

ORTHOTIC SUCCESS STORIES: FOUR CASES IN A SERIES

Sawyer

Case Study Two

Sawyer was prescribed SMOs (supramalleolar orthoses) at age 18 months, when he was demonstrating pronation, hypotonia, and ligamentous laxity. He was pulling to stand and cruising but not yet standing independently. In addition to the SMOs, he received physical therapy once a week for the duration of the study.

On the day he received his SMOs, Sawyer was cruising and taking some steps with both hands held for assistance. Relative to a typical child, his developmental delay was eight months. Four months later, he was walking with a medium guard and narrow base of support. He had mastered eight to nine months of gross motor skills in four months, putting him about three to four months behind his peers. His gross motor skills rate of change (months/skills) after receiving his SMOs was .28 compared to .51 for a typical child of the same age.

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BACKGROUND: Each child in this case series was assessed every other week for 16 weeks (12 weeks for one patient who moved out of state) to determine mastery of items 23, 26-28, 30-39, 41, 42, and 45 (ranging from “pull to stand” to “run”) on the Peabody Developmental Motor Scale. Test instructions were modified as needed for children to understand them. Parents were included in each session and encouraged to play with the child in order to demonstrate the targeted skills. Graphs illustrate age of mastery for each item number for the hypotonic child compared to a “typical” child, with linear trend lines illustrating rate of change, and demonstrate the improved mastery of skills after prescription of SMOs.

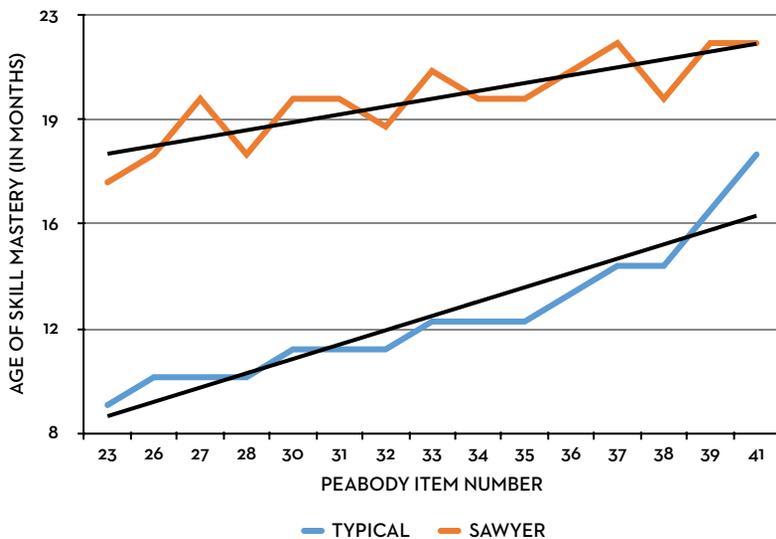
Day One - Barefoot



Day One - SMOs



Gross Motor Skill Mastery Over Time



PEABODY ITEM DEFINITIONS

- 23 Pull to stand with support
- 26 Cruising: 4 steps
- 27 Lowering to sitting without falling
- 28 Takes 4 steps with trunk held
- 30 Standing: Child will let go of table and stand for 5 seconds
- 31 Standing: Away from table, child will stand for 3 seconds
- 32 Stepping: 4 steps with one hand held
- 33 Standing up from ground without turning more than 20°
- 34 Walking 8 feet with one hand held
- 35 Walking 5 steps with no hands held (independent)
- 36 Standing, picks up toy from ground, stands up and takes 3 steps
- 37 Creeps up 2 steps
- 38 Walks 10 feet with narrow base of support, has heel-toe gait for half the distance
- 39 Creeps down 3 steps backward, without support
- 41 Walking fast
- 42 Walking backward
- 45 Running

Source: Folio MK, Fewell R. Peabody developmental motor scales and activity cards. Chicago: Riverside Publishing; 1983.