POSTER ABSTRACT

The Role of Circulatory Sex Hormones on Cognitive Performance

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This study evaluated the relationship between circulating hormones in humans and performance on two cognitive tasks. First, saliva samples were collected and estrogen and testosterone levels were assessed with ELISA. Hormones levels were then correlated with performance on a visio-spatial task ( Judgment of Line Orientation Task; JLOT) and a verbal task (Rey Auditory Verbal Learning Task; RAVLT). Consistent with previous results males performed better on the JLOT as compared to females whereas the reverse was true for the RAVLT. For men, performance on both tasks was related to circulating hormone levels; estrogen levels were negatively correlated with performance on JLOT and testosterone level was negatively correlated with performance on the RAVLT interference trial. For women, circulating estrogen levels were positively correlated with performance on the RAVLT interference trial. These findings support the idea that the organizational effects of hormones on cognition may be further enhanced by circulating hormones.