

ORTHOTIC SUCCESS STORIES: FOUR CASES IN A SERIES



Kate

Case Study Four

Kate was prescribed SMOs (supramalleolar orthoses) at age 18 months, when she was demonstrating pronation and hypotonia. She was pulling to stand, cruising, and taking some steps with trunk support, but not yet standing independently.

On the day she received her SMOs, her developmental delay was eight months compared to a typical child. Immediately after receiving

her SMOs, she started to stand independently and take steps with just one hand held. Three months later, she was walking with a low guard and narrow base of support. She had mastered eight months of gross motor skills in three months, ultimately putting her three months behind her peers. Her gross motor skills rate of change (months/skills) was .25 compared to .51 for a typical child of the same age.

BY MEGAN SMITH, CO

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.

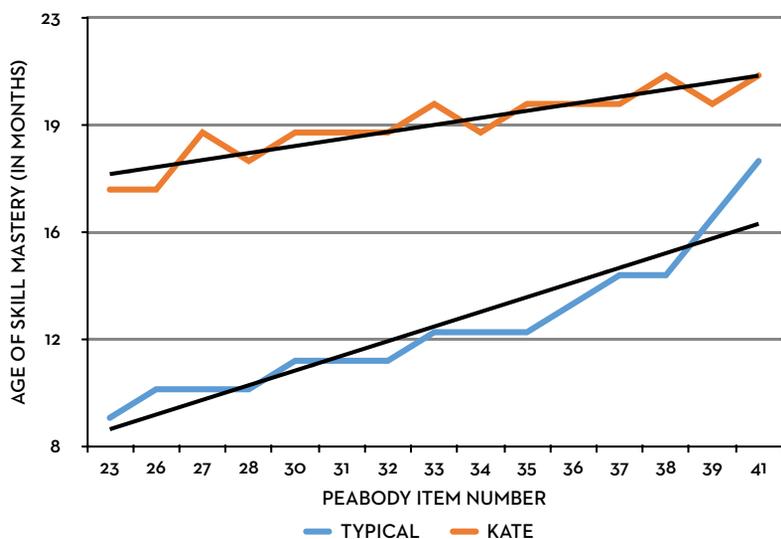
Day One - Barefoot



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.