

Growth hormone treatment for children may exacerbate feelings of depression

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Short, otherwise healthy children who are treated with growth hormone (GH) may become taller, but they may also become more depressed and withdrawn over time, compared to children the same age and height who are not treated with GH, a new study finds. The results were presented in a poster Monday, June 23 at ICE/ENDO 2014, the joint meeting of the International Society of Endocrinology and the Endocrine Society in Chicago.

"Daily injections, frequent clinic visits and repeated discussions about height might exacerbate instead of improve psychosocial concerns in children with idiopathic short stature (ISS) who are otherwise healthy, and give them no cognitive improvements," said lead author Emily C. Walvoord, MD, associate professor of clinical pediatrics at the Indiana University School of Medicine in Indianapolis.

While the link between using GH to increase height and improved psychological adaptation is being debated, early data suggest that the subtle cognitive problems seen in adults with growth hormone deficiency (GHD) might also occur in children with GHD and might improve with treatment.

Dr. Walvoord and her colleagues evaluated the cognitive and behavioral status of children with GHD and ISS after they received either GH therapy or observation alone, and their preliminary results presented here challenge the idea that improvements in height also result in improvements in psychological functioning. Their findings also raise the

concern that GH treatment of these otherwise healthy children might even worsen their emotional symptoms.

In their study, 41 children with GHD and ISS between the ages of 6 and 16 years of age, 11 on average, took a series of tests that examined their [cognitive functioning](#), and their parents completed questionnaires that assessed their child's emotional and behavioral functioning.

The children were then assigned to either the group that was treated with [growth hormone](#) or the untreated control group, and after 9 to 12 months, the children in both groups were retested.

So far, 41 children have had initial testing and 28 have had follow up testing. Among these children, the researchers have found no differences in cognitive functioning between GHD and the ISS children from their first test to their retest.

However, compared with the untreated ISS children, whose depression and withdrawal according to their parents' questionnaire responses have lessened over that period, the depression and withdrawal symptoms in the treated GHD and ISS children have worsened.

"This novel study of the cognitive and emotional effects of GH therapy in children with GHD and ISS compared to untreated short children raises concerns that, despite improvements in height, these [children](#) may not achieve psychosocial benefits," Dr. Walvoord said.

Provided by The Endocrine Society

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