

Child growth weekly measurement using universal coordinate measuring instruments

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Summary. Article describes an approach to measure child growth using universal coordinate measuring instruments such as height gauge or coordinate measuring arm. For this purpose, it has been built the test set-up (Fig. 1) to measure the lower leg length [1], which is the distance between the surface of the knee and the surface of the foot of the sitting child and generally, related to the measurement of two main components – the bone and soft tissue. Measurements were performed directly on the knee surface (Fig. 1a,c) and with the help of the additional plate (Fig. 1b). The use of plate resulted in the distribution of pressure on the surface to be measured.

On the basis of the obtained results, it can be concluded that the new method allows for observing even weekly increase in the lower leg length. From among the obtained results, those can be distinguished which concern the periods of a child being healthy and being sick.

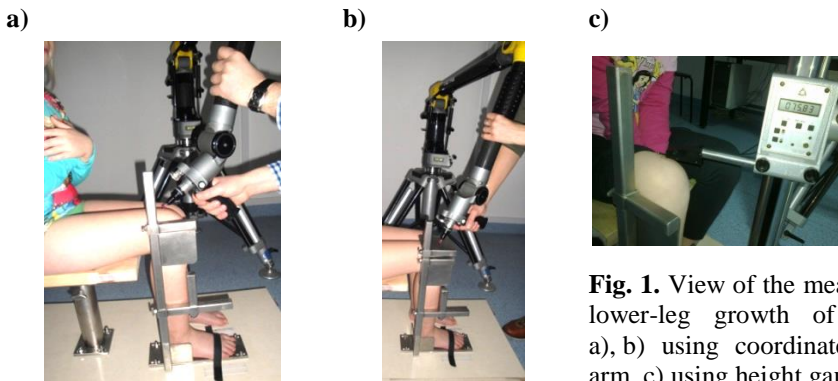


Fig. 1. View of the measurement of lower-leg growth of the child: a), b) using coordinate measuring arm, c) using height gauge

- [1] Wolthers O. D., Methodology and implications of knemometry in growth assessment of inhaled glucocorticoids, *Pediatric Allergy and Immunology* 2010, 21, e190-198.