

## Abstract

High Fat Diet (HFD) is associated with the obesity and renal dysfunction. Nonetheless, the effect of HFD is not well known. HFD induce obesity and tubular injuries in contrast to the normal diet (ND). The purpose of this study was to investigate the relation between the HFD and its influence on the weight and renal functions. This study dictate that the HFD influence kidney function in contrast with standard diet (SD). Rats were grouped into five groups (4 rats/ group): baseline, three High Fat Diet groups; Exg1, Exg2, Exg3, +ve control group and -ve control group. In the end Body mass index, lipid profiles and RFTs are measured. HFD increases body mass along with the lipid profile parameters (TG, TC, HDL, VLDL, and LDL). It also raised the Creatinine and BUN level in blood. In female rats, lipid profile is better than in male rats. The results showed increased body mass (Exg1:  $122 \pm 1.45$ , Exg2:  $73 \pm 1.45$ , Exg3:  $97 \pm 0.88$  vs SD:  $50 \pm 3.17$ ) correlated with increased obesity. Results are significantly different with the p value  $< 0.001$ . In conclusion, our discovery indicates that HFD cause adiposity in kidney, which causes glomerular and tubular injuries. It caused lipid profile levels to rise (high TG, TC levels caused arteriosclerosis). High Fat Diet caused renal dysfunction by raising BUN and Creatinine.

**Keywords:** HFD/ obesity/ Renal dysfunction.