



mustang



Beth, age 12, uses adjustable R82's Mustang to support gait development

Beth who lives with Cerebral Palsy, has recently begun using R82's Mustang – an anterior/posterior gait trainer which allows a growing child to develop stepping and walking skills and achieve proper positioning.

The Mustang is designed to assist gait in a wide range of abilities and is particularly suitable for children with Cerebral Palsy. Offering flexibility and ease of use, it is highly adaptable to cater for a child's changing needs as they grow. The anterior position is ideal for users unable to fully weight bear on their feet, or if motor skills are reduced and the user needs support around the trunk and pelvis. The posterior position can be used for those children who have improved gait development, more advanced trunk stability and who are capable of bearing their full weight.

Beth lives with her family, near to Humberston Park Special School, Lincolnshire, which she has attended since the age of three. Cerebral Palsy affects all four of her limbs but low tone is most evident in her legs. Historically, Beth has been able to compensate with strong arm movement which has allowed her to achieve a good level of independence. She is a self-propelling user of a wheelchair, independent in transfer and uses her arms to support her weight to push up rather than her leg muscles. However, as Beth grows

older and is becoming taller, her weak muscle tone is making it more difficult to push against gravity. As a result, Beth now has a 'sinking' in her gait causing increased hip and knee flexion and this is becoming more apparent in her walking and stepping. She is unable to achieve ideal hip and knee extension and consequently is sinking progressively further down.

Frances George, Specialist Physiotherapist, MSc, BSc, HPC, MCSP has worked with Beth at Humberston Park for the past five years, during



which time she has introduced “walking and stepping” focus groups to assess and develop walking patterns and skills of children with different abilities.

She comments: “Beth has a good passive range of movement. As a result we have looked for new ways to support her as she grows taller. We already provide a range of therapy sessions, including standing upright in hydro and standing for dynamic exercise on the trampoline, where Beth demonstrates she is able to utilise the correct muscles with her own body weight. We hope that by using R82’s Mustang gait trainer, Beth will be given the correct support in an upright position to improve her sinking gait and allow a more natural walking position to develop. Importantly, the Mustang provides firm support with an adjustable saddle, essential chest support and prone positioning. This means crucial alignment is maintained, facilitating



optimal hip and knee positions through flexion into extension, which is necessary for walking development and enabling that efficient and effective step forwards.”

Initially the adjustable Mustang’s saddle height has been set quite high to support much of Beth’s body weight. During this period, Frances will concentrate on re-educating her step and walking pattern to ensure Beth achieves ideal hip and knee extension and remains on her feet for as long as possible. Frances is conscious the challenge will be encouraging improved leg position and strength without adversely affecting Beth’s arm movement as a result. She is conscious that Beth needs to support some of her own body weight in the Mustang in order to free up the use of her arms when stepping. Therefore, once Beth is working the correct leg muscles and the right pattern of movement is in place, Frances will slowly lower the saddle, introducing more gravity and allowing Beth to support more of her body weight herself.

Frances explains: “We need to find a happy medium where Beth is encouraged to improve her gait and remain standing for as long as she is comfortable – without her compensating and over using her arms when stepping. At the moment I am challenging Beth to step without pushing up through her arms; this is a challenge as it is a new skill and movement Beth is learning. We will closely monitor Beth and will concentrate on developing leg movement, through continued therapy sessions and use of the hydro pool and trampoline, whilst we work on developing her walking pattern in the Mustang. As the Mustang allows us to easily adjust the saddle height, it means we can work



Saddle height adjustment system

at the correct pace for Beth. Ultimately we hope to achieve a good balance between stepping and support allowing Beth to achieve ideal positioning and function.”

Frances is aware that as Beth grows taller, maintaining correct balance and posture will become more difficult and Beth’s muscle strength in the future cannot be guaranteed. However, she feels confident that through using R82’s Mustang in combination with therapy sessions, Beth will have been given every opportunity and the best chance of succeeding.

Frances concludes: “We already have five children at Humberston Park, aged between 3½ to 16 years, benefitting from regularly using the R82 walker in integrated therapy and education sessions. Therapy is really about maximising every opportunity and I believe that together with Beth’s family, we will have allowed Beth every opportunity to achieve her best potential.”



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