

## Effect of Chronic Physical Stress on Immune System

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**Background:** Physical stress affects most people in some way, but prolonged exposure to physical stress can negatively affect all body systems including immune system. Chronic stress suppresses the immune system and its functions, which can lead to an increase in the susceptibility to infections and cancer.

**Objective:** Investigating the effect of chronic physical stress on some parameters of immune system.

**Patients and Methods:** This study has been carried out on 50 patients subjected to chronic physical stress, and 20 healthy persons of matched age and sex as a control group. Serum cortisol level (fasting, morning), IgG, IgM, IgA, C3 and C4 were measured, in addition to CBC and leucocyte differential count.

**Results:** There was a positive correlation between cortisol level and chronic physical stress, and a negative correlation between chronic stress and IgG and IgA levels. Results also revealed a statistical significant increase in WBCs count in the case group.

**Conclusions:** Chronic stress has a deleterious effect on immune system.

**Key words:** Chronic stress, immune system, immunoglobulins, complement.