

## Original Paper

### Effect of oral feeding of *Allium schoenoprasum* L. on blood glucose and lipid level in diabetic Rats

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#### Abstract

**Background and Objective:** Reduction of serum glucose and lipids in diabetic patients due to medicinal plants is clinically very important. Therefore, the effect of *Allium schoenoprasum* feeding on blood glucose and lipids was investigated in male streptozotocin-diabetic Rats.

**Materials and Methods:** In this experimental study, male Wistar Rats (n=32) were divided into 4 groups, i.e. control, *Allium schoenoprasum* -treated control, diabetic, and *Allium schoenoprasum* -treated diabetic groups. The treatment groups received oral administration of plant-mixed pelleted food at a weight ratio of 6.25% one week after the study for 6 weeks. For induction of diabetes, streptozotocin was administered at a dose of 60 mg/kg (i.p.). Serum glucose and lipids levels were determined before the study and at 3rd and 6th weeks after the study.

**Results:** Serum glucose was significantly lower in *Allium schoenoprasum* -treated diabetic Rats at 3rd and 6th weeks as compared to untreated diabetics (p<0.05). In addition, serum total cholesterol did not show a significant change at 6th week in *Allium schoenoprasum* -treated diabetic Rats as compared to untreated diabetics. There was also a significant lower level of triglyceride in *Allium schoenoprasum* -treated diabetic Rats (p<0.05) and *Allium schoenoprasum* treatment caused significant improvement in HDL- and LDL- cholesterol levels in treated diabetic group as compared to untreated diabetic group (p<0.05).

**Conclusion:** This study showed that oral administration of *Allium schoenoprasum* to streptozotocin-diabetic Rats at a food weight ratio of 6.25% has a significant hypoglycemic effect, reduces serum triglyceride and LDL-cholesterol level and increases serum HDL-cholesterol.

**Keywords:** *Allium schoenoprasum*, Diabetes mellitus, Glucose, Lipid

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