

Diabetes drug may offer 'modest' weight loss for very obese teens

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Byetta users showed small improvement, but drug is pricey and has side effects.

(HealthDay)—The drug Byetta, approved for adults with type 2 diabetes, appears to help severely obese teens lose some weight, a small study found.

Researchers assigned 26 [teens](#), ages 12 to 19, either to injections of Byetta ([exenatide](#)) or placebo injections twice daily. After three months, those who got the [drug](#) had a nearly 3 percent greater reduction in their [body mass index](#) (BMI, a measure of height versus weight) compared to those on placebo.

However, that difference remains "modest," said researcher Aaron Kelly, assistant professor of [pediatrics](#) at the University of Minnesota Medical School and Amplatz Children's Hospital.

"We are not proposing this be prescribed clinically," he said. The study was small, only lasted six months and more study is needed, he added.

According to Kelly, Byetta may only be another tool to help the 4 percent to 6 percent of U.S. children and teens who are severely obese. "It's ultimately going to take more than one medication," he said. "It's going to take combinations of medication."

The new research was published online Feb. 4 in *JAMA Pediatrics*.

While some research suggests that the levels of obesity, overall, in children and teens may be leveling off, "we think severe obesity is the fastest growing subcategory," Kelly noted. A BMI of 35 or more is considered severely obese. An example would be a teenage boy of average height who weighs 220 pounds, experts say.

Children like these may begin to face serious [health risks](#). "Severe obesity, even in children, is associated with an increased risk for [cardiovascular disease](#) and diabetes," Kelly said. Typically, [lifestyle advice](#) to exercise more and reduce [portion sizes](#) has not worked well in teens who are [severely obese](#), he added.

His team decided to look at Byetta because it has been shown to reduce body weight in adults with [type 2 diabetes](#). In adults, the drug is often used when other drugs fail to control diabetes, he said.

Byetta works by helping to reduce blood sugar levels after meals, Kelly explained. It is thought to help reduce weight, he said, by acting on receptors in the brain that control appetite and by increasing feelings of fullness after eating.

All the teens in the study got instructions for lifestyle changes aimed at losing weight. Half of the teens got the injected drug twice a day, before

breakfast and before dinner. The others were injected with what looked like an identical drug, but was in fact a placebo.

In all, 22 of the 26 children initially enrolled finished the first three months of the study. At that time, those on the drug lost about seven more pounds on average than those on placebo.

After the three months, those on the placebo had the option of taking Byetta. At the end of six months, those on the drug for the entire study had lost an average of 4 percent more, in terms of their BMI, compared to the others.

One expert agreed that the added weight loss was modest.

"As has been shown in adults, exenatide does appear to produce some weight loss," said Dr. Jeffrey Schwimmer, professor of pediatrics at the University of California, San Diego.

Schwimmer, who also wrote an editorial accompanying the study, said that "there is likely to be variability in who does and doesn't respond [to Byetta]." One challenge for researchers, as more drugs become available, he said, is to predict which teens will best respond to these medicines.

According to the study, the most common side effects were gastrointestinal, such as nausea and vomiting, but these effects resolved over time.

The study ended at six months, so Kelly doesn't know if the teens kept off the weight long-term.

While the [weight loss](#) differences were modest, Kelly said those on the drug also showed a slight, healthy decrease in systolic blood pressure (the upper number of the reading), which is important to reduce heart

risk factors.

Still, there's the drug's price to consider, as well: A month's supply costs \$350 or more, Kelly said.

He said his team plans to study other medications in the same class of drugs, and combinations of drugs, to see if they can produce better results. Recently, the Food and Drug Administration approved two new drugs for the treatment of obesity in adults, Belviq and Qsymia.

The study was funded by the University of Minnesota, the National Center for Research Resources and the National Institutes of Health. Kelly has received research funding from Amylin, which developed Byetta.

More information: To learn more about childhood obesity, visit the [U.S. Centers for Disease Control and Prevention](#).

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