**Original Article  
Effect of Acute sleep deprivation on blood cell count in healthy young individuals  
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**Abstract:**

**Introduction:** Various studies throughout the world have reported that sleep deprivation is associated with an increased risk of morbidity and mortality. Thus people with unusual working hours are commonly affected. Various research works have also indicated that there is a relation between the human circadian system in sleep deprivation and the immune parameters. To evaluate the variation of white blood cell (WBC) count in healthy young individuals during day shift and night shift in the same individuals.

**Materials and methods:** The study was a Hospital based cross sectional study conducted on 20 Normotensive Shift workers aged between 25- 45 years. Blood samples were collected twice from the individuals, once during their day shift and the second during their night shift.

**Results:** The results were recorded in tabular format and mean with standard deviation was used to express the result. Neutrophil count was found to vary significantly before and after sleep deprivation.

**Conclusion:** Variation in WBC counts especially granulocytes (neutrophils) is noted from the study and further studies may be done to evaluate the risk factor of sleep deprivation on diseases of the immune system as well as diabetes, obesity and hypertension.

**Keywords:** Sleep Deprivation, White blood cell count