious blood clots (DVT, PE) than other progestin-containing pills. Contains a daily dose of folate to lower rare neural tube defect risk.
<u>ethynodiol and ethinyl estradiol</u>	Kelnor, Zovia	Monophasic combination progestin and estrogen pill.
<u>levonorgestrel and ethinyl estradiol</u>	Afirmelle, Altavera, Amethia, Amethyst, Ashlyna, Aubra, Aviane, Ayuna, Balcoltra, Camrese, Camrese, Chateal, Daysee, Delyla, Enpresse, FaLessa, Falmina, Fayosim, Introvale, Jaimiess, Jolessa, Kurvelo, Larissia, Lessina, Levonest, Levora, Lillow, LoJaimiess, LoSeasonique, Lutera, Marlissa, Myzilra, Orsythia, Portia, Quartette, Quasense, Rivelsa, Seasonique, Setlakin, Simpesse, Sronyx, Trivora-28, Vienva	Combination progestin and estrogen pill; some examples are triphasic, extended-cycle pills, or continuous-cycle pill.
<u>norethindrone</u>	Aygestin, Camila, Deblitane, Errin, Heather, Incassia, Jencycla, Jolivette, Lyza, Nor-QD, Nora-BE, Norlyda, Norlyroc, Ortho Micronor, Sharobel, Tulana	Progestin-only birth control pills (“mini-pills”); for use in breast-feeding or high risk for blood clots.

Generic Name	Example Proprietary Name(s)	Description
norethindrone and ethinyl estradiol	Alyacen, Aranelle, Balziva, Blisovi 24 FE, Brevicon, Briellyn, Cyclofem, Dasetta, Estrostep Fe, Femcon Fe, Generess Fe, Gildagia, Gildess, Junel, Kaitlib FE, Leena, Loestrin, Lo Loestrin, Lo Minastrin Fe, Microgestin, Minastrin 24 Fe, Necon, Norinyl 1+35, Nortrel, Ortho-Novum, Philith, Taytulla, Tilia Fe, Tri-Legest Fe, Wera, Wymzya Fe, Zenchent Fe	Combination progestin and estrogen pill; some are biphasic or triphasic.
norgestimate and ethinyl estradiol	Estaylla, Femynor, Mili, Mono-Linyah, Previfem, Sprintec, Tri Femynor, Tri-Estaylla, Tri-Linyah, Tri-Lo-Estaylla, Tri-Lo-Marzia, Tri-Lo-Sprintec, Tri-Lo-Mili, Tri-Lo-Sprintec, Tri-Mili, Tri-Previfem, Tri-Sprintec, Tri-VyLibra, Tri-VyLibra Lo, VyLibra	Combination progestin and estrogen pill; some options are triphasic.
norgestrel and ethinyl estradiol	Cryselle 28, Low-Ogestrel, Ogestrel-28, Low-Ogestrel, Elinest	Combination progestin and estrogen pill.

Spermicides

- Should be combined with barrier protection for maximum effectiveness

Emergency Contraception

- Treatment goal
 - Effective and immediate contraception
- Most effective when taken within 72 hours (*plan B*) or 120 hours (*Plan b one step*)
- No 100% effective
- OTC without age restriction
 - One prescription *Ulipristal*
- Serious adverse effects uncommon
- Mechanism of action
 - Prevents ovulation

Abortion

- Abortifacients
- Conducted under close supervision of a health care provider Monitor for bleeding
- Mifepristone
- Misoprostol
- Methotrexate
- Prostaglandins
 - Cause contraction of the smooth muscle
 - Induces contractions

Hormone therapy

Prostate Cancer

- Reducing levels of testosterone
 - Testosterone fuels prostate cancer
 - Block testes from producing testosterone (chemically)

Breast Cancer

- Following surgery use adjuvant (in addition) therapy
- Treatment depends on type of cells in the cancer
 - Have estrogen and progesterone receptors ER+ or PR+
 - Hormonal therapy (Anti-estrogen therapy) is very effective
 - Cuts recurrent risk in half
 - Pill form that blocks estrogen receptors or stop the production on estrogen in the body.
 - Cancer expresses HER2New
 - We need to block this protein, as it makes the breast cancer more aggressive
 - Targeted Biologic therapy
 - Use monoclonal antibody treatment IV
 - Or hormonal therapy PO