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## **Antidepressant drugs may cause aggressive, violent behavior in youth**

by Jessica Fraser

(NewsTarget) Children and adolescents prescribed the antidepressant drug Prozac may experience violent behavior, according to new research published in the journal Behavioral Neuroscience.

A team of researchers from the University of Texas at Austin, led by Kereshmeh Taravosh-Lahn, conducted an animal study in juvenile and adult golden hamsters. The researchers split the hamsters into three groups: adult hamsters receiving either high or low doses of fluoxetine (Prozac), adolescent hamsters receiving high or low doses of fluoxetine, and hamsters receiving [placebo](#). A high dose consisted of 20 mg per kilo of body weight, while a low dose was 10 mg per kilo.

After administering the drugs, the researchers placed a smaller, same-sex hamster into the cage of each experimental animal, and filmed any fights or displays of [aggressive behavior](#). The researchers found that the adolescent hamsters on a low dose of [Prozac](#) were far more aggressive than those on high doses of the drug.

The high-dose hamsters initiated 65 percent fewer attacks than the placebo group, while the low-dose hamsters initiated 40 percent more fights. Adult hamsters on both high and low doses of Prozac initiated fewer fights than the placebo group, the researchers found.

Taravosh-Lahn said the difference in aggression between the high- and low-dose hamsters could be because fluoxetine binds [serotonin](#) -- a mood-altering brain chemical -- to different receptors in the brain, depending on the dose. The researchers speculate that low doses of the drug may bind to aggression-inducing receptors, while higher doses more readily bind to aggression-inhibiting receptors. Mature animals also have fewer aggression-inducing inhibitors for the drugs to bind to, compared to adolescent animals.

"We underestimate the difference between the juvenile brain and the adult brain," said Taravosh-Lahn. "It seems there needs to be more research on the effects of [antidepressants](#) on kids."

Earlier studies have linked use of [antidepressant drugs](#) -- specifically SSRIs (selective serotonin reuptake inhibitors) -- to violent and aggressive behavior in children. A high-profile case involving Pfizer's [Zoloft](#) SSRI is that of Christopher Pittman, who at the age of 12 shot and killed his grandparents, then set their house on fire. Pittman's attorneys argued that the Zoloft he was taking at the time of the killings caused him to become violent, but a jury disagreed and sentenced him to 30 years in prison in February 2005.

In 2004, the U.S. Food and Drug Administration required that all antidepressants carry the agency's most serious "black box" warning, which cautions that the drugs can cause suicidal thoughts or abnormal behaviors in teenage users.