

Abstract

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Telomere length and obesity.

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AIM: To assess the telomere length in apparently healthy obese and normal-weight subjects.

METHODS: Seventy-six Caucasian subjects were chosen including 53 children (age 8.2+/-3.5 years) and 23 adults (age 40.5+/-8.4 years). Among these, 22 (12 children and 10 adults) were obese with a body mass index (BMI, kg/m²)>2 SD above the norm. Bioelectrical impedance analysis (BIA), measured with a multiple frequency analyzer, was used to estimate body composition. DNA extraction from white blood cells was used to estimate the telomere length by detection of terminal restriction fragments (TRF).

RESULTS: No difference was found between the TRF lengths of obese and normal children. Obese adults had shorter TRF lengths than adults who were not obese (mean TRF length difference, -884.5; 95% confidence intervals -1727 to -41.8; t=2.183; df=17; p<0.041).

CONCLUSIONS: Obese adults have shorter telomeres than their normal-weight counterparts, while this phenomenon is not present in childhood.

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