MAKING A REAL DIFFERENCE

BACK ON TRACK

Hayley Rylott was only four years old when a car crash left her with traumatic brain injury (TBI) and a partial paralysis of her left hand side. She was unable to use her left hand and was affected by drop foot, meaning that she was unable to lift her foot and toes when walking, resulting in frequent trips and falls. This bleak picture changed though in June of 2009 when, referred by her case manager to a Specialist Neurological Physiotherapists called Physiofunction, Hayley was fitted with a highly innovative medical device. The NESS L300, produced by Bioness, is a functional electrical stimulation (FES) system. This consists of a cuff worn just below the knee, an unobtrusive wireless gait sensor that sits in the shoe and a wireless hand held remote control unit. When a user lifts their heel, a wireless signal is transmitted from the gait sensor to the stimulation unit in the leg cuff. This in turn stimulates the nerves to contract the muscles in the leg, lifting the foot and toes to provide a much more safe, efficient and normal walking pattern. The small, hand-held control unit allows users to turn the stimulation on or off, access the walking or exercise modes and adjust the stimulation intensity when required.

MAKING A DIFFERENCE

Now aged 17 Hayley's walking has transformed beyond recognition, and she is now able to join in activities that other teenagers take for granted, but that she could previously only watch – from trampolining to horse riding, and most impressively, a 5 mile cross country walk. Hayley's mum, Helen Rylott, said: "It was difficult when she was a child, but it got even harder for her as she entered her teenage years. She used to have to wear a splint and had a large insert in her shoe, meaning that she could never buy the nice pretty shoes that all teenage girls want to wear. "Her limp and foot drop were so pronounced that people used to stare at her as she walked down the street, so unsteady on her feet," she added. "It used to break my heart. She's like a different girl now! She has so much more confidence and is so much happier in herself. I just wish she'd found the Bioness device earlier."

WIRELESS TECHNOLOGY

The NESS L300 is unique; with full wireless remote control, there are no cumbersome wires to deal with or difficult electrodes to position every day, and it's extremely easy for Hayley to take on and off. The wireless gait sensor also adjusts to 'real-time' changes in Hayley's walking pattern. It is this that has made the key difference in helping her to walk on uneven surfaces, on slopes, and even backwards. "Hayley was videoed walking with her drop foot by the team at Physiofunction when she first went to get fitted with the device," Helen said. "They could then tell exactly where to place the device for optimum stimulation. "As soon as she had this initial fitting, she was then able to remove and reapply the leg cuff in a matter of seconds," Helen added. "She does it all herself, I don't need to help her."

LIVING ON

Hayley continues to both inspire and amaze with her progress. Despite the fact that she is now working at a busy Equestrian Centre, Hayley somehow manages to find time to care for and ride her very own horse. In keeping with this love, a dream was fulfilled when Hayley completed the Burghley Cross Country Course walk organised by the Child Brain Injury Trust, with Olympic Equestrian Mary King. Completed over 5 miles of beautiful but limb sapping countryside, with rough ground and steep slopes along the way, a number of the participants commented that they struggled to keep up with Hayley. Helen Rylott comments: "Hayley could never have done this without her Bioness L300". What an amazing girl – it is a joy to see that with hard work, the right advice and the help of a very clever piece of technology, she is back where she belongs – leaving the adults struggling to keep up.