

Enable Ireland's Bicycle Skills Part 3: Hemiplegia – Learning to Ride a Bike

Most children with hemiplegia (or children with a mild asymmetrical diplegia) will manage to ride a mainstream bike, possibly with some alterations/accessories although generally at a slightly older age than their peers. It is generally recommended that your child first learns to balance on a bike either using a specific balance bike or converting their own bike into a balance bike. More information on this can be found on the Enable Ireland publication 'Bike Skills Part 1: The Balance Bike Method'. Riding a bike is a great way for children with asymmetry to learn where their midline is, which can have consequent improvements in their walking pattern and overall balance too.

When your child is able to freewheel along without pedals, it is generally easier for the child to place the pedal back on to their affected side first and, starting with this pedal in the low position, encourage them to scoot along with their stronger side. When they are confident in this stage, add the pedal back onto the bike on their stronger side and encourage the same scooting. When enough speed is gained, they can then place this foot on the pedal and start pedalling typically.

For some, on their more affected side, they find the brake lever too far away as their fingers may not stretch out as easily. The brake lever distance can be adjusted by this screw →



If your child is finding the brake too hard to pull, this is another adjustment which a local bike store mechanic would be able to assist with.

Most bikes shops are also able to swop the brakes and gear system to your child's stronger side. If your child is unable to use the brakes at all on their less strong side, then dual brake levers are available (such as these from motorizedbikes.ie).



Image from motorizedbikes.ie



Image from quest88.com

Grip mitts are also available to help hold your child's hand in place (or a cheaper home DIY alternative is to sew Velcro to your child's glove and wrap corresponding Velcro around their handlebars)

If your child wears an AFO (ankle foot orthosis) splint on one or both legs, it can sometimes be easier to cycle with this on as it can maintain the foot in a better position and decrease the incidence of the foot sliding forwards off the pedal. However, caution needs to be advised that the AFO doesn't cause pinching or rubbing at the back of the calf/ thigh, especially on a low saddle height. For some children, assistance is still required to prevent the foot from sliding forwards and toe clips can be added. Strong caution needs to be advised when using toe-clips, especially with straps as it can be very difficult for your child to remove their foot quickly when falling and can cause more injury.



An alternative can be to also use self-levelling pedals which assist the pedal to stay parallel to the ground. These can be found online (e.g. John. M Hanna cycles, Trike.ie and other sites). Pedals come in two axle sizes so be sure to order the correct size for your child's bike.

Some disability cycling companies also produce a range of accessories which can be fitted to most mainstream bikes, such as extra wide saddles, back supports, AFO pedals etc (such as these pictured from trike.ie).



Strong caution needs to be advised when attaching items such as the AFO pedals to a mainstream bike as your child will not be able to remove their leg once strapped in. It is advised to also be using stabilisers (regular or large) when providing this level of support at the foot, or consider if a disability trike is safer and more suitable.

For some children with hemiplegia or diplegia, riding a mainstream bike is extremely challenging but could be possible with stabilisers. These can range from standard bike shops stabilisers or more specialist ones like Adjustabilisers© (wp.good-designs.uk)



For some children, standard stabilisers do not offer enough stability as the wheels are too small and larger stabiliser wheels can be sourced from suppliers such as fatwheels.com (for bikes 16" to 20")

Stabilisers are also available for bikes over 20" sized wheels such as these from trike.ie or jmhcycles.co.uk



Fidlock© magnetic buckle on helmets can also make one handed fastening easier such as this helmet

https://www.trekbikes.com/ie/en_IE/equipment/cycling-accessories/bike-helmets/kids-bike-helmets/bontrager-little-dipper-childrens-bike-helmet/p/30489/

Handy gadgets can also be found at bike shops and websites such as:

- Mirrors
- Indicator backpacks with handlebar remotes for children struggling with hand signals





Cycling Ireland provide great resources as part of their Cycle Right program including resources on Independent Cycling with a Disability
<http://www.cyclerright.ie/resources>



Each year, at the end of June, Bike Week is celebrated nationwide with free biking events on and inclusive family activities in the community.