

Client: Alex

PT/OT/Supplier: Becky Breaux, MS, OTR/L, ATP

Location: Bayfield, CO

Alex is a young woman with the diagnosis of cerebral palsy. She lives with her parents and has been seen at the Assistive Technology Clinic at Center for Inclusive Design and Engineering in Denver with Becky Breaux, MS, OTR/L, ATP.



Large and Forceful Movements

Alex exhibits very strong extensor tone, as well as large, forceful movements. These strong forces had led to repeated equipment breakage in the past. Her strong forces have broken the wheelchair back canes and footrest hangers, and repeatedly loosened screws on the frame. As a result, Dynamic Seating was recommended.

Movement

Alex seeks out movement, primarily by rocking at her hips and extending her legs. She rocks so forcefully, that the front casters leave the ground. Many clients rock to provide sensory input, specifically vestibular input. Movement very often decreases agitation and increases alertness or arousal levels.

Dynamic Seating

Alex received her Seating Dynamics Dynamic Rocker Back interface (DRBi) several years ago on her Freedom Designs P.R.O. CG wheelchair. She recently received Dynamic Footrests, along with shoe holders to keep her feet on the footplates so that her knee extension would activate this dynamic component.

Dynamic Back

Alex requires a Dynamic Back as she tends to rock a great deal of her day with strong and forceful movement (she needs the elastomers changed about every 3 months due to the degree of force she is exerting).

Dynamic Footrests

Alex requires Dynamic Footrests as she has large, repetitive, and forceful movements in her lower extremities. She often sits with her legs crossed, in an effort to find stability. Her team was concerned that this position could lead to loss of range and pressure issues. Dynamic Footrests require her feet to be secured to the footplates (so that her force will activate this component) yet allow movement of the legs. This movement is in a controlled arc, reducing wear and tear on the footrest



Quick Notes

Challenges:

- ✓ Rocking and Banging
- ✓ Wear and Tear on equipment
- ✓ Tipping Risk
- ✓ Sensory Seeking

Areas affected:

- ✓ Back
- ✓ Feet

Equipment Used:

- ✓ [Dynamic Rocker Back](#)
- ✓ [Dynamic Footrests](#)

hangers, reducing injury to the lower extremities (from colliding against the frame), and providing stability and weightbearing at her feet.

Results



Alex has done quite well using Dynamic Seating. She no longer damages the equipment or injures herself. She is less agitated and more alert when using Dynamic Seating, allowing her to tolerate sitting for longer periods of time. Her parents are very happy with this intervention, as well. Her Dad, Luke, stated that their main goal was to have a wheelchair that was dependable and did not need to be constantly tightened and maintained. He used to tighten the bolts on her wheelchair every few weeks. He also stated that after receiving Dynamic Seating, it was nice to see her get better movement and be more comfortable.

To view videos of Alex in motion, click below.

[Wear and Tear indicate need for Dynamic Footrests](#)

[Alex Rocking Wheelchair with Force: a side by side comparison](#)

[Alex's strong movements are rocking the entire wheelchair posteriorly](#)

[A Dad's Perspective of Dynamic Seating for his Daughter](#)

[Knee Extension and Sustained Forces indicate need for Dynamic Footrests](#)

[Large and Forceful Leg Movements indicate need for Dynamic Footrests](#)

Becky Breaux, MS, OTR/L, ATP
Denver, CO

“Dynamic Seating can be life-changing!”

About the Author

Michelle Lange is an occupational therapist with over 38 years of experience and has been in private practice, Access to Independence, for over 19 years. She is a well-respected lecturer, both nationally and internationally, and has authored numerous texts, chapters, and articles. She is the co-editor of *Seating and Wheeled Mobility*: a clinical resource guide. Michelle is a RESNA Fellow and member of the Clinician Task Force. Michelle is a RESNA certified ATP and SMS.
