



No 3.

Case Study

Amanda Rohlkohl, SPT 2018

Purpose:

The purpose of this case study was to investigate changes in gross motor function using the GMFM-88 in a child with Down syndrome after a 3-week intensive program of 3 hours, day for 5 days per week with the NeuroSuit.

Intervention:

A 3 year, 7-month-old male with Down syndrome participated in a combination of physical and occupational therapy services for a total of 3 hours per day, 5 days per week, for 3 weeks. His individualized treatment plan included physical and occupational therapy with use of modalities and techniques including NeuroSuit and Dynamic Movement Intervention exercises.

Findings:

The subject demonstrated taking 4 steps independently during the 3-week period, however, was unable to demonstrate on the final evaluation but showed improvement in walking with one handheld assist. Per therapist report, the subject demonstrated a weekly increase in ability to stand independently, starting with 2-3 seconds during the second week, 7-10 seconds during the third week, and 27 seconds on his last day. The patient made significant improvements in his strength, balance, posture, and endurance, as evidenced by a 12.4% increase in his GMFM-88 score from 48.39% to 60.79%.

Implications:

For children in the same age range and same GMFM level (level 2), the mean total score was 61.2% with a standard deviation (SD) of 14.9. Therefore, our subject fell within 1 SD of the mean before the interventions. The mean change after 6-months of traditional therapy is a value of 5.31% with a SD of 6.06. The subject's change in their total score was 12.4%. Therefore, the subject was 2 SD above the mean after 3-week of intensive therapy.