

Polyphenols and flavonoids in the prevention and treatment of diabetes type 2

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ABSTRACT

The genetic basis of diabetes is associated with genes that predispose to obesity development. There are also variants of genes that change the metabolism and distribution of glucose in the body tissues. Others regulate the lipid profile or affect insulin resistance, directly or indirectly affecting the risk of developing diabetes. Polyphenols are a group of compounds that have a protective effect on

pancreatic cells. Thanks to their antioxidant activity, they protect cells against apoptosis, improve glucose metabolism and reduce hyperglycemia. The aim of the review was to discuss the mechanisms of bioactive food compounds influence on the human genome and to demonstrate their relationship between diabetes prevention and treatment.

Keywords: Diabetes, diet, food, polyphenols, flavonoids, genes, alleles

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