

# Change in postmenarche anthropometric indicators in indigenous and nonindigenous adolescents from Chile

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## Abstract

**Objective**To analyze the change in anthropometric indicators between menarche and 36 months after menarche among indigenous and non-indigenous adolescents from the Araucania Region of Chile.

**Method**This was a concurrent cohort study. Of 8,504 girls interviewed, 114 indigenous adolescents and 123 nonindigenous adolescents who had recently experienced menarche were selected. Body mass index (BMI), BMI by age (BMI z-score), waist circumference (WC) and body fat percentage (BF%) were evaluated at menarche and 6, 12, 18, 24, 30, and 36 months postmenarche. Linear models estimated with generalized estimating equations were used to quantify disparities adjusted for baseline anthropometric values, age at menarche, place of residence, and socioeconomic level.

**RESULTS**Indigenous girls presented menarche 4 months later than nonindigenous girls and had significantly higher BMI (1.5 kg/m<sup>2</sup>), BMI z-score (0.4), WC (2.9 cm), and BF% (1.7%) at menarche. Adjusted results did not show an association between being indigenous and postmenarche anthropometric variables: BMI=0.1 kg/m<sup>2</sup> (CI=-0.3; 0.5), BMI z-score=0 (CI=-0.1; 0.1), WC=0.7 cm (CI=-0.6; 2.0), and BF%=0.5% (CI=-0.2; 1.3). It is important to mention that the mean BMI z-score of both groups were in the overweight category.

**CONCLUSION**At menarche, indigenous girls had higher values than nonindigenous girls for all anthropometric variables, and this trend remained after menarche, with no further change in ethnic disparity over the subsequent three years. This reinforces the need to implement interventions to prevent or control excess weight prior to menarche, with emphasis on indigenous girls.

## Keywords

**KeyWords Plus:**[BODY-MASS INDEX](#); [PIMA-INDIANS](#); [MENARCHE](#); [CHILDREN](#); [SCHOOLCHILDREN](#); [PREVALENCE](#); [OBESITY](#); [AGE](#)

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