

Effects of testosterone in humans

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Gender-dependent differences in sensation seeking and social interaction are correlated with saliva testosterone titre in adolescents.

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OBJECTIVES: In the present study, we tested the hypothesis that gender – dependent differences in novelty seeking, leadership, and sympathy might correlate with testosterone titre. Since several studies report that the impact of testosterone on personality traits is more visible under emotional challenging situations, we harvested saliva testosterone upon an anticipated stressor (academic examination) and under basal conditions. **SETTING AND DESIGN:** 19 female and 23 male adolescents (17 to 19 years of age) completed standardized questionnaires on sensation seeking, anxiety, and social interaction. Two weeks later, they had to write an anticipated, rigorous examination in mathematics in their school. Before and after the examination, saliva had been harvested from each subject and testosterone titre has been estimated. **METHODS:** Saliva testosterone was quantified using a luminescence immunoassay (LIA). Each subject completed questionnaires on sensations seeking according to Zuckerman (SSS – V), anxiety (STAI), and social interactions. **RESULTS:** Both genders showed an increase in their testosterone titre shortly after examination or announcement of test scores. A Spearman correlation coefficient indicated a significant correlation between testosterone titre and sensation seeking subscales in female but not in male subjects. Analysis of social interactions revealed that peers regarded male subjects, who had high testosterone titres, as leaders but not as likeable individuals, whereas they regarded female subjects, who had high testosterone titres, not as leaders but as highly likeable individuals. **CONCLUSION:** Theses findings strongly suggest that testosterone has gender specific effects on novelty seeking, dominance, and sympathy.