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ALARMING PREVALENCE RATES OF OVERWEIGHT AND OBESITY IN A POPULATION BASED SAMPLE OF DUTCH CHILDREN WITH DOWN SYNDROME

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Background and aims: It is know that children with Down Syndrome (DS) have high prevalence rates of overweight. Our aim is to assess the prevalence rates of overweight and obesity in Dutch children with DS, with attention to influences of concomitant disorders.

Methods: In 2009 longitudinal growth data were retrospectively collected from medical records of 25 Dutch regional specialized centers for children with DS. All Dutch children with Trisomy 21 karyotype born after 1982 were included. Healthy children with DS were defined as not having any concomitant disorder or suffering only from a mild congenital heart defect. Prevalence rates of overweight and obesity were calculated using cut-off values for body mass index as defined by the International Obesity Task Force. Differences in prevalence rates were tested by multi-level logistic regression analyses to adjust for gender and age.

Results: Growth data of 1,596 children with DS were analyzed. Compared to the general Dutch population, more healthy children with DS had overweight (25.5% vs. 13.3% of boys, and 32.0% vs. 14.9% of girls) and obesity (4.2% vs. 1.8%, and 5.1% vs. 2.2%, respectively). Prevalence rates of overweight in children with DS vary with the presence of concomitant disorders, although not statistically significant. DS children with hypothyroidism had the highest (35.1%) and DS children with celiac disease the lowest rate (7.6%).

Conclusions: Dutch children with DS have high prevalence rates of overweight and obesity during childhood and adolescence. There are indications that prevalence rates in DS vary with the presence of concomitant disorders.