

Hormone Categories

Estrogens: *ethinyl estradiol, estradiol valerate, estetrol*

1st generation progestins: *norethindrone, norethindrone acetate, and ethynodiol diacetate*

They bind Estrogen, Progestin and Androgen receptors.

2nd generation progestins: *norgestrel, levonorgestrel*

They have higher progestin activity and bind androgen receptors

3rd generation progestins: *norgestimate and desogestrel (etonogestrel is active form)*

They bind the androgen receptor weakly and are more progestin selective.

4th generation progestins: *Drospirenone and dienogest*

They are progestins with antiadrenergic effects. Drospirenone has antimineralocorticoid effect

Hormone Side Effects

Estrogen – hypertriglyceridemia, hypertension, breast tenderness, nausea, migraine (esp. with withdrawal), headache, spotting with low dose, bloating, some mood change

Progestin – headache, mood changes, spotting (b/c of thin endometrium), breast tenderness, low libido

Androgen – hyperlipidemia, acne, hirsutism, weight gain

Definitions

Monophasic pills contain the same dose of estrogen and progestin in each of the 21 to 24 hormonally active pills.

Multiphasic pills vary the dose of either or both hormones during the active pill phase. There is no data that these preparations have any important clinical advantages. Biphasic formulations may be associated with more unscheduled bleeding compared with triphasic pills and therefore are not used

Continuous COC regimens have the patient take a combined estrogen-progestin pill every day for a year.

Extended-cycle COC preparations are similar to continuous regimens, except that seven-day intervals of placebo or low-dose estrogen administration are inserted approximately every three months