Primary hormones (in CAPS) are made by organs by taking up cholesterol ★ and converting it locally to, for example, progesterone. Much less is made from circulating precursors like pregnenolone. For example, taking DHEA can create testosterone and estrogen, but far less than is made by the testes or ovaries, respectively.

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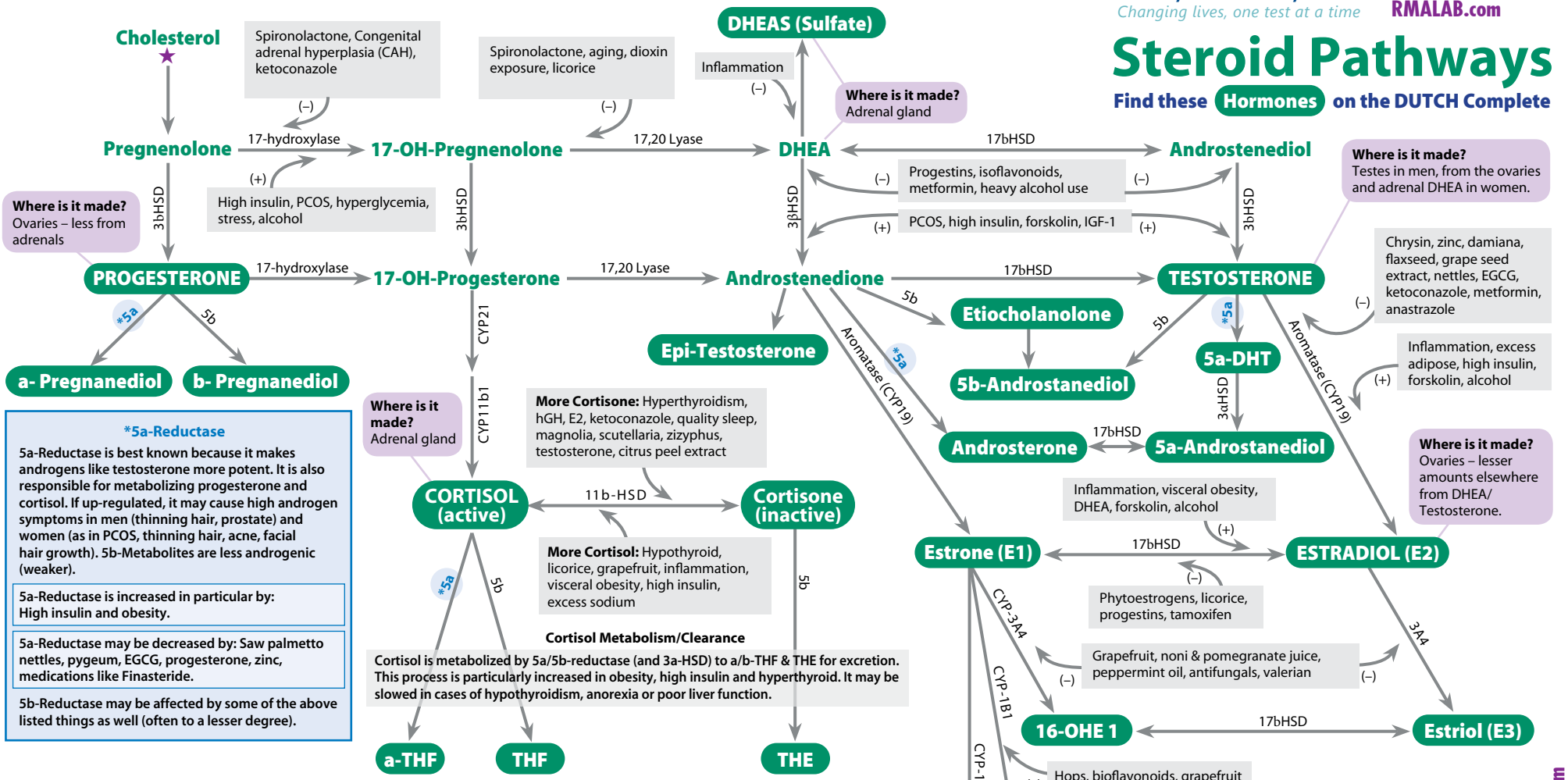
Steroid Pathways

Find these Hormones on the DUTCH Complete



*5a-Reductase

5a-Reductase is best known because it makes androgens like testosterone more potent. It is also responsible for metabolizing progesterone and cortisol. If up-regulated, it may cause high androgen symptoms in men (thinning hair, prostate) and women (as in PCOS, thinning hair, acne, facial hair growth). 5b-Metabolites are less androgenic (weaker).

5a-Reductase is increased in particular by: High insulin and obesity.

5a-Reductase may be decreased by: Saw palmetto nettles, pygeum, EGCG, progesterone, zinc, medications like Finasteride.

5b-Reductase may be affected by some of the above listed things as well (often to a lesser degree).

Cortisol Metabolism/Clearance

Cortisol is metabolized by 5a/5b-reductase (and 3a-HSD) to a/b-THF & THE for excretion. This process is particularly increased in obesity, high insulin and hyperthyroid. It may be slowed in cases of hypothyroidism, anorexia or poor liver function.

Other factors affecting the production of primary reproductive and adrenal hormones:

Increased Cortisol: stress, inflammation, Cushing's Disease, obesity
Decreased Cortisol: glucocorticoid use, opioid use, Addison's Disease, Accutane, chronic marijuana use
Increased DHEA: PCOS, acute stress, Bupropion (Wellbutrin), Alprazolam (Xanax), ADD meds
Decreased DHEA: aging, rapid weight loss, Venlafaxine/Mirtazapine, opioids, glucocorticoids, hormonal birth control, antipsychotic meds, estrogens, diabetes meds
Increased Testosterone: PCOS, HCG, HGH, L-Dopa, Climiphene Citrate (Clomid)
Decreased Testosterone: obesity, opioids, hormonal birth control, acute illness, aging, high insulin, steroid use
Increased Estrogens: PCOS, inflammation, pregnancy, DHEA/testosterone supplementation
Decreased Estrogens: hormonal birth control, ovarian failure (menopause), opioids, anorexia, underweight
Increased Progesterone: pregnancy, pregnenolone supplementation (increases urine progesterone metabolites, not actual circulating progesterone), Vitex (chaste tree berry)
Decreased Progesterone: hormonal birth control, stress, high insulin, opioids, NSAID use >10 days, anovulation, luteal phase defect, high prolactin, underweight, hypothyroid, hormonal IUD (Mirena)

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