

## The Effect of Two Combined Herbal Supplements on Health-related Quality of Life in Type2 Diabetes Patients

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### Introduction

Increased prevalence of diabetes due to increased unhealthy eating habits, and a sedentary lifestyle increases inflammation and imbalance of glycemic status and consequently decreases the quality of life.

### Method

A randomized controlled clinical trial was performed on 50 patients with type 2 diabetes. Participants in the intervention group who received 3 capsules of 500 mg (300 mg of berberine + 200 mg of fenugreek seed powder) or a placebo daily for 12 weeks were randomly selected.

### Results

68% of each study group was female. Most dimensions of quality of life were significantly increased in the intervention group and the placebo group at the end of the study was significant in only 3 of the dimensions. The mean physical component summary score (PCS) from baseline to week 12 was significantly approximately similar in the intervention and placebo groups. In contrast, the mean changes within the group's mental component summary score (MCS) at the beginning of the study in the intervention group ( $P = 0.001$ ) were

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greater than the placebo group ( $P = 0.4$ ). While no significant relationship was observed between the two groups at the beginning and end of the intervention.

### Discussion

The current study assessed for the first time the combined effect of berberine and fenugreek seed on glycemic indices, inflammatory factors, lipid profiles health-related quality of life in T2DM patients. One of the main reasons for the difference in the results of this study and the lack of significant effect following supplementation with berberine and fenugreek on various factors, unlike the results of previous studies, was related to the dose used. We used the lower dose of these two plants with the aim of better gastrointestinal tolerance, and it seems that this dose does not have a significant effect on some biochemical factors. Diabetes obviously could affect both the health and quality of life of patients. Likewise, type 2 diabetes patients have a lower quality of life than those healthy persons. Accordingly, health-related quality of life would be assessed through several domains including physical and psychological health. In the current study, the SF-12 subscale in the intervention group significantly improved scores for general health (GH), vitality (VT), mental health (MH), physical functioning (PH), Role physical (RP), social functioning (SF), role emotional (RE), physical component summary (PCS) score and also increased the mental component summary (MCS) score. Similarly, in other clinical studies, intervention with herbal medicine, date, and synbiotics augmented the quality of life scores for some of the subscales. The finding of a recent Meta-analysis showed physiological or clinical outcomes, and westernize diet was associated with the QOL of type 2 diabetes patients. The combination of berberine and fenugreek seeds can improve the quality of life in diabetic patients by improving their metabolic status, so it can support the anti-diabetic and anti-inflammatory role of berberine and fenugreek seeds.

**Keywords:** Berberine, Fenugreek, Glycemic status, Quality of life, Type 2 diabetes

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