

Improving Erin's sleeping position with the Sleepform System

Introduction

Erin's ability to assume a comfortable aligned sleeping position is severely compromised by musculo-skeletal deformities of her trunk and lower limbs. Throughout the day Erin uses a manual chair to self-propel around school and home and uses a powerchair for outdoor mobility. Erin has knee blocks in both to control the level of external hip rotation. She is independently mobile at floor level and can transfer chair to chair.



Clinical Assessment

- Erin has an external hip rotation on the left side.
- She also has a knee flexion contracture on the left.
- Erin's preferred sitting posture is asymmetrical and destructive.

Approach

It is essential to maintain Erin's range of movement to ensure ease of seating in both her wheelchairs. It is also important to maintain the range of movement in Erin's spine for as long as possible. If the left knee flexion contracture progresses this will create issues with transfers, seating and affect Erin's level of independence.

- The Sleepform System can be moulded to promote a more aligned sleeping position, with increased adduction at the hips.
- Using a knee roll maintains adequate abduction whilst encouraging the left hip to adduct, helping to achieve a midline position.
- The Sleepform Mattress alleviates the pressure on the bony area of Erin's spine, thus reducing the risk of pressure sores.



Outcome

Initially the position achieved helped to ensure Erin maintained her range of motion and ability to transfer independently. It also reduced the risk of pressure areas as the airflow mattress provided a cushion between Erin and the bed, promoting air circulation keeping her cool.

After 3 months, Erin's range of movement at her left hip had increased. Her therapist stated, "The improved range of movement at Erin's hip has an impact on the ability to position her left leg – the force required to keep Erin's leg in a more neutral position is reduced, reducing the risk of developing pressure areas or risking that her seat width is dictated by the width at her knees."

The Sleepform system was remoulded to allow Erin to sleep in a slightly more side-lying posture as she was tending to adopt this position during the night and losing symmetry. While the position looks a little awkward, it was better than how she was sleeping and represented a midway posture between her destructive asymmetrical posture and the total symmetry aimed for. The focus has also shifted to work on left knee extension.



Further review

Erin's therapist visited to check on progress, and found that Erin's family had re-moulded Sleepform appropriately as Erin had decided she liked sleeping on her back! She says, "Erin's mother understands the concept of what we are trying to achieve (with maintaining ROM) and knows how to use the product to optimise ROM and keep Erin comfortable. She set it up just as I would have done so I'm not at all worried. Erin's ROM that she gained initially has remained stable, despite a significant period of growth."

