- Cardiovascular disease (CVD) is a common and serious complication of type 2 diabetes mellitus (T2DM) and is often linked to the increased morbidity and mortality associated with T2DM.

- Insulin therapy is considered the most effective method of controlling blood glucose; it has been shown to have potent anti-inflammatory effects, to influence blood coagulation and to significantly improve measures of endothelial dysfunction; however, its influence beyond glycemic control is not fully recognized. This review examined CV risk in patients with T2DM and the impact of insulin therapy on this risk.

- This review has shown that there is evidence that treatment with insulin glargine is associated with considerable improvement in the lipid profiles of people with T2DM and that intensive insulin therapy has been shown to lower mortality rates in people with diabetes following acute myocardial infarction after 1 year.

- Retrospective data also indicate that insulin reduces the risk of CVD events, regardless of whether people had comorbidities known to increase CV risk, whilst other studies have suggested a possible increased risk; however, the prospective ORIGIN trial found that treatment with insulin glargine had a neutral effect with regard to CV outcomes in people with prediabetes or early diabetes, compared with standard care.

- Further research is needed to fully determine the CV benefits of insulin therapy, and ongoing, large-scale studies of insulin therapy should provide further insights into whether or not insulin therapy can influence long-term CV outcomes.