Background: When a person has type 2-diabetes mellitus (T2DM), the body has insufficient production or impaired insulin sensitivity, resulting in increased glucose loading in the blood which can be measured by HbA1c. Today, those who have T2DM are treated with medication and dietary changes. The traditional diabetic diet usually involves energy restriction and a greater intake of fruits, vegetables, whole grains, legumes, nuts and seeds, which is also the basis of a vegan diet. A vegan diet has also shown improved blood glucose control and reduced use of medication.

Objective: The purpose of this systematic review was to examine the evidence as to whether a vegan diet may have an equivalent effect as a conventional diabetic diet for BMI and HbA1c in individuals with type 2-diabetes mellitus.

Search strategy: The literature search was conducted with the help of databases PubMed and Scopus. To exclude systematic reviews, the Cochrane database was used.

Selection criteria: Human studies, randomized controlled studies, vegan diet, conventional diabetic diet, type 2-diabetes mellitus. The selected clinical endpoints were HbA1c and BMI.

Data collection and analysis: After searching for articles with an appropriate title, 17 remained. These articles were reviewed by their abstract, resulting in twelve articles excluded. The five remaining articles were read in full text. This systematic review is consisting of three articles based on two studies, including a short-term study from Korea and a US study showing both short-term and long-term results.

Main results: In both studies, both HbA1c and BMI decreased in the intervention group, but no statistically significant difference between the groups was shown in any of the outcomes. One exception was in the short-term study from Korea where there was a significant larger reduction of HbA1c for the vegan diet intervention group.

Conclusions: There is moderate (+++) evidence that a vegan diet has an equivalent effect as a conventional diabetic diet on BMI and HbA1c.

Keywords: Type 2 diabetes mellitus, vegan diet, conventional diabetic diet, HbA1c, BMI.