

The Pharmacology and Physiology of Steroid Oral Contraceptives

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Abstract : PIP: This review, based on 2 large-scale studies, discusses the pharmacology and physiology of oral steroid contraceptives (OCs). The pharmacological distinction between synthetic and naturally occurring steroids centers on changes in biological activity dependent on compound formulation and an individual's metabolism. OC mechanism of action is explained as the main prevention of ovulation by interference with gonadotropin-releasing hormone. Since some 52 metabolic alterations have been reported in OC users, these phenomena are dealt with in 3 categories: 1) effects on the primary target organs of the female reproductive tract (ovary, myometrium, endometrium, cervix, vagina, breasts, and hypothalamus), 2) general metabolic effects (serum proteins, carbohydrate metabolism, lipid metabolism, water and electrolyte metabolism, body weight, tryptophan metabolism, and vitamins and minerals), and 3) effects on other organ systems (liver, central nervous system, skin, genitourinary, gastrointestinal tract, eye, immune phenomena, and effect on subsequent fertility). The choice of the proper OC formulation and use of OCs by adolescents are discussed. Assessment of OC safety, contraindications, and patient monitoring are provided.

Keywords : steroid oral contraceptives, ovulation, female reproductive tract, metabolic effects

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