

Latest type 2 diabetes drug helps patients achieve blood sugar and weight targets faster

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The phase 3 SURPASS trials [published in 2021](#) established that tirzepatide lowers blood sugar and supports weight loss better than other drugs for type 2 diabetes (T2D). Now new research evaluating the time

taken to reach blood glucose targets indicates that tirzepatide also helps patients achieve their blood sugar control and weight-loss goals faster than existing diabetes drugs.

The latest analyses of the SURPASS-2 and SURPASS-3 trials, being presented at this year's European Association for the Study of Diabetes (EASD) Annual Meeting in Stockholm, Sweden (19-23 Sept), found that adults treated with various doses of injectable tirzepatide (5, 10, and 15 mg) reached blood glucose targets about four weeks sooner than those taking injectable semaglutide (1 mg), and between 4 and 12 weeks sooner than those taking a once-daily [insulin](#) (degludec; iDeg), along with diet and exercise and oral glucose-lowering medications.

"Tirzepatide is unique because it mimics two natural insulin-releasing and appetite-suppressing hormones in one injection," says lead author Dr. Adie Viljoen, a Consultant Metabolic Physician and Chemical Pathologist from the East and North Hertfordshire NHS Trust, UK. "The speed we are seeing in glucose-lowering and weight loss is beyond anything else we have available right now and it may put adults with type 2 diabetes in a better position for preventing long-term complications. But it is important to remember that these medications should be used in addition to diet and exercise."

T2D is a chronic and progressive condition in which the body does not make or use insulin normally, leading to high levels of glucose in the blood. More than 30 million Americans have T2D, but despite the availability of many medications to treat diabetes, only around half of US adults with T2D achieve target hemoglobin A1c (HbA1c; a measure of blood sugar control) of less than 7%. Higher HbA1c levels are associated with complications like heart disease, stroke, kidney disease (nephropathy), eye disease (retinopathy) and nerve disease (neuropathy).

Tirzepatide is a single molecule that belongs to a new class of diabetes drugs that mimics two hormones, glucagon-like peptide-1 (GLP-1) and glucose-dependent insulintropic polypeptide (GIP), involved in blood sugar control and appetite suppression. It was approved for the treatment of T2D by the US Food and Drug Administration in May 2022.

The SURPASS-2 and SURPASS-3 trials compared different doses of tirzepatide (5, 10, and 15 mg) with a once-weekly injectable semaglutide 1 mg (which is a single hormone, GLP-1 mimic agent) as an add-on therapy to metformin, or a long-acting insulin (iDeg), as an add-on therapy to metformin with or without a sodium-glucose cotransporter-2 inhibitor, respectively.

On average, participants treated with all doses of tirzepatide lowered their HbA1c more than those treated with semaglutide and iDeg, and a greater proportion achieved a HbA1c of less than 7% (

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