# Effect of turmeric on glycemic status, lipid profile, hs-CRP and total antioxidant capacity in hyperlipidemic type 2 diabetes mellitus patient

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**Abstract:**

Diabetes Mellitus (DM) is the most common metabolic disorder worldwide. The increase in blood lipids and sugar in diabetic patients exacerbates the incidence of DM late-onset complications. This study examined the effect of turmeric supplementation on glycemic status, lipid profile, hs-CRP and total antioxidant capacity in hyperlipidemic type 2 diabetic patients. In this double blind, randomized clinical trial, 80 hyperlipidemic type 2 diabetic patients were divided into two groups. The intervention group received 2100 mg of turmeric powder daily for 8 weeks; while the placebo group received placebo over the trial period. Body weight, fasting plasma glucose, HbA1c, serum insulin, insulin resistance index, triglyceride (TG), total cholesterol (TC), LDL-c, HDL-c, apolipoprotein A1, apolipoprotein B, hs-CRP, and total antioxidant capacity were measured before and after intervention. Statistical analysis was carried out using paired and independent t and chi-square tests. Seventy five patients completed the study. After 8 weeks of intervention, the turmeric group showed significant decreases in body weight (P value = 0.000), BMI (P value = 0.000), TG (P value = 0.000), and LDL-c (P value = 0.009) compared with baseline. BMI, TG, and TC decreased significantly in the turmeric group compared with the placebo group (P value < 0.05). No significant changes were observed in body weight, fasting plasma glucose, HbA1c, serum insulin, insulin resistance index, HDL-c, LDL-c, apolipoprotein A1, apolipoprotein B, hs-CRP, and total antioxidant capacity between the two groups after intervention (P value < 0.05).In conclusion, turmeric powder improved some fractions of lipid profile and decreased body weight in hyperlipidemic patients with type 2 DM. It had no significant effect on glycemic status, hs-CRP, and total antioxidant capacity in these patients.

**Biography:**

Shahryar Eghtesadi received Bachelor degree in Nutrition Science and Food Chemistry 1975, from Shahid Beheshti University of Medical Sciences, Tehran; MSPH degree in Nutrition, 1977, from Tehran University of Medical Sciences, Tehran and

PhD from University of California at Davis(UCD), USA, in Nutrition (1985).

**Recent Publications:**

1. The effects of probiotics on mental health and hypothalamic-pituitary-adrenal axis: A randomized, double-blind, placebo-controlled trial in petrochemical workers. Mohammadi AA, Jazayeri S, Khosravi-Darani K, Solati Z, Mohammadpour N, Asemi Z, Adab Z, Djalali M, Tehrani-Doost M, Hosseini M, Eghtesadi S. Nutr Neurosci. 2016 Nov;19(9):387-395. doi: 10.1179/1476830515Y.0000000023. Epub 2015 Apr 16. PMID: 25879690

2. High Dose Pomegranate Extract Suppresses Neutrophil Myeloperoxidase and Induces Oxidative Stress in a Rat Model of Sepsis. Tavasoli S, Eghtesadi S, Vafa M, Moradi-Lakeh M, Sadeghipour A, Zarnani AH. Int J Vitam Nutr Res. 2019 Nov;89(5-6):271-284. doi: 10.1024/0300-9831/a000563. Epub 2019 Apr 16. PMID: 30987552

3. Effect of turmeric on glycemic status, lipid profile, hs-CRP, and total antioxidant capacity in hyperlipidemic type 2 diabetes mellitus patients. Adab Z, Eghtesadi S, Vafa MR, Heydari I, Shojaii A, Haqqani H, Arablou T, Eghtesadi M. Phytother Res. 2019 Apr;33(4):1173-1181. doi: 10.1002/ptr.6312. Epub 2019 Mar 12. PMID: 30859660



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