

# ADHD drugs linked to later weight gain in kids

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Photo: U.S. National Institutes of Health

Study found 'rebound' effect in children who stopped using stimulants, which may increase obesity risk later.

(HealthDay)—Children diagnosed with attention-deficit/hyperactivity disorder (ADHD) tend to gain more weight than their peers as they enter their teen years, a new study finds.

The weight differences seem to be most pronounced for [kids](#) who had taken stimulant medications to control their symptoms, suggesting that there might be something about the drugs themselves that aggravate the problem, the researchers said.

"The reason we think it is more likely to be the drugs than the diagnosis is because the earlier the drugs were started and the longer the drugs

were used, the stronger the effects," said study author Dr. Brian Schwartz, an epidemiologist at the Johns Hopkins Bloomberg School of Public Health, in Baltimore.

"If you agree with the reports that stimulants may be over-prescribed, then this is another important cost of that over-treatment—kids who have dramatic changes in their growth trajectories during and after the treatment," Schwartz said.

For the study, which was published online March 17 and in the April print issue of the journal *Pediatrics*, Schwartz and his team pored over medical records kept by a large Pennsylvania HMO. Records on more than 160,000 children who were between the ages of 3 and 18 were included in the study, and some were followed for as long as 12 years.

About 8 percent of the children had received a diagnosis of ADHD. Nearly 7 percent of those kids had been prescribed stimulants to treat their symptoms.

On average, kids in the study had three annual body-mass index (BMI) measurements recorded. BMI is a measurement of body fat based on height and weight. Researchers used the BMI measures to model their projected growth over time.

They found that kids with an ADHD diagnosis who had not taken any medication to treat their symptoms started growing larger than their peers without the disorder as early as age 10.

Adding a stimulant medication changed that picture, however. Kids who took stimulants such as Ritalin and Concerta initially lagged behind their unmedicated peers on the growth charts. Children who were medicated the longest were about one to two BMI points smaller than their peers at age 10, Schwartz said.

That makes sense, Schwartz said, because stimulants often cause kids to lose their appetites, which might initially lead to weight loss and decreased growth.

But by age 15 to 18, Schwartz noted that the growth picture had changed. By their late teens, kids who had taken and then stopped using stimulants tended to be one or two BMI points larger than their peers.

For an 18-year-old who stands 5 feet 7 inches, that's a 6- to 13-pound difference—enough to tip a kid from being normal to overweight.

"As an average effect size, this is large," Schwartz said. "In contrast, in the untreated ADHD children, the effects are relatively small."

The study echoes previous research that has suggested a link between ADHD and obesity. But it doesn't prove ADHD medications by themselves cause kids to gain more weight.

Because children who were diagnosed with ADHD but left untreated also gained more weight than their [peers](#) without attention problems, it suggests that something about the disorder itself might also be to blame.

For example, the brains of people with ADHD don't process rewards the same way as others, said Dr. Tonya Froehlich, a developmental-behavioral pediatrician at Cincinnati Children's Hospital Medical Center in Ohio.

"There's a lot of reward that we get from eating—especially things that are bad for us," Froehlich said. "If you have issues regulating reward and also regulating your delay of gratification, which we see a lot with ADHD, it makes sense that would also be linked to eating the wrong things at the wrong times and gaining more weight."

Froehlich said it will be important for parents to weigh the risks and the benefits of [stimulants](#), including the possibility of rebound weight gain.

"I think many children who have rip-roaring ADHD are having so much impairment from it that even if, when they stop taking their meds, they get this BMI rebound, as a parent that risk may be worth it because they're having so many social and academic impairments," Froehlich said.

**More information:** Attention Deficit Disorder, Stimulant Use, and Childhood Body Mass Index Trajectory" *Pediatrics*, 2014.

Visit the [U.S. Centers for Disease Control and Prevention](#) to find out more about treatments for ADHD.

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