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Androgens and antiandrogens.

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The role of androgens in women's health has been generally neglected. Currently available assays are lacking in sensitivity and reliability at the lower ranges. Circulating androgens as prohormones for other steroids (e.g., androgens) have an ubiquitous role on diverse physiological and behavioral systems. Clinical assessment of both androgen production and androgen availability can be achieved by measurement of two or three essential values. These include either total T and sex-hormone binding globulin (SHBG), free T and SHBG, or free T and total T. The free testosterone index (total T/SHBG) correlates well with free or bioavailable T and can be used as a substitute. DHEA-S is the most useful measure of adrenal androgen production in women. Androgen insufficiency in women is not a specific consequence of natural menopause, but may occur secondarily to the age-related decline in both adrenal and ovarian androgen production. Since estrogen effects are also strongly linked to mood, psychological well-being, and sexual function in women, the diagnosis of androgen insufficiency should only be made in women who are adequately estrogenized. Before initiating a trial of androgen replacement therapy, a comprehensive clinical assessment should be performed in all cases. Approved androgen replacement therapy is not yet available in most countries for treatment of female sexual dysfunction. This would include T supplements or DHEA. Several new progestins have been synthesized in the last decade. Dienogest is a hybrid progestin that is derived from both the pregnane and the estrane groups with a 17 α -cyanomethyl radical; drospirenone is derived from spiro lactone. Somehow, the molecules available have demonstrated antiandrogenic properties. Cyproterone acetate (CPA) is the most potent antiandrogenic progestin, followed by dienogest, drospirenone, and chlormadinone acetate. Nomegestrol acetate and medrogestone also exert some antiandrogenic properties and are similar to chlormadinone acetate in antiandrogenic potency. While androgens act positively on libido in women, antiandrogenic properties in doses used in HRT do not appear to have a negative effect. Progestins used in HRT have varying pharmacological properties that are associated with different adverse effects. The new progestins with antiandrogenic properties avoid many of the androgenic side effects related to testosterone-derived progestins. They also have the potential of not counteracting beneficial estrogen effects, for example, on the cardiovascular system or mental tone.