

## Changes in Bilateral Coordination in Males and Females 8-21 Years With Intellectual Disabilities

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In typically developing youth (TDY) there is a clear developmental acquisition of bilateral coordination proficiency (BLC; i.e., synchronized arm and leg movements) from ages 4 to 21 yrs. That is, BLC capacities reach 88% proficiency by age 10, then gradually increase to full capacity by age 21. The purpose of this study was to determine if this trend is true for male and female youth with intellectual disability (ID). The Bruininks-Oseretsky Test of Motor Proficiency (BOT-2) is widely used for evaluating motor proficiency in children and adolescents. Participants (135 males, 85 females) with ID were divided into five age groups: 8-10 yrs; 11-12 yrs; 13-14 yrs; 15-16 yrs; and 17-21 yrs. Six test items for BLC from the BOT-2 were used to measure BLC capacities: BLC-1, touching nose with fingers, eyes closed; BLC-2, jumping jacks; BLC-3 and BLC-4, jumping in place, same sides and opposite sides synchronized, respectively; BLC-6 and BLC-7, tapping feet and fingers, same sides and opposite sides synchronized, respectively. To normalize subtest items scores for comparative purposes, all raw scores (jumps, touches, and taps) were converted to percent of test score ceiling (% of expected score). For males, the younger groups (8-10 yrs, 11-12 yrs) scored significantly lower than the three older groups. Similar results were seen for females. For both sexes, mean scores for each age group ranged from 15-35% below that expected for TDY. Results indicate that although %Ceiling scores were lower than TDY, youth with ID display a similar developmental acquisition of motor proficiency.