

Major study heralds new era in treatment of type 2 diabetes

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Blood glucose monitoring. Credit: Wikipedia

A drug that lowers blood sugar levels for people with type 2 diabetes has also been revealed to significantly reduce the risk of both cardiovascular and kidney disease.

The study by The George Institute for Global Health has major implications for the treatment of type 2 [diabetes](#) which affects around 450 million people worldwide.

The findings published in the *New England Journal of Medicine* found the drug canagliflozin reduced the overall risk of [cardiovascular disease](#) by 14 per cent and reduced the risk of [heart failure](#) hospitalisation by 33 per cent. It was also shown to have a significant impact on the progression of renal disease.

Professor Bruce Neal, of The George Institute for Global Health, said the findings which were presented at the American Diabetes Association

Conference in San Diego were exciting and offered real hope to people suffering from type 2 diabetes. "Coronary heart disease is the biggest killer by far for people with type 2 diabetes. Our findings suggest that not only does canagliflozin significantly reduce the risk of heart disease, it also has many other benefits too. We found it also reduced blood pressure and led to weight loss.

"Type 2 diabetes is growing rapidly all over the world and we need drugs that not only deal with [glucose levels](#), but that also protect the many millions of people from the very real risks of stroke and heart attack."

The study is particularly important to Australian because around 65% of all cardiovascular deaths occur in people with diabetes or pre-diabetes, and diabetes is also the leading cause of end-stage kidney disease. It also reinforces the findings from a previous study which also showed a reduced risk of cardiovascular disease associated with blood sugar level lowering drugs.

Co-author Professor Vlado Perkovic, Executive Director of The George Institute Australia, said: "Both patients and physicians should be tremendously reassured by the results. What we have done is show that the earlier results were not just a one off. This really is a game changer in the treatment of type 2 diabetes. It not only reduces the risk of [heart disease](#), it also provides real protection against kidney decline which affects many people with diabetes."

Canagliflozin is known as a SGLT2 inhibitor and is a relatively new type of drug that works by blocking the body's reabsorption of sugar or glucose. This results in more glucose being released in urine and a drop in glucose levels. Most other diabetes drugs work by managing insulin levels.

Key findings

- The risk of hospitalised heart failure fell by 33 per cent.
- Patients were 40 per cent less likely to suffer serious kidney decline.
- The overall risk of cardiovascular disease fell by 14 per cent.
- The study of more than 10,000 patients in 30 countries also found the drug offered protection not just for people already suffering cardiovascular disease but for all type 2 diabetics.
- However, patients were twice as likely to suffer from amputations.

Professor Neal said: "We don't know why there was an increased risk of amputation, and further work is needed in this area. But for now we urge caution in prescribing this [drug](#) to people at increased risk of suffering amputation."

A further study on the benefits of canagliflozin related to [kidney disease](#) will be published later this year.

Provided by George Institute for Global Health

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