

Ministry of Higher Education  
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# Effect of irregular of biological clock in human on some secretion of pituitary gland

A thesis

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## Summary

The present study was conducted to investigate the effects of night work (stress) on some hormonal, hematological, and biochemical parameters of workers. 90 males (60 work at night and 30 at light time) and their ages ranged between 20 years to 65 years. The subjects were classified into several groups: according to age (20-30 years, 31-40 years, 41-65 years), smoking (smokers and non smokers), and kind of work (electrical, production, mechanic).

The present study involved determination of Adrenocorticotrophic hormone, Growth, Prolactin, and Testosterone hormone.

The results showed significant decrease ( $p < 0.05$ ) in the levels of Prolactin hormone of production and mechanic groups (Night workers).

On the other hand, levels of growth, adrenocorticotrophic, and testosterone hormone showed non significant differences ( $P \geq 0.05$ ) all groups of night work in a comparison with light time workers.

Concerning hematological studies, the present study showed non significant differences ( $P \geq 0.05$ ) the levels of red blood corpuscles and total white blood cells in all groups of night work.

Levels of hemoglobin and packed cell volume recorded significant increase ( $p < 0.05$ ) in age group (20-30 years) of night workers when compared with light time workers.

As well as, values of blood platelets pointed out a significant increase ( $p < 0.05$ ) in mechanic group of night workers in a comparison with mechanic light workers.

At the same time, there was non significant ( $P \geq 0.05$ ) difference of blood platelets of other groups.

Changes of biochemical parameters, data obtained from present study, recorded a significant increase ( $p < 0.05$ ) in the level of serum cholesterol of non smokers (night work) of mechanic group in a comparison with control group (Light time group).

It had been found that the level of blood sugar showed non significant in all groups of the study.

Levels of blood uria pointed out a significant elevation ( $p < 0.05$ ) in the second and third age groups of production, smokers and non smokers of night work in a comparison with light time work. In addition values of serum creatinine recorded significant increase ( $p < 0.05$ ) in third age group, smokers, significant, and production groups of night workers when compared with workers of light time. Changes summarized above, may be attributed to stress (Insomnia) which resulted from night work, kind of work, and smoking which in turn disturbs several physiological parameters of the body.