

## A COMPARISON OF HEIGHT OF FIVE-YEAR OLD TWINS AND SINGLETONS



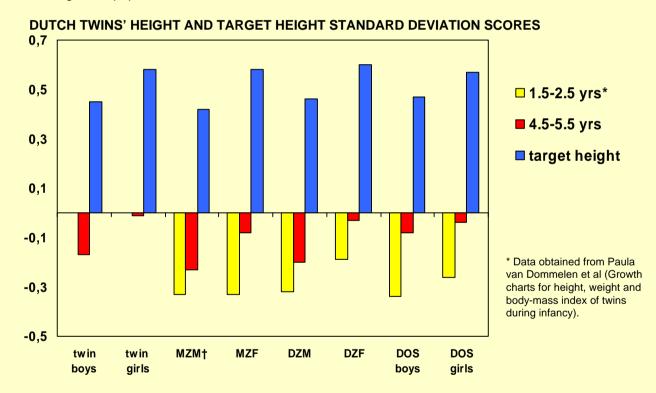
Frederiek Estourgie-van Burk<sup>1</sup>, Meike Bartels<sup>2</sup>, Toos van Beijsterveldt<sup>2</sup>, Dorret Boomsma<sup>2</sup>, and Henriette Delemarre-van de Waal<sup>1</sup>

<sup>1</sup>VU University Medical Center, Department of Pediatrics, Amsterdam, the Netherlands <sup>2</sup>VU University, Department of Biological Psychology, Amsterdam, the Netherlands

**BACKGROUND:** During the first 2.5 years of life differences in body size between Dutch twins and infants from the general population infants decrease but do not disappear despite correcting for gestational age. Some studies have shown that these differences disappear during childhood, but in other studies differences remain until at least the age of 18 years.

**OBJECTIVE**: Height in a large group of 5-year old twins pairs is studied in relation to the Dutch reference growth charts in order to investigate the persistence of twin-singleton differences.

**METHODS:** Maternal report on height of 5-year old twins and information on parental height were available for 5905 twins (2910 boys, 2995 girls) of the Netherlands Twin Register (NTR). Standard deviation scores (SDS) for height and target height were calculated using the Dutch reference growth charts for the general population from 1997.



**RESULTS:** Between 4.5 and 5.5 years of age, Dutch female twins are as tall as singletons, while male twins are significantly shorter than singletons (SDS -0.17; P<0.01). For both boys and girls the mean height SDS is 0.6 SDS below the mean target height (P<0.01).

**CONCLUSIONS:** At age 5 Dutch twin girls show a complete catch-up in height compared to singletons. Dutch twin boys catch up in body height, but are still significantly shorter at age 5. As for height, twins grow fairly well compared to singletons. However, they grow below their target height, due to the above average height of the parents (reflected in above average target height for the children) of these twins.

†MZM monozygotic, males; DZM dizygotic, males; MZF monozygotic, females; DZF dizygotic, females; DOS dizygotic, opposite sex

One-Sample T Test: all groups P < 0.05 (except twin girls, DZF and DOS girls)