

Client: Jozie

PT/OT/Supplier: Michelle L. Lange, OTR/L, ATP/SMS

Location: Denver, CO

Meet Jozie

Jozie is a 3 1/2 year old girl with the diagnosis of epilepsy and West Syndrome (also known as infantile spasms syndrome). She underwent a corpus callosotomy at age 10 months to better control her seizures. She has developmental delays and is non-ambulatory and non-verbal. She also has cerebral visual impairment (CVI). When she was first seen at age 2, she was using a standard stroller and highchair, and also a stationary stander and adaptive bath seat. She was unable to sit upright in the standard stroller due to a lack of postural support.



Evaluation

On the mat examination, it became clear that Jozie wanted, and needed, to rock from her hips. This movement appeared to calm her and increase alertness. The family was also interested in an Activity Chair and so Jozie was placed in our clinic's Rifton Activity Chair. This includes a dynamic back (called a 'back spring') which Jozie quickly discovered and took full advantage of!

Recommendations

We recommended a Ki Mobility ARC manual tilt in space wheelchair and seating system, including a Dynamic Rocker Back interface (DRBi). We also recommended the Activity Chair with dynamic back.

Changing Resistance Level

Jozie was seen after receiving the recommended equipment. The DRBi was installed with the default elastomers, which are Clear and provide a Medium level of resistance. She could barely compress these elastomers, which didn't allow the rocking she sought (see video [here](#)).

The elastomers were changed to a Soft (Yellow) level of resistance. She was able to more readily rock with these elastomers in place (see video [here](#)). Further compression of the elastomers created more energy absorption and helped her to return to a starting position. Sometimes clients who do not exert a great deal of force, yet who seek out movement through rocking, require a lower level of resistance so that the Dynamic Back responds more readily.



Jozie in her new wheelchair and seating system

Quick Notes

Challenges:

- ✓ Rocking
- ✓ Agitation
- ✓ Decreased Alertness

Areas affected:

- ✓ Back

Equipment Used:

- ✓ [Dynamic Rocker Back](#)
- ✓ [Ki Mobility ARC](#)

Maintaining Posture through Movement

Even though her movements do not have significant force, she tends to 'push' or leverage off of the back of the seating system into a posterior pelvic tilt. The movement of the Dynamic Back keeps her pelvis in a neutral position, despite her frequent movement.

Jozie did not require Dynamic Footrests as she does not tend to extend her legs. Dynamic Head Support Hardware was not indicated as she does not extend at the neck. Her movement was confined to a rocking motion at the hips which was best addressed with a Dynamic Back.

Elastomer Wear and Tear



Although Jozie does not move with a great deal of force, she does move a lot! As a result, she wore out the elastomers in about 8 months. The back was "sagging" into a more open seat to back angle and her parents noticed it was getting harder to lock-out / latch the Dynamic Back. Replacing the elastomers restored the correct seat to back angle, eased latching the Dynamic Back, and made the back more responsive to Jozie's movements.

Worn elastomer (Left) is discolored, shorter, and wider than the new one on the right

Results

Jozie tolerates her wheelchair and seating system for several hours at a time. She is alert and calm most of the time and continues to seek out movement, particularly this rocking movement. Her pelvis remains in position relative to the seating support surfaces and she is starting to use a speech generating device for communication!

Michelle L. Lange, OTR/L, ATP/SMS
Jozie's seating and wheeled mobility evaluator
Denver, CO

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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. She is the former NRRTS Continuing Education Curriculum Coordinator and Clinical Editor of NRRTS Directions magazine. Michelle is a RESNA Fellow and member of the Clinician Task Force. Michelle is a RESNA certified ATP and SMS.