

Bone age

Bone age is a designation for the average age at which bones in a given state of ossification are found in a population. The process of ossification, the formation of ossification nuclei, the end of ossification and the disappearance of ossifying cartilages is therefore an indicator of the individual's **biological maturity**. To assess the maturity of the individual, the state of ossification of the bones, which is determined on the basis of the x-ray image, is compared with the actual calendar age of the child.

Bone age is directly related to the hormonal status of an individual with unfinished growth, therefore it is an accurate indicator of **biological age**, which describes the individual maturity of an individual. Girls are approximately two years more skeletally mature.

Bone age is most often assessed by an X-ray image of the non-dominant hand. However, it can also be evaluated using images of the knee or tarsus. The state of ossification, any emerging abnormalities and the width of the epiphyseal fissures are evaluated.

Previously, comparative atlases were used to evaluate the results, today the Greulich-Pyle (GP) and Tanner-Whitehouse (TW3) methods are most commonly used.



Ossification of wrist

Links

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- MUDR. MASÁŘIKOVÁ, Helena. *Assessment of bone age* [lecture for subject Pediatric Radiology, specialization VŠL, Faculty of Medicine MU]. Brno. cit. 25/11/2015. Available from <<http://telemedicina.med.muni.cz/pdm/detska-radiologie/res/f/hodnoceni-kostniho-veku.pdf>>.