

The effect of noise stress on serum levels of LH, FSH and testosterone in animals

Supported by: GREEN, IAS, AIC

Background

Recent studies have shown that stress can influence the reproductive function. The purpose of this study was to determine the effects of noise stress on serum levels of LH, FSH and testosterone in male rats.

Methods

In this experimental study, 28 male Wistar rats were randomly divided into 4 groups (7 rats in each group) including control, and groups exposed to noise stress for 1, 3 and 6h/day. After 8 weeks, blood samples were obtained using the cardiac puncture method and serum levels of LH, FSH and testosterone were measured by the enzyme-linked fluorescent assay.

Results

Serum levels of LH and FSH were significantly decreased in all groups exposed to noise stress compared to the control group ($P < 0.001$). Serum level of testosterone was significantly decreased in groups exposed to noise stress for 1, 3 and 6h/day compared to the control group ($P < 0.05$, $P < 0.01$, $P < 0.001$, respectively).

Conclusion

Findings of this study show that noise stress can reduce the serum levels of LH, FSH and testosterone resulting in damage to reproductive system. Hence, preventing stress can play an important role in healthy reproductive function.