

IAC: Meds Improve Growth and Body Composition

August 16, 2006 By [Tim Horn](#)

August 16, 2006 (AIDSmeds)—New data reported at the XVI International AIDS Conference (IAC) in Toronto indicates that HIV treatment dramatically improves growth and body composition in HIV-positive children. In fact, the AIDS Clinical Trials Group study concludes that HIV-positive children starting or switching HIV treatment actually have higher gains in weight, height, and lean body mass than HIV-uninfected children.

Numerous studies have demonstrated that HIV-positive children suffer from poor growth and body composition (water, fat, and muscle), which has been shown to be associated with more rapid disease progression. While the exact cause, or causes, of poor growth in these children has not been fully determined, data collected over the past ten years suggests that HIV treatment can lead to improvements in growth and body composition.

Pediatric AIDS Clinical Trials Group study 1010, reported during an IAC session on Monday by Caroline Chantry, MD, of the University of California Davis Medical Center, was conducted to evaluate changes in growth in children starting or changing HIV treatment. It was a 48-week clinical trial that enrolled HIV-positive children between one month and 13 years of age. All children were either starting treatment or switching to a protease inhibitor-based regimen for the first time.

Ninety-seven pediatric patients were enrolled. Nine percent were infants, 15% were toddlers, 34% were between three and eight years of age, and 41% were between eight and 13 years of age. The average viral load upon entering the study was approximately 50,000 and the average CD4 cell percentage (T cell percentage) – considered to be a more accurate measure of CD4 cell function in children – was 25%. Twenty-nine percent of the children were starting treatment for the first time and 24% were switching to a protease inhibitor-based regimen for the first time.

The HIV-positive children were compared to a large cohort of 6,819 HIV-negative children participating in the National Health and Nutrition Examination Survey (NHANES).

After 48 weeks of treatment, which was chosen for each patient by the study researchers, 54% of the children had viral loads below 50. There were also significant increases in weight and height, along with a significant increase in fat-free mass, a good indicator of improved body composition.

Additional analysis of the study data demonstrated that the status of the children at study entry – not the viral load and CD4 count responses to therapy, nor the HIV treatments used during the study – was the best predictor of growth and body composition improvements. Lower body composition, CD4 cell percentage, and age at study entry were predictive of the greatest increases in weight. As for height, waist circumference, body fat percentage, and body composition measurements of triceps skinfold thickness and mid-arm muscle circumference, a lower body mass at baseline was the most predictive value.

Finally, compared to the children of similar ages in the NHANES cohort, the HIV-positive children – after 48 weeks of treatment – had significantly greater body weight, height, and fat-free mass. In other words, not only does HIV treatment improve growth and body composition in HIV-positive children, it actually boosts healthy growth and body composition to above-normal levels. These data, the study authors concluded, are encouraging.