

Validation of equations to assess body composition using anthropometric data in Chilean preschool children Validación de ecuaciones antropométricas para evaluar composición corporal en niños preescolares chilenos

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Background: Validated equations to measure body composition in Chilean preschool children are lacking, since the only international equation available was developed in obese, and undernourished caucasian children. Due to the increase in overweight and obesity in Chile, it is essential to have simple and reliable instruments to assess children. **Aim:** To design and validate anthropometric equations to estimate body fat (BF) and total body water (TBW) to be applicable in children aged 3 to 5 years, using deuterated water dilution as a reference method. **Materials and Methods:** Weight, height, circumferences and skinfold thickness were evaluated in 238 children aged 3 to 5 years, attending Junta Nacional de Jardines Infantiles (JUNJI). Several equations were developed using multiple regression models to estimate body water and fat. The proposed equations were validated against a sample of 77 children previously evaluated, using Bland and Altman agreement analysis, that compares average differ