

# Factors associated with post-menarcheal growth: results of a longitudinal study in Chilean girls from different socioeconomic statuses

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## Resumen

**Background:** Menarche is the last stage of pubertal development, which coincides, with the completion of longitudinal growth. Our aim was to evaluate, post-menarcheal growth and clinical variables proposed to be associated with this growth.

**Methods:** In a prospective fashion, 106 healthy girls attending five different socioeconomic status (SES) schools of Santiago were randomly recruited. A pediatric endocrinologist obtained anthropometrics and registration of date at menarche every 6 months. The evolution of the girls' heights was assessed through mixed models adjusted to the SESes, parental height and body mass index (BMI).

**Results:** Sixty-three girls from a high socioeconomic status (HSS) and 50 from a low socioeconomic status (LSS) were followed. Four years post menarche, the girls reached a growth plateau and the average height gain was 5.2 +/- 2.5 cm. This gain was not associated with SES, BMI, nor with parental height ( $p=0.744$ ). The only variable that modulated this gain was age at menarche ( $r=-0.1997$ ,  $p=0.0332$ ). There was an inverse correlation between height at the moment of menarche and the height reached after 4 years of follow-up adjusted to parental height ( $r=-0.302$ ,  $p=0.0011$ ).

**Conclusions:** Post-menarcheal growth ends 4 years post-event and is inversely correlated with the age at menarche and with the height at the moment of menarche independent of BMI, parental height and SES.

## Palabras clave

**Palabras clave de autor:** [height](#); [menarche](#); [post-menarcheal growth](#)

**KeyWords Plus:** [BODY-MASS INDEX](#); [ADULT](#)

[HEIGHT](#); [AGE](#); [ADOLESCENTS](#); [PREDICTION](#); [CHILDREN](#); [PUBERTY](#)

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