Influence of Acute Turkesterone Dosing on Serum Insulin-like Growth Factor 1 (IGF-1) and Subjective Digestibility Scores in Recreationally-active Males

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Category: Professional-in-Training

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ABSTRACT

Turkesterone is a relatively novel phytoecdysteroid compound that has become increasingly popular amongst recreationally active demographics. Despite prior *in vitro* data suggesting that this compound may support enhanced body composition via both insulin-like growth factor 1 (IGF-1)-mediated protein synthesis, no human evidence exists in this regard nor how well its digestibility is tolerated. **PURPOSE:** To determine the effect of multiple turkesterone doses on serum IGF-1 and to report any gastrointestinal (GI) distress symptoms in a healthy human sample. **METHODS:** Eleven recreationally active males (23.3 ± 2.2y) visited the laboratory on three occasions separated by at least seven days and were randomized in single-blind, placebo-controlled, and counter-balanced crossover fashion to either 2000mg cellulose placebo (PLA), 1000mg turkesterone + 1000mg placebo, (1000T) or 2000mg (2000T) turkesterone. Venous blood was sampled to determine serum IGF-1 concentrations and a GI distress questionnaire was (nausea, vomiting, heartburn symptoms, etc.) administered both at baseline (PRE), as well as 3-hours (POST3H) and 24-hours (POST24H) post-acute supplementation at each visit. Serum IGF-1 was analyzed using a two-way (condition [PLA, 1000T, 2000T] x time [PRE, POST3H, POST24H]) ANOVA with repeated measures at a significance level of $p<0.05$. **RESULTS:** Analyses failed to reveal any significant condition ($p=.180$; $\eta_p^2=0.228$), time ($p=0.227$; $\eta_p^2=.390$), nor interaction effects ($p=0.547$; $\eta_p^2=0.211$) for serum IGF-1. Moreover, no participants reported any GI distress symptoms across any condition and/or time permutation. **CONCLUSION:** Although the current study did not find any significant IGF-1-associated serum alterations to multiple acute turkesterone doses in the times assessed, there were fortunately no adverse GI symptoms experienced by the participants across any dose throughout the investigation. Nevertheless, these data support turkesterone supplementation is well tolerated and thus future research should build upon our analysis by employing a longitudinal supplementation regimen alongside an exercise intervention to elucidate the potential long-term and anabolism-permissive impacts of this compound on the presently-explored and additional associated parameters.