

Relationship between anthropometry and balance of postural control in children 6-9 years old [Relación entre el perfil antropométrico y el balance postural estático y dinámico en niños de 6 a 9 años]

Guzmán-Muñoz E.E.

Valdés-Badilla P.

Méndez-Rebolledo G.

Concha-Cisternas Y.F.

Castillo-Retamal M.E.

Background: balance or postural control is a complex motor skill that aims to achieve an adequate postural balance from multiple sensorimotor processes in both static and dynamic activities.

Although the relationship between anthropometric measurements and postural balance in children has not been clearly defined, it has been suggested that they could negatively influence postural control.

Objective: to determinate the relationship between the anthropometric profile and the postural and dynamic balance in children from six to nine years old. Methods: the sample included 158 schoolchildren (88 men and 70 women) who were between six and nine years old. The

variables of the anthropometric profile studied were body mass, bipedal stature, body mass index (BMI), waist circumference (WC), waist-to-hip ratio (WHR), sum skin-folds, body composition and somatotype. In addition, the static and dynamic postural balance was measured through

posturography and the Y-Balance Test, respectively. The anthropometric measurements were correlated with the results of the postural balance tests. Results: moderate positive correlations between static postural balance, mainly in closed eyes condition, and BMI, PC, sum skin-folds, fat mass and endomorphy were found. Regarding the dynamic postural balance, moderate negative

correlations were observed between the performance of the Y-Balance Test and body mass, bipedal stature, BMI, sum skin-folds, fat mass, skin mass and endomorphy. Conclusion: children with higher adiposity and/or predominance of the endomorphic component have a lower performance in static and dynamic postural balance tests. © 2019 SENPE.

Anthropometry

Children

Pediatric obesity

Postural balance

anthropometry

body composition

body equilibrium

body height

body mass

child

female

human

male

motor performance

physiology

skinfold thickness

somatotype

waist circumference

waist hip ratio

Anthropometry

Body Composition

Body Height

Body Mass Index

Child

Female

Humans

Male

Motor Skills

Postural Balance

Skinfold Thickness

Somatotypes

Waist Circumference

Waist-Hip Ratio