

## **Stress salivary biomarkers variation during flight exercises in pilots from the Spanish army.**

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Cortisol is a stress hormone that is secreted in saliva following a circadian rhythm, and increases in response to physical and emotional stress. In the present study, we considered performing a quantitative study of cortisol in saliva samples from 13 volunteers from the Spanish army personnel on active duty flying status. The subjects belong to one of the following categories: colonel, lieutenant colonel and captain. Saliva samples were collected prior and after flight exercises in the military plane F18. For cortisol analysis in saliva, we used a competitive ELISA assay, bounded cortisol-enzyme conjugates were measured by the reaction to the peroxidase to the substrate tetramethylbenzidine (TMB) and density is calculated based in absorbancy reading detected with a plate reader. Cortisol levels were in general higher after flight exercises when compared to samples prior to flight. These results suggest that hormone levels may be differentially affected by the stressors of routine military flight.