

## World Impact of COVID-19 on Diabetic Patients

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### ABSTRACT

People with diabetes seem to develop more severe COVID disease. According to American Diabetes Association (ADA), at this time, there is insufficient data to show if those with diabetes are more likely to become infected with COVID-19; however, those with diabetes have worse outcomes, such as higher rates of serious complications.

**Methods:** The studies published in PubMed, Web of science, and EMBASE from December 1, 2019, to March 31, 2020, to identify relevant observational study that investigated prevalence of Diabetes among COVID-19 patients or its impact on clinical outcomes were analysed using random effects or fixed effects model to estimate pooled prevalence of diabetes and risk ratio and its 95% confidence interval of diabetes on outcomes. Funnel plots were used to evaluate the publication bias and heterogeneity was evaluated by I<sup>2</sup> statistic.

**Results:** 23 eligible articles including 50 thousand COVID-19 patients in which 1600 with diabetes and 48,400 without diabetes were included. Pooled prevalence of diabetes was 10 per cent of COVID patients. Diabetes was higher in studies with patients aged more than 50 years. The risk of death was also higher in COVID patients with diabetes.

**Conclusion:** 1 in 10 COVID patients had diabetes and were associated with a high risk of several illness and death. Targeted early intervention is needed in COVID 19 patients with diabetes. The covid-19 global pandemic poses considerably health hazards, especially for patients with diabetes mellitus.

**Keywords:** Diabetes, covid-19, pooled prevalence, people, illness

