

PROJECT REVIEW

“Impact of glucocorticosteroid administration on the steroid profile”

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The misuse of testosterone and other endogenous anabolic androgenic steroids is detected through alterations in the urinary steroid profile. The steroid profile, composed of concentrations and ratios of endogenous steroid hormones, has been implemented by WADA in the athlete's biological passport.

Metabolites included in the steroid profile have both gonadal and adrenal origin. Administration of glucocorticosteroids inhibits the hypothalamic-pituitary-adrenal axis by negative feedback, and reduces the adrenal steroid production. Due to significant adrenal origin of some of the metabolites included in the steroid profile (androsterone, etiocholanolone, 5 α -androstane-3 α ,17 β -diol, and 5 β -androstane-3 α ,17 β -diol and epitestosterone), it might be expected that reduction in the production of androgens by adrenal glands will have an effect on the urinary steroid profile, mainly in women where the relative importance of androgens generated in the adrenal cortex is greater. Due to the wide use of glucocorticosteroids in sports, its effect on the steroid profile deserves to be studied.

The aim of the project is to investigate the impact of the administration of glucocorticosteroids by systemic routes on the parameters of the steroid profile in healthy volunteers. The effect of single systemic doses (intramuscular or oral doses) of synthetic glucocorticosteroids on the different parameters of the steroid profile will be evaluated in men and women.