

Geschlechtsspezifische Entwicklung der Anatomie und Gangdynamik im Kindes- und Jugendalter.

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Differences between boys and girls in anatomic structural features and dynamic movement patterns increase during childhood. We studied anatomic structural properties and dynamic characteristics in a cross-sectional sample of 27 girls and 27 boys ranging from 4 to 16 years of age. The subjects walked and were filmed to create digitized 3-D-point-light models. Linear discriminant functions based on dynamic information classified gender and age of individual walkers above chance level, the accuracy increasing with age. In addition, discriminant functions based on anatomic structural information could identify gender only within separated age-groups. Correlative interactions between age-specific anatomic body structure and dynamic aspects appear to differ for both genders during different developmental phases. These results have implications for anthropometric norms and the development of movement patterns.