

SUMMARY

In this study, serum concentrations of testosterone, free testosterone, follicle stimulating hormone, luteinizing hormone, adrenocorticotrophic hormone, cortisol and prolactin were measured in 12 male basketball players. Measurements were made in the basal pre-exercise state and immediately after exercise. Serum total testosterone and free testosterone concentrations declined significantly ($p < 0.05$ and $p < 0.001$, respectively) following exercise. Although the concentration of follicle stimulating hormone unchanged significantly, luteinizing hormone level decreased (0.05). Serum cortisol concentrations were parallel with the rise in adrenocorticotrophic hormone. In addition, serum prolactin concentrations increased immediately after exercise ($p < 0.05$).

The present findings demonstrate that intensive continuous exercise decreased serum concentration of total testosterone, free testosterone and luteinizing hormone, but increased adrenocorticotrophic hormone, cortisol and prolactin.

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