

# The effect of lycopene on serum ghrelin levels and body weight in adult female rats (Article)

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## Abstract

**Introduction:** Lycopene is a red carotenoid that is effective in controlling body weight. Ghrelin is an appetite-stimulating peptide that plays a key role in the regulation of energy balance. The purpose of this study was to investigate the effects of lycopene on ghrelin serum level in adult female rats. **Methods:** In this experimental study, 32 adult female Wistar rats were divided into 4 groups of 8 rats including monitoring, control, experiments receiving lycopene (at concentrations of 5 and 10 mg/kg). The animals were fed by gavage of lycopene. Twenty-nine days after the start of the experiment and after weighing the animals, cardiac puncture was performed and serum ghrelin level was measured. The results were statistically analyzed by ANOVA and Duncan's test at  $P \leq 0.05$ . **Results:** The concentration of lycopene 10 mg/kg significantly decreased the ghrelin hormone as well as the average body weight more than the control group ( $P \leq 0.05$ ). **Conclusion:** Lycopene reduces body weight by decreases serum ghrelin levels. © 2009-2016, JGPT.

## Author keywords

Body weight; Ghrelin; Lycopene; Rat