Bone Mass Evaluation in Children – Comparison Between Methods

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Peak adult bone mass should be optimized during childhood and adolescence. The physiology of bone mass accretion during these early years of life has been extensively studied, due to the development of reliable, precise, little or non-invasive methods of bone mass assessment. The purpose of this review is briefly to describe quantitative aspects of bone mass accretion during intrauterine life, childhood and adolescence and to describe the methods that have been used to assess bone mass in children in terms of precision, accuracy, ease of use, invasiveness and normative data. In particular, we review major methods such as radiographic methods, photon absorptiometry, dual-energy X-ray absorptiometry, quantitative ultrasound, quantitative computerized tomography and other methods less frequently used.