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## CUBN GENE POLYMORPHISMS AND SUSCEPTIBILITY TO TYPE 2 DIABETES VERSUS TYPE 1 DIABETES: A SYSTEMATIC REVIEW

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### ABSTRACT

The CUBN gene polymorphisms have been implicated in the pathogenesis of diabetes mellitus, encompassing both type 1 diabetes and type 2 diabetes. Nevertheless, the outcomes have been erratic.

We conducted a comprehensive review to examine the connections. The literature was obtained from PubMed, ISI Web of Science, EmBase, and Scopus databases. The systematic review of the relationships between CUBN gene polymorphisms and diabetes risk identified 8 studies based on the search technique and inclusion criteria. Every single study that was considered used a case-control methodology. There was no study that was not considered to be of "high" or "medium" quality. The CUBN gene polymorphism in type 2 diabetes was the subject of five investigations involving 54,0970 patients and 435,312 controls.

The CUBN gene polymorphism in type 1 diabetes was the subject of three studies including 19,660 patients and 388,374 controls. The majority of the research were conducted in European communities, with one study specifically focusing on American groups.

Finally, the investigations varied in the platform utilized for genotyping or sequencing. While the study uncovers a new connection between the CUBN gene polymorphism and type 1 diabetes, the specific mechanism by which this polymorphism increases the chance of developing diabetes requires additional exploration.

The results offer fresh perspectives on the genetic structure of albuminuria and emphasize specific genes and pathways that can be targeted to prevent kidney damage associated with type 2 diabetes.

Our findings suggest that the CUBN gene may play a significant role in the genetic vulnerability to diabetes in individuals of European and American descent. Nevertheless, the generalizability of these findings to other ethnic groups remains unknown due to the previously documented significant variations in the genetic structure of CUBN gene between European and African populations

**KEYWORDS:** . CUBN gene, diabetes mellitus, genetic polymorphism, systematic review.

### INTRODUCTION

Severe vascular complications can cause major injury and death in people with diabetes mellitus (DM), a prevalent chronic condition. The immune

system attacks and destroys the pancreatic beta cells in type 1 diabetes mellitus (T1D). Although they only account for about 5-10% of all diabetes cases

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