

## Whey Protein in Type 2 Diabetes Mellitus: A Systematic Review and Meta-Analysis

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**Abstract :** Type 2 Diabetes Mellitus is the more prevalent type, caused by a combination of insulin resistance and inadequate insulin response to hyperglycemia<sup>1</sup>. Aside from pharmacologic interventions, medical nutrition therapy is an integral part of the management of patients with Type 2 Diabetes Mellitus. Whey protein, which is one of the best protein sources, has been investigated for its applicability in improving glycemic control in patients with Type 2 Diabetes Mellitus. This systematic review and meta-analysis was conducted to measure the magnitude of the effect of whey protein on glycemic control in type 2 diabetes mellitus. The aim of this review is to evaluate the efficacy and safety of whey protein in patients with type 2 diabetes mellitus. **Methods:** A systematic electronic search for studies in the PubMed and Cochrane Collaboration database was done. Included in this review were randomized controlled trials of whey protein enrolling patients with type 2 diabetes mellitus. Three reviewers independently searched, assessed, and extracted data from the individual studies. **Results:** A systematic literature search on online databases such as Cochrane Central Registry, PubMed, and Herdin Plus was conducted in April to September 2021 to identify eligible studies. The search yielded 21 randomized controlled trials after removing duplicates. Only 5 articles were included after reviewing the full text, which met the criteria for selection. **Conclusion:** Whey protein supplementation significantly reduced fasting blood glucose. However, it did not reduce post-prandial blood glucose, HbA1c level, and weight when compared with the placebo. There has been a considerable heterogeneity across all studies, which may have contributed/confounded its effects. A larger sample size and better inclusion, and a more specific study may be included in the future reviews.

**Keywords :** whey protein, diabetes, nutrition, fasting blood sugar, postprandial glucose, HbA1c, weight reduction

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