

Height, weight and BMI changes seen in children treated with peginterferon alpha for hepatitis C

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Follow-up research from the Pediatric Study of Hepatitis C (PEDS-C) trial reveals that children treated with peginterferon alpha (pegIFN α) for hepatitis C (HCV) display significant changes in height, weight, body mass index (BMI), and body composition. Results appearing in the August issue of *Hepatology*, a journal of the American Association for the Study of Liver Diseases, indicate that most growth-related side effects are reversible with cessation of therapy. However, in many children the height-for-age score had not returned to baseline two years after stopping treatment.

In the U.S. an estimated 240,000 [children](#) have the HCV antibody and up to 100,000 have chronic HCV (Jonas, 2002). "While HCV in children is typically mild, some cases do progress to cirrhosis and liver cancer," explains lead author Maureen Jonas, Director of the Center for Childhood Liver Disease and Medical Director of the Liver Transplant Program at Boston Children's Hospital in Massachusetts. "Treatment of HCV with peginterferon and ribavirin is approved for young children and offers the most benefit while liver disease is mild. However, there are concerns about the potential side effects of peginterferon therapy in children, which is the focus of our current study."

Children between the ages of 5 to 18 years with chronic HCV were recruited for the Pediatric Study of [Hepatitis C](#) (PEDS-C), a multi-center trial of the safety of pegIFN α with and without ribavirin that took

place from December 2004 through May 2006. For the present study, children were followed for an additional two years to determine if height, weight, or BMI were affected by treatment. Subjects were placed into three groups based on duration of pegIFN α therapy at 24, 48 or 72 weeks.

The study group included 107 children with a mean age of 11 years of age; 55% were male, 82% were Caucasian, and all were of normal height, weight, BMI, and [body composition](#) at baseline. While on therapy, researchers observed up to a 0.5 unit decrease in height, weight, and BMI z scores (standard deviation scores) in some participants on therapy. In the 48-week treatment group, 33% of children had a greater than 0.5 unit decrement in their height-for-age z score.

Results show that mean height-for-age z scores were slower to rebound than those for weight and BMI. The authors report that after two years following the end of treatment, mean height z scores were lower than baseline in most children who had been treated with peginterferon for 48 or 72 weeks. Physical activity and food intake among the children did not change during the study period.

"Our findings demonstrate significant effects on weight, BMI, and body composition in children treated with pegIFN α that are reversible upon cessation of treatment. A reduction in linear growth persisted even after treatment was discontinued," said Dr. Jonas. "Additional investigation of growth patterns is needed to determine long-term outcomes so that optimal timing of [treatment](#) can be determined for children with chronic HCV."

More information: "Peginterferon for Chronic Hepatitis C in Children affects Growth and Body Composition: Results from the Pediatric Study of Hepatitis C (PEDS-C) Trial." Maureen M. Jonas, William Balistreri, Regino P. Gonzalez-Peralta, Barbara Haber, Steven

Lobritto, Parvathi Mohan, Jean P. Molleston, Karen F. Murray, Michael R. Narkewicz, Philip Rosenthal, Kathleen B. Schwarz, Bruce A. Barton, John A. Shepherd, Paul D. Mitchell and Christopher Duggan.

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