

SALIVA TESTOSTERONE AND MALE DEPRESSIVE SYNDROME IN A COMMUNITY STUDY. THE SUDURNESJAMENN STUDY

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Introduction: The relationship between testosterone levels and depressive symptoms has been described as U-shaped in some previous studies.

Aims: To investigate the relationship between testosterone levels and male mental health as well as evening cortisol.

Methods: In this community study 534 males were screened, using the Beck Depression Inventory (BDI), Gotland Male Depression Scale (GMDS), Montgomery-Åsberg Depression Rating Scale (MADRS) and a general health questionnaire. Those with signs of depression (n=65) and randomly selected controls (n=69) were evaluated by a psychiatrist for Depressive Disorder (DD). In a sub-sample (n=51) saliva testosterone was measured two times on a single day.

Results: Morning values were significantly higher than evening values (236 vs. 145 pg/ml p=0.009). Evening testosterone was significantly higher in males depressive according to both MADRS (p=0.017) and BDI (p=0.031). This relationship was also present when tested for U shaped connection by dividing the group into three even parts by testosterone levels. Men with depression were significantly more likely to be in the highest third of testosterone levels (BDI p=0.021; MADRS p=0.018). There was also a significant correlation between elevated evening cortisol and evening testosterone levels (p=0.021). However, high evening cortisol and high evening testosterone were not detecting the same depressive cases according to either BDI or MADRS scales. Thus, simultaneous testing for evening cortisol and evening testosterone did not increase specificity for clinical diagnosis of DD.

Conclusion: Males with high evening testosterone seem to be more likely to have depressive symptoms but further studies are needed.