

Lewis maintains a standing programme in school with the Leckey Horizon Stander

Introduction

Lewis is a 17 year old young man with a diagnosis of Duchenne Muscular Dystrophy (DMD). DMD is a degenerative neuromuscular condition causing progressive muscle weakness. He attends a mainstream sixth form college which has a physical disability unit to support his physical therapy input, including hydrotherapy.



Lewis is fully communicative and is currently studying hard for his A-Levels!

Clinical Assessment

Lewis is independent with powered mobility both indoors and outside. Lewis is unable to weight bear independently, and uses a hoist for all transfers. He can sit for short periods unaided but fatigues quickly. He can roll with some support. Lewis has reasonable control of his upper body and arms/hands. He is able to feed himself and bring his hands to his mouth to have a drink. He has full head control.

Lewis has low muscle tone, and muscle weakness affecting his legs more than his upper limbs, although he has a reduced range of movement at his elbows, hips, knees and ankles. Lewis' pelvis mobility is reduced, and he tends to adopt an anterior pelvic tilt resulting in lumbar lordosis. This impacts on his comfort over time. Lewis also reported that due to steroid use relating to his condition, he had a spinal fracture approximately 4 years ago at L4/5.



Approach

Due to Lewis's clinical needs, age and size, his therapist considers the Horizon stander to be the most appropriate for him. Due to Lewis' specific postural needs, some compromises were required in the setup of his standing frame. Lewis' anterior tilt and lumbar lordosis required additional support from a roll, and as a result, the back rest could not be set at the optimum height.

Outcome

After setting up the standing frame for Lewis, he gained a symmetrical position with reduced thigh abduction. His knee and ankle contractures were successfully accommodated, and improved lateral support of his trunk enabled shoulder girdle stability and thus better hand function.

Lewis reports that being upright helps his respiration, as lying flat or placed in a reclined position can result in a build-up of secretions.

Lewis may also benefit from longer pelvic laterals to give increased support around his ASIS, with the aim of promoting a more neutral position of his pelvis. If this could be achieved, it would alleviate the discomfort caused by his lumbar lordosis.



However, in the meantime, Lewis is able to continue his regular standing programme of up to forty minutes per session – something he has been able to sustain for the past two years.