

Semaglutide reduces excess body fat in people with obesity

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In adults with obesity or overweight, weekly treatment with the glucagon-like peptide 1 (GLP1) receptor agonist semaglutide leads to reduced excess body fat and increased lean body mass, according to an industry-sponsored study presented virtually at ENDO 2021, the Endocrine Society's annual meeting.

"Our findings suggest that semaglutide, through [body](#) weight loss and improvement of body composition, has the potential to reduce the risk of heart disease, diabetes and stroke in people with overweight or obesity," said lead researcher John Wilding, D.M., F.R.C.P., of the University of Liverpool.

Obesity poses many health risks. Excess fat in the abdominal area, particularly fat in and around abdominal organs, also called visceral fat, contributes to major causes of death and disability, including heart attacks, strokes, [high blood pressure](#), cancer, [fatty liver disease](#) and diabetes.

The study, called STEP 1, included 1,961 adults with a body mass index (BMI) of 27 or higher with

at least one weight-related health condition, or a BMI of 30 or higher, without diabetes. A person is classified as overweight if their BMI is 25 to 29.9, and the range for obesity is a BMI of 30 or more.

The study participants were randomly assigned to inject themselves once weekly for 68 weeks with either 2.4 milligrams of semaglutide or a placebo. Semaglutide, already approved by the U.S. Food and Drug Administration at the lower dose of 1 mg weekly as a treatment for type 2 diabetes, is a synthetic version of the naturally occurring hormone glucagon-like peptide 1 (GLP1). It acts on appetite centers in the brain and in the gut, and produces feelings of fullness.

As part of the study, the researchers used dual-energy absorptiometry (DEXA), a technique that is widely used clinically to assess body composition, to monitor the effects of therapy on total body fat and fat around the stomach area in 140 of the participants.

They found treatment with semaglutide improved body composition by reducing excess body fat, including abdominal fat, and increasing the proportion of [lean body mass](#), or the amount of weight someone carries that is not body fat. The more body weight a participant lost, the greater the improvement in body composition.

In February 2021, the researchers published findings from the STEP 1 trial in [The New England Journal of Medicine](#) showing that patients who injected semaglutide lost close to 15% of their body weight, on average, compared with 2.4% among patients receiving the placebo. More than one-third of participants receiving semaglutide lost more than 20% of their [weight](#). Many patients experienced improvements in risk factors for heart disease, blood sugar levels and quality of life.

Provided by The Endocrine Society

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