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Standard values for the 6-minute walking distance in healthy children and adolescents from different nations – which one to rely on?

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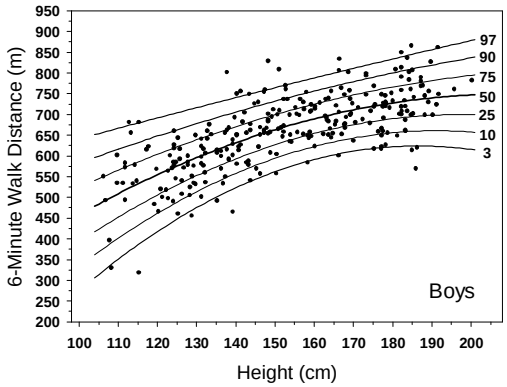
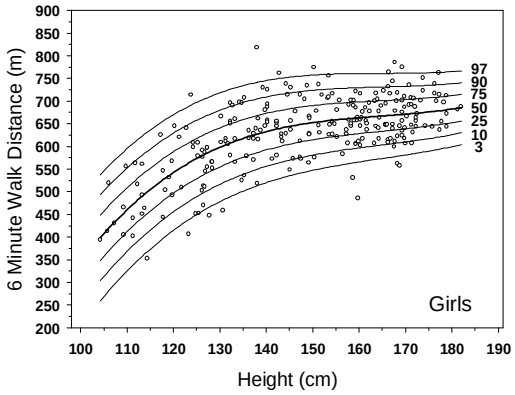
Introduction:
The 6-minute walk test (6-MWT) represents the most practicable and reliable test method to evaluate functional capacity on a submaximum level.
Recently reference values for the 6-minute walking distance (6-MWD) for healthy children and adolescents from four different countries have been published.
Which one is better suited, given the methodological differences and different results?
Methods:
Comparism of the results from 4 published studies on reference values for the 6-MWD in children and adolescents (two european, one chinese and one american), and interpretation of potentially confounding factors.
Results:
6-MWD of 3 study groups (austrian, american and chinese children and adolescents) correlated quite well despite different, albeit standardized, methodological approaches. Values published by the British study group were substantially lower than those of the other groups. Potentially confounding factors are age, height, ethnicity of the studied population. Because of these imponderables we propose sample–based centile curves for boys and girls for the standard values of the 6-MWD in children and adolescents of caucasian origin. Height was used for the construction of our standard reference curves because of its most discriminative properties of all anthropometric factors.





Conclusions:
Results of the 6-MWT in children differ between different populations. Growth and methodological issues have to be taken in account when conducting comparable studies.