

Weight loss drug added to diet and exercise improves blood sugar control

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The new weight loss drug lorcaserin (Belviq) appears to improve blood sugar control in nondiabetic, overweight individuals, independent of the amount of weight they lose, a new study finds. The results will be presented Saturday at The Endocrine Society's 95th Annual Meeting in San Francisco.

Lorcaserin activates a [serotonin receptor](#) (5HT_{2C}) in the brain believed to decrease appetite and promote a sense of fullness, thus encouraging decreased [food consumption](#), said the study's principal investigator, Louis Aronne, MD, professor of clinical medicine at Weill Cornell Medical College, New York City.

"This analysis supports the possible role that the drug's serotonin receptor activation may play in regulating glucose [blood sugar] metabolism," Aronne said.

The U.S. [Food and Drug Administration](#) approved lorcaserin last June as an add-on treatment to diet and exercise for long-term weight management in adults who are obese ([body mass index](#), or BMI, greater than 30 kg/m²), or overweight (BMI of 27 or greater) with at least one weight-related health complication.

Aronne's study was a pooled analysis of two previously published clinical trials that together included more than 6,300 overweight or obese, nondiabetic patients. These trials compared the effects of lifestyle changes—diet and exercise—combined with either lorcaserin treatment

or a placebo ([dummy pill](#)).

The new study received funding from San Diego-based Arena Pharmaceuticals, the maker of lorcaserin, and from Eisai in Woodcliff Lake, N.J.

As a group, the 3,195 patients treated with lorcaserin tablets lost twice as much weight after one year of treatment and lifestyle changes than the 3,185 patients in the [placebo group](#) did: an average of 12.8 pounds versus 5.6 pounds, the study authors reported. However, even when lorcaserin-treated patients and placebo-treated patients lost the same amount of weight, those receiving lorcaserin had a greater average decrease (improvement) in their [hemoglobin A1c](#) level than the other group did, Aronne said. Hemoglobin A1c is a measure of long-term glycemic (blood sugar) control.

"More than just weight loss alone may explain the significant improvement in glycemic control associated with lorcaserin," Aronne said.

Fasting blood sugar levels also were better after one year in the lorcaserin group, which had an average decrease since the study started of 0.23 milligrams per deciliter (mg/dL), according to the abstract. In the placebo group, fasting blood sugar levels rose 0.60 mg/dL in the same period.

In a separate study not included in this analysis, lorcaserin also demonstrated improved blood glucose measures in patients with type 2 diabetes, Aronne said.

The two earlier studies included in the new analysis were the BLOOM (Behavioral modification and Lorcaserin for Overweight and Obesity Management) Study and BLOSSOM (Behavioral modification and

Lorcaserin Second Study for Overweight and Obesity Management). The pooled data confirmed the independent findings of BLOOM and BLOSSOM, Aronne said.

Provided by The Endocrine Society

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