



# R82 Mustang

How to enable children to walk

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# What is the Mustang?

The Mustang is a highly adaptable walking aid for children and youngsters. It can be configured with anterior or posterior support to meet a range of walking needs. It provides excellent and snug support for the upper body whilst keeping the child's pelvis gently supported. The upright, slightly forward, leaning position, aims to stimulate the walking function and encourages the child to participate in daily activities.

Mustang is designed to assist gait training for a wide range of abilities ranging from those with reduced motor skills or needing some weight bearing and/or trunk and pelvis support (GMFCS 3-5 in CP) to users able to fully weight bear with a lesser need for postural support.

This interactive workbook with contributions by Frances George, a highly specialist Physiotherapist, who takes a detailed look at Mustang including different positioning options and how it can be used for different stages of walking development. We look at a current case story being undertaken following the progress of 3 year old Tommy and also include a look at accessories.

There are links to additional information on clinical research, the case story and "how to" videos.

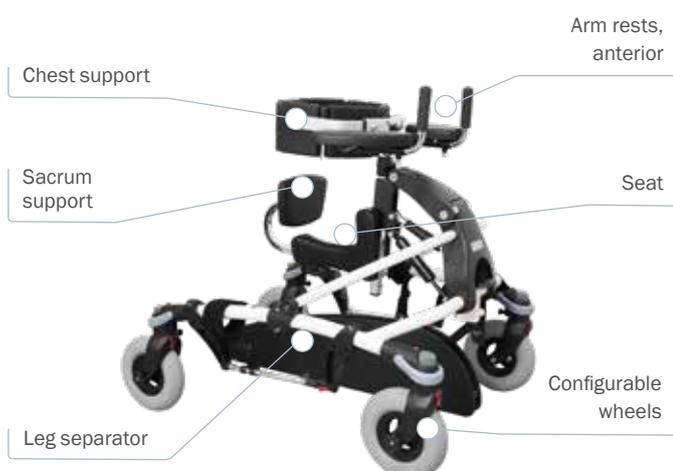
## Manoeuvrability

Children in the Mustang are close to the centre of the frame so they can turn around their own vertical axis. Many children with postural asymmetry can have great difficulty walking straight ahead. Others are weak and to help them to walk, wheels must be low friction.

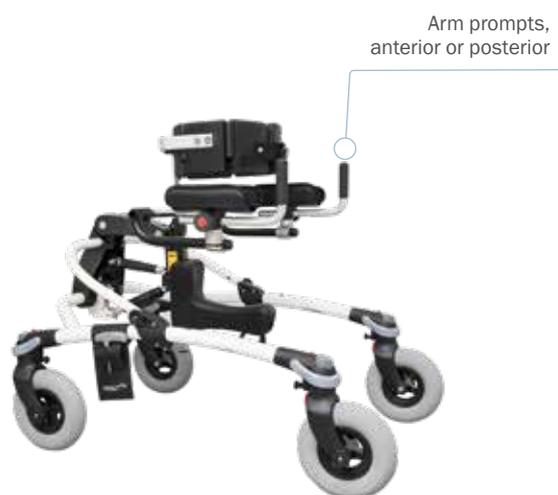
Swivel wheels allow maximum manoeuvrability but where the child's movements are poorly co-ordinated or on sloping surfaces the directional stabiliser can be used. Also anti-reverse brakes keep the Mustang on course.

When fixed in a straight line the child can focus on their steps. As their walking develops, the front wheels can be unlocked to allow movement forward and back or all four released to give the child more control.

## Anterior Support



## Posterior Support



Find out more about the benefits of configurable wheels on the Mustang

# Positioning Options

The Mustang can be used with anterior or posterior support.

## Anterior Support

This position is best suited for children in the early stages of walking, those who are not able to fully weight bear on their feet, where motor skills are impaired or where support is needed round the trunk and pelvis.

The child is protected in this position and having the support at the front of the trunk stimulates a more active extension. In this position, the Mustang can be tilted forward to create a prone position. The chest support and seat move together to keep optimal body alignment and this forward tilt encourages the child to step forward. It also offers easy access to the walker.



Frances explains anterior support



See a demo of the Mustangs forward tilt



## Posterior Support

In a this position, the Mustang is suited for children whose walking skills have developed, who have more trunk stability, can fully weight bear and don't need the forward tilt prone position. The open frame makes it possible for the child to better access their environment. Not having anything to lean on facilitates a more active posture and gives the child more freedom.



Frances explaining posterior support

## Leg Positioning

Children with poor postural control, poor co-ordination or spasticity, often cross their legs when walking (scissoring). To help prevent this and encourage a normal walking pattern, a seat and leg separator can be mounted on the walker. The seat increases abduction and outward rotation of the hip and the leg separator stops the feet from crossing the midline and blocking contra lateral stepping.



See Frances explaining how to overcome scissoring in the Mustang



# The R82 Next Step Development Plan

## Walking Principles

The complexity and strength demands of walking are reflected in the length of time it takes an infant to start walking and develop a mature gait.

Children with disabilities can have difficulty walking for many reasons and need to be guided and stimulated in taking first steps.



Frances explains movement patterns in walking

## Adaptive Walking Patterns

The Mustang can be adjusted to assist children with different walking patterns.

Children with tightness in their muscles which limit movement in their hips and knees often stand with bent legs in a crouched position. To help improve dynamic muscle stretch, the anterior support with prone tilt can be used.

With altered muscle tone and tightness, children often take short steps. To help improve stride length and for a more efficient walking pattern, the Mustang can be configured to give posterior support with a forward tilt.



Find out how Frances is working with Beth to improve her walking pattern

## Stages of Walking Development

In the early stages of walking, children with movement problems, can display various adaptive standing and walking styles such as bottoms sticking out, flexion of the hips and knees, difficulty stepping, asymmetrical trunk, scissoring and bunny hopping.

These walking patterns can persist or emerge as the child grows and they have to work harder to maintain an upright position against gravity, effecting stages of walking development at a later age.



Frances explains in more detail



# Adapt and configure the walking aid to changing needs

## Getting those first steps

When using a walker for the first time, a good standing position is the starting point. The shoulders, trunk, hips and feet should be in line and the child should be weight bearing as centrally as possible.

The adjustable seat support allows hip and leg position to be set and the trunk support allows stable alignment of the trunk with the hips and the feet. The sacrum support brings the bottom in to help align the body.

When the Mustang is adjusted into a prone position, the seat and chest support tilt together to ensure optimal alignment is maintained. The child's body weight shifts forward to give the momentum to take their first step.



Frances explains how to get a child set up in their walker



## Tommy - early walking

Frances has recently started to work with Tommy, 3, on his walking and stepping. He has high tone in his legs so "scissors". Frances uses the leg separator with the Mustang to prevent this. He is in the early stages of his walking development and "bunny hops" so the Mustang is tilted forward to encourage some reciprocal steps.



Frances explains more

## Targeted Strength Training

Research has shown that the greatest difference in strength between independent walkers and children needing walking aids was in the hip abductors and knee extensors at 30 degrees.

These are key muscle groups in sagittal and frontal plane walking ability which have implications in targeting strength training to maximise functional outcome.



Find out how Frances is working with Lewis to give him some independence

# Transferring and moving on...

## Transferring into Mustang

Depending on the child's ability, there are several transfer options - independent, adult assisted or hoisted using a standing sling/ambulating vest.

Safiya (right) is being assisted from her R82 Kudu into the Mustang with an Immedia support belt which offers extra support when standing, sitting, walking or during transfers.

A hoist can also be used if required with an ambulating vest so the child is supported as they sit to stand to access the walker.



## Moving on...

Once walking development has progressed sufficiently in the Mustang and the child has been using it in a posterior position, if they have active use of their arm/hand function, head control and some trunk control, you may like to consider the Crocodile walker.

The Crocodile helps the child into a more upright posture. It is placed behind the child. It is lighter making it easy to move and use - as much energy as possible is used walking rather than moving the frame.

The multi adjustable handle can be positioned for height and width and are close to the body giving better support, stability and walking position.

The Crocodile comes with a wide range of accessories including a seat, which makes it possible to take a rest



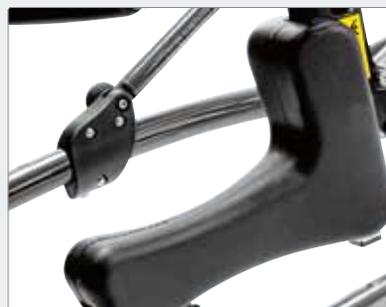
Find out more about the R82 Crocodile walker

# Key accessories



## Chest Support

The Mustang chest support is moulded to hold the trunk or pelvis like a pair of hands. It is important to create symmetry and stability of the trunk to facilitate mobility. The support is height adjustable to allow the child to enjoy the greatest degree of mobility whilst still maintaining a stable trunk.



## Seat

The firm saddle seat allows hip and leg position to be set and hold position even when the child is tired. The sling seat provides partial weight bearing support for a child who doesn't need the firm seat support but benefits from the sling seat when tired.



## Hip Supports

The curved hip support is used when more support is needed round the pelvis. It can be adjusted in height and width. Frances explains hip support options.



## Sacrum Support

The flat sacrum support pushes the bottom in to keep the body correctly aligned and allows lateral shift as the child walks. It is height adjustable. James shows how.

See more “How To” videos...



Adjusting configurable wheels



Adjusting arm rests



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