Objective The aim of this study is to evaluate the relationship of ghrelin hormone with body mass index (BMI) in cohort of adult men and women subsequently categorized from normal weight to morbidly obese based on BMI criteria. The relationship among the total ghrelin, serum lipids and C-reactive protein (CRP) was also evaluated.

Materials and Methods Two-hundred sixty men (n=151) and women (n=109) between the ages of 20 and 59 years were recruited from Sleep Disorder Center of Medicine Faculty of Süleyman Demirel University and of Isparta Gülkent State Hospital. Fasting plasma total ghrelin, CRP, serum lipids and glucose levels were measured after overnight fasting. Results Ghrelin levels were found to be statistically significantly lower in obese subjects (P<0.001). Glucose levels were clinically higher in obese subjects but not statistically significant. Fasting plasma ghrelin was negatively correlated with BMI, cholesterol, triglyceride (TG) and CRP (r=-0.402, P<0.01; r=0.259, p=0.01; r=0.137, p=0.05; r=0.146, p=0.05), respectively. There was weak significant correlation between ghrelin and glucose (r=0.131, p=0.05). Conclusion Obese subjects have low fasting ghrelin levels that they are significantly related to glucose, CRP, Cholesterol, triglyceride and body mass index. More prospective studies are needed to establish the role of ghrelin in the pathogenesis of human obesity.