

**THE EFFECTS OF HYDRO-ALCOHOLIC EXTRACT OF SAFFRON STIGMA (*CROCUS SATIVUS L.*) ON BLOOD GLUCOSE, BLOOD UREA NITROGEN AND LIPID PROFILE IN TYPE-2 DIABETES PATIENTS**

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**Introduction:** There is some evidence that saffron (*Crocus sativus L.*) potentially has roles, due to its anti-oxidant, anti-inflammatory, anti-tumour, anti-microbial and anti-diabetic properties, in disease prevention and treatment and metabolic abnormalities, e.g., hyperlipidemia [1].

**Objective:** The objective of this study was to determine the effects of a hydro-alcoholic saffron extract on blood lipids, fasting blood glucose (FBS) and urea nitrogen (BUN) levels in type-2 diabetic patients. **Methods:** This was a clinical trial of 8 weeks duration, including 54 type-2 diabetic patients randomly assigned to either a saffron (receiving 2 15mg capsules/day) or a placebo (2 capsules/day) group. The FBS, blood lipids (cholesterol, triglycerides, high-density lipoprotein (HDL) and low-density lipoprotein (LDL)), BUN, as well as potential confounders (physical activity and food intake) and blood pressure were measured at baseline and at the end of the period and compared. Data were analyzed using the SPSS-16 software.

**Results:** There were statistically significant decreases (mg/dL) in FBS ( $164.36 \pm 40.88$  to  $128.84 \pm 31.86$ ,  $p < 0.000$ ), blood triglycerides ( $146.54 \pm 41.68$  to  $127.00 \pm 36.61$ ,  $p < 0.02$ ) and BUN ( $28.84 \pm 5.59$  to  $24.47 \pm 8.10$ ,  $p < 0.01$ ) and a significant increase (mg/dL) in HDL ( $58.83 \pm 4.46$  to  $63.33 \pm 5.11$ ,  $p < 0.02$ ) in the saffron group; no significant changes were seen in the placebo group. Food intakes, physical activity, blood pressure and body weight did not change in either group. **Conclusion:** Saffron stigma extract can, through improving blood glucose and lipid control, improve the conditions in type-2 diabetes patients, as well as help in improving kidney function probably due to its antioxidant properties.

**Reference:** [1]. Hatziagapiou K, Lambrou GI. *The Protective Role of Crocus Sativus L. (Saffron) Against Ischemia- Reperfusion Injury, Hyperlipidemia and Atherosclerosis: Nature Opposing Cardiovascular Diseases. Curr Cardiol Rev. 2018;14:272-289*

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