



LEARNING TO CYCLE SPECIALISED BICYCLES

CYCLING SPECIALISED BICYCLES



Duration: 30-60 min lessons (multiple as required)



Location: Outdoor/Indoor (gym or suitable area)



Lesson Type: Practical



Equipment: Bicycles, helmets, marking cones, whistle

The trainer will focus equally on teaching the trainee and on guiding their assistant, the individual who will work with the trainee in sessions. Having an accompanying individual who will take a physically active role in the learning process is key to learning for the trainee, and will also ensure the trainee will have informed assistance between sessions which promotes optimal learning and progress towards independent cycling.

AIMS & OUTCOMES



This session employs a biopsychosocial model (NOTE 1 *) of disability and seeks to maximise an individual's potential while supporting progress with any necessary equipment adjustments and with inventive, inclusive approaches to training methods and the training environment with the goal of finding out how to best fit the individual to the right bike for their strength and desired level of riding. It is important that a trainer assesses an individual in person themselves, as in some cases, others may make assumptions about an individual's ability to cycle which limit that individual's potential.

A trainer's focus in assessment should be on the individual

- Discussing their goals for cycling
- Finding out what teaching approach will best suit them
- Exploring their needs and requirements
- Understanding their physical capability (e.g. sitting, walking)
- Whenever possible having the bike the rider gets on be the best one for their cycling stage, especially for someone who comes to ride for the first time.

In all instances, trainers are encouraged to take a unique approach to each individual and their particular needs by, at all times, exploring the goals of the individual and ways to work towards these.





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The practical aim of this session is to introduce a trainee with a disability, who hasn't cycled independently before, to independent usage of a bicycle. Trainees will learn how to mount and dismount while keeping control of the bike, will be guided on optimal position (seated, body, arms, legs and head) and will progress, in turn, towards starting, balancing, pedalling and stopping, the core bike handling skills.

By the end of a number of sessions, depending on the learning curve of the individual, the trainee will be able to;

- Demonstrate cycling skills appropriate to the individual
- Demonstrate cycling skills according to their own learning curve
- Experience cycling as an enjoyable activity to the fullest of their ability
- Experience cycling as an independent activity to the fullest of their ability
- Experience cycling as an empowering activity which facilitates independence and increases self esteem
- Experience cycling as an activity which offers low impact fitness and health benefits
- Experience cycling as a group activity, which reflects and promotes confidence in the individual's ability
- Demonstrate an ability to safely mount and dismount a bike while preventing it from moving
- Demonstrate correct seated position on the bike
- Demonstrate correct starting position
- Demonstrate correct start
- Demonstrate cycling in a straight line
- Demonstrate correct stopping
- Demonstrate effective braking and stopping
- Demonstrate effective cornering
- Demonstrate active knowledge of required turning lines for the bicycle being used with appropriate speed for the turn

NOTE 1*

The biopsychosocial approach to disability views disability as arising from a combination of factors at the physical, emotional and environmental levels.

This approach or model takes the focus beyond the individual and addresses issues that interact to affect the ability of the individual to maintain as high a level of health and wellbeing as possible and to function within society. This approach is consistent with the revised definitions of disability of the World Health Organisation (WHO). It recognises that disabilities are often due to illness or injury and does not dismiss the importance of the impact of biological, emotional and environmental issues on health, well-being, and function in society.

See the following for more information www.who.int/classifications/icf/training/icfbeginnersguide.pdf



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DELIVERY METHOD



The first step in the training process will be to **assess**

- the **balance, co-ordination** and **muscle strength** of the trainee
- the individual's ability to understand and follow instruction and to proceed from this point.

It is important that **appropriate equipment** is available from the outset to facilitate the trainee's learning.

This may mean;

- making appropriate **adaptations to equipment** (e.g. adjusting brake lever tension to assist an individual's grip and pull)
- making recommendations with regard to **accessing specific equipment** to facilitate cycling (eg a semi-recumbent bike) before training is due to commence.

Setting up the bicycle

It is important to remember that often, the rider's most limiting factor is balance. With this in mind, many adaptive bicycles are low to the ground, increasing the stability of the equipment. These recumbent bicycles position the body with the feet at about the same height as the seat and have a higher performance potential maximizing safety by increasing stability.

A hand cycle is a form of recumbent that allows a rider with little or no leg power cycle using propulsion from their arms and upper body.

The following factors also enhance stability:

Wheel Width: Wheel width helps with balance, but it can also be a limiting factor. Excessive wheel width can make the bike difficult to navigate in tight places and can also be risky on narrow trails and roadways. Most bikes have a wheel width less than 32", providing a wide but not excessive footprint.

Speed & Stability: Tricycles allow the rider to ride even at slow speeds. As the three wheels maintain balance for the rider, they can accompany someone at walking speed and easily stop without fear of tipping over. This stability also allows the rider to get going, take breaks

as needed, and finish a ride without needing to put a foot down. This is very important for those with joint replacements or insecure joints, or those who need extra pedal support to keep their feet in place on the pedals. The tricycle allows people who are concerned about their balance or the problem of insecure joints to get back into riding with peace of mind.

Tandems can offer the support of another rider to someone with balance issues and a traditional back/front tandem is a marvellous way for people with vision impairment to experience cycling at many levels from gentle travel and leisure to elite performance.

Before a trainee gets on the bike, the trainer will assist them to check that the bike is the right fit, and where appropriate, will have them make adjustments themselves;

- Ideally riders should have the opportunity to try out a number of bikes to see some of the differences between them. They may come back to the first bike they try — but they may like features from one bike and something else from another. Often these can be combined, or there will be a bike that has both elements.
- Always remember, every rider is different, there aren't "typical" setups - one person with a particular disability may not be the best suited to the same setup as another person with the same disability.
- Safety must always be the first priority as cycling at speed can result in accidents with serious injury. Educate riders, staff, and volunteers to make riders as safe as possible.
- Many adaptive cycles are low to the ground and difficult to see, safety flags should be used at all times to increase visibility.
- All riders should also be instructed on braking and steering and should be asked to perform on command braking and steering exercises.



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- For a rider whose ability to steer or brake is compromised, set up cycling practice in a controlled area, or have another rider join them on a tandem setup to ensure safety. Riders should wear any protective clothing needed, and be prepared for the activity they are involved in (using sunscreen, carrying water, etc). It is advisable for all riders to have water and snacks to hand.
- Having a First Aid kit on site is essential
- The trainer may need to make **adjustments** to a bike that are **specific** to an individual and should be conscious, at all times, of the particular **needs of each individual**
 - adjusting brakes for someone who has limited pulling strength
 - adjusting front brake tension to prevent a trainee being pitched forward by accidentally pulling the brakes too firmly.

Environment

The trainer will also need to assist the trainee to **assess the environment**;

- The **needs** of each **individual** should be considered and **adjustments** to the **working area** should be made accordingly, taking account of **features** such as
 - sloping **ground surfaces**, gutters, shores and kerbs
 - **surface grip**
 - ~ gravel
 - ~ stones
 - ~ leaves
 - all of the above may be impacted negatively by weather such as rain or frost
 - **access points** such as doors and gates
 - **yard furniture**
 - ~ poles
 - ~ shelters
 - ~ nets
 - **walls**
 - **corners** etc.
- individuals with **limited mobility** or **sensory disability** may be more affected by **weather**
 - impact on the **length of a session**
 - suitability of **indoor or outdoor** venues.



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Interaction and communication

The trainer should also be conscious of **interaction and communication**;

- a trainer should always **communicate directly** with a **trainee who has a physical or intellectual disability**
 - **concise, clear** directions
 - with **clear signals** and **demonstrations** to support these
 - **repeated** as many times **as appropriate** to promote understanding
 - **readiness to break** when the trainee indicates they wish to or feels uncomfortable with an aspect of training
- Always present **positive, open body language**
- a trainer should always **give time to respond**
 - **Never rush** someone for a response
 - **Don't speak over** someone speaking, even in an attempt to assist
 - Ask someone to repeat if needed, **don't guess**, then repeat back for confirmation
- a trainer should always communicate with a trainee with full **respect for their age** – treat **adults as adults** without patronising
- a trainer also needs to be aware of **cultural aspects of interaction**
 - are there issues for individuals relating to **eye contact**?
 - are there issues relating to **touch and contact**?
- a trainer should **place the individual at the centre of communication** taking a perspective that disability is to be factored into the learning process but is not a 'sickness' that defines it or them
- a trainer should always be aware that each individual experiences their disability differently and all **training** should be approached on an individualised basis and on the basis of a person's **ABILITY** rather than a particular disability
- a trainer should
 - **progress** at the **pace of each individual**
 - focus on **one teaching point at a time**, until the **outcome is achieved**
 - give **feedback** regularly to both the trainee and whoever is working with them
- **Positive framing** is also very significant – telling a trainee **what to do**, rather than what not to do
- It is hugely important that the trainer works with the **trainee on his/her goals**
- A trainer must be aware of particular **communication techniques** for individuals and should communicate in the way the individual is comfortable e.g. **verbal, non-verbal, signs and gestures**
 - someone who is **deaf or hard of hearing**
 - ~ will require a **visual stimulus back up** (a flag system)
 - ~ if a trainee can **lip read**, it is hugely important that they **can clearly and directly see the trainer's face at all times**
 - ~ the trainer will need to **face the trainee** when talking to facilitate
 - ~ the trainer should ensure their face is well lit and not in shadow – face the sun
 - someone who is **blind or vision impaired**
 - ~ may require an **aural** and/or agreed **touch system back up**
 - ~ an agreed **key word code**
 - ~ an agreed **whistle code** (if any distance or external sound factors involved)
 - ~ **hand contact code** – hand to the shoulder, arm or back for agreed pointers
- Other ways to **clarify learning points** include
 - **Demonstration**, so that the trainee can see what is to be done and copy, leading to repetition and reinforcement of a particular action
 - Breakdown a skill into **smaller parts** to be learned separately and built to a whole



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Interaction and communication

- A trainer also needs to communicate with someone who is **assisting the trainee**
 - Clearly defining their **role** and how they can best **assist the learning process**
 - Being especially clear about **appropriate levels of support** and highlighting where intervention can hinder the learning process
 - ~ Supporting the weight of someone who is trying to achieve **balance**
 - ~ Holding or moving the handlebars for someone who is learning to **control** and steer a bike
- Someone with a **physical or intellectual disability** may need **assistance**
 - mounting and dismounting
 - pulling brakes
 - moving on the bike
 - maintaining balancebut at all stages this assistance should be directed by the participant with **respect** for their preferences, age and goals and should be given by their assistant

Session structure is very important;

- Training should be based around the **TREE** philosophy (**NOTE 2***) – appropriate adaptations to
 - **Training style**
 - **Rules** of operation
 - **Equipment** and adaptations
 - **Environment** and making this more conducive to individual learning

- It is **generally** best to have someone who is committed to **assisting each trainee** and will take responsibility for supporting **regular practice between sessions** – it is crucial that this individual understands the steps they are helping the trainee to achieve
- This person should also act as a **“spotter”**, so that in a group session, trainees don't collide
- **Zoning** is another effective way of avoiding possible collisions – here, trainees who are at different stages in their progress are grouped in **different sections of the training area** and don't risk entering the path of someone travelling at a different speed
- A trainer needs to be aware of the benefits of both **one-to-one** and **group** sessions
 - Teaching someone **separately** from their established group (eg class) can lead to a **sense of exclusion**
 - On the other hand, some individuals may find the level of activity in a group intimidating and upsetting and may prefer a **one-to-one** scenario where **concentration** is easier
 - **Age** may also be a factor, with individuals of different ages feeling **embarrassed** to be with younger learners
- A trainer should be aware that, at times, it may be appropriate for the trainer to assist a trainee to achieve an action by **physical manipulation**, eg pushing pedals. This exercise should be performed where the person accompanying the trainee can clearly see and should be done only with the agreement and within the comfort zone of the trainee

NOTE 2*

The Inclusion Spectrum Framework (ISF), incorporating the TREE principle, developed by Ken Black and Pam Stevenson 2011

The ISF shows various ways in which sport and physical activities can be presented and modified to ensure that every child is able to join in, learn and experience a certain level of achievement and success. It suggests four main ways of presenting sport and physical activity:

1. **Open Activity:** Everyone can play without the need to modify the activity.
2. **Change to Include Activity:** Everyone does the same activity but a number of changes are made to support all children taking part. This method incorporates the widely known TREE model.
3. **Ability Groups Activity:** Children are grouped according to ability and do the same activity or a modified version which meets their needs.
4. **Separate Activity:** Some participants work separately for a given time to develop a number of skills that will help them be more successful when they re-join the group.
5. **Adapted Physical Activity/Disability Sport:** Bring in activities, games or sports that are based on adapted physical activity or disability sport programmes.



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TECHNIQUES



Pre-checks

- ✓ Bicycle Check
- ✓ Helmet Check
- ✓ Saddle Height
- ✓ Clothes Check
- ✓ Conditions Check

Trainers should encourage the bicycle pre-checks and should assist each trainee and those working with them to perform these checks for their safety.



SUGGESTED PRACTICES



- The trainee should be taught the **different functions of the brakes** before getting on the bike
 - **Back brake** to slow
 - **Front brake** to stop fully



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Getting on the bike

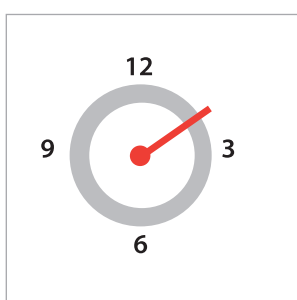
Hand cycle

- Most adult starter hand cycles are adjustable to suit any size of adult, while most children's are a standard size with an adjustable back which can accommodate different heights
- The handlebar/pedal mechanism and lever reach on a hand cycle must be the right fit for the individual for effective use and are generally adjustable
- Foot/leg supports should also be adjusted for best position and comfort
- Be sure the hand brake is applied before an individual starts getting on the hand cycle
- Individuals organising and assisting at sessions for trying out hand cycles should be guided by those taking part on getting on and off the bike, particularly with regard to
 - Correctly positioning a wheelchair in proximity to a hand cycle to best facilitate getting on and off – this is likely to be between 60 and 90 degrees angle between the wheelchair and the hand cycle, in close proximity to the seating area
 - Height of the hand cycle relative to a wheelchair, what direction the rider needs to move to get on (up, down, sideways), whether an interim move to a bench may help
 - Whether the rider wishes to have physical assistance or not
 - ~ What form they wish that to take and where they wish to be supported

Tandem

Both partners, pilot (sighted partner to the front) and stoker (visually-impaired partner to the rear), should get on the tandem at the same time, to an agreed signal, eg “one, two, three”. This will require prior agreement and clear communication as to;

- the preferred side of the bike both get on from, while practising for both (it is best, if the stoker is comfortable with it, for the partnership to get used, as early as possible, to getting on from the left, as this fits with cycling on Irish roads)
 - The pilot will need to be aware of their leg length and foot when getting on the bike to ensure their partner is not in reach and should swing their leg over the front crossbar
 - The partnership may need to lean the bike towards them to assist with getting on, depending on the saddle(s) height and should agree how to control this, likely with the pilot controlling the degree of tilt with their partner supporting the weight (the weight of a tandem will be approximately twice that of a standard road bike)
- For a starting stoker, the saddle should be set so both feet can comfortably reach the ground
- which will be the starting side, as both will need to get into pedal-ready position on the same side, at the same time, to avoid either being hit on the leg by a rotating pedal (right starting pedal is best practice for cycling on Irish roads)





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Getting used to the movement of the bike and to using the gears

Hand cycle

- Positioning – the cyclist's position on the hand cycle can be low to the ground, more so with models built for speed or competition with the rider in an almost fully recumbent position, where moving up and down levels (kerbs etc.) needs to be done with care
- Pedalling – the pedals on a hand cycle usually turn in simultaneous movement which makes for more comfortable upper body stability
- Cornering – depending on the speed of approach and the turn, on a hand cycle the rider leans away from the bend, rather than into it, to prevent roll over, particularly in sharp corners.
- A hand cycle takes considerably more room to turn than a standard bike so the rider needs to be conscious of turning lines and needs to be aware of the probable need to initially move out and away from the corner before starting the turning movement round the corner
 - Will this bring the hand cyclist into the path of other traffic?
- On a hand cycle the brake lever is usually within easy reach of the pedal crank
- On a hand cycle gears, which are usually part of the same mechanism as the brake, can generally be changed while continuing to pedal or with maybe a split second of non-pedalling, depending on how close the lever is placed to the pedals on the bike
- A hand cycle can generate considerable speed on the flat, but can be challenging going uphill, requiring substantial upper body and arm strength to maintain momentum.

Tandem

- as the tandem pair effectively move as one rider when on the bike, with the front rider being responsible for steering, gearing and braking, communication between the partnership is critical, with the pilot needing to clearly communicate everything they would wish to know themselves, if they were unsighted, to let the stoker know about
 - changes of gear, increases in speed and braking, for instance slowing before entering a corner, gearing down on approaching a hill, slowing in preparation for a stop
 - conditions or traffic on the road ahead, for instance rough road or change of surface, changing turning lines to approach a bend or turn
- what verbal cues the stoker may use to let the pilot know what is happening behind (if possible) such as approaching traffic – this will depend on the visual acuity of the vision-impaired partner

Any change of movement must be flagged to ensure no negative impact on balance. With a really attuned partnership, this may develop to where both instinctively recognise changes in movement of their partner and the bike and will react appropriately. It is vital to a positive experience on a tandem that the pilot encourages and respects the opinion of the stoker and that the journey is on the basis of shared knowledge.

The gears and brakes on a tandem are controlled by the pilot and the partnership needs to agree a general list of cues, for example;

“Gear” – Take some pressure off the pedals for a split second, whilst still spinning the cranks, in order to change gears.

“Cruising” – Stop pedalling at the same pedal location (for example "right foot forward") and coast along.



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“Slowing” – Stop pedalling (cruising position) and slowly applying the brakes.

“Stopping” – Brakes are applied immediately and pedalling motion stops (take up cruising position) as soon as possible.


“Ready?” – A question asked by the front or rear rider to announce they are ready and waiting to ride from a stationary position.

“Bump” – Allows the rear rider to prepare for a hump or depression in the road by taking some weight off their saddle.

“Going for it” – Applying as much power to the pedals as possible to make an orange light or traffic gap.

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- Manual handling training is recommended for those volunteering to assist participants.
 - Those assisting should bend their knees, rather than their backs, prior to bearing weight.
 - It is best for someone assisting for the first time to shadow someone with experience to learn the correct way to assist.
 - When transferring a person with a disability from their wheelchair to any other mobility device or platform, the level of assistance required will very much depend on the functional ability of the person and how much they can transfer themselves.
 - The person with a disability is the best one to give directions on what form of assistance they need when being lifted.

STAGES OF PROGRESSION are always a BALANCE BETWEEN STABILITY AND EFFICIENCY

- 
- Bike Setup - should favour STABILITY and height to ensure EASE of ACCESS
 - Body position - for comfort, positioned for optimal propulsion for stage of learning (will differ as experience builds) and to allow looking in the direction of travel
 - Movement - emphasis on steady STABLE upper body
 - Head position - should be held up at all times and with eyes looking in the direction of travel



LEARNING TO CYCLE SPECIALISED BICYCLES

Stopping

Hand cycle

- To brake a rider needs to take one hand off a pedal but the hand cycle can still be controlled with one hand as braking occurs before turning and not during it.
- Hand cycles can free wheel but don't have a back brake
- Riders need to be very aware that a hand cycle propelled at power can be faster than a two- wheel bike going downhill due to the different weight distribution of the rider.

Tandem

- what verbal cues the pilot will use to let the stoker know about slowing and stopping
 - When brakes are about to be pulled and degree – “slow brake” or “sharp brake”
 - Which side bike will tilt to and so, which foot to the ground
 - Whether stopping on the flat or an incline, either up or down

Getting off the bike

Hand cycle

- Be sure the hand brake is applied before an individual starts getting off the hand cycle
- Individuals organising and assisting at sessions for trying out hand cycles should be guided by those taking part on getting off the bike, particularly with regard to
 - Correctly positioning a wheelchair in proximity to a hand cycle to best facilitate getting off
 - Height of the hand cycle relative to a wheelchair, what direction the rider needs to move to get off (up, down, sideways), whether an interim move to a bench may help
 - Whether the rider wishes to have physical assistance or not
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- the preferred side of the bike both get off to, while practising for both (it is best, if the stoker is comfortable with it, for the partnership to get used, as early as possible, to getting off to the left, as this fits with cycling on Irish roads)
 - The pilot will need to be aware of their leg length and foot when getting off the bike to ensure their partner is not in reach
 - The partnership may need to lean the bike to assist with getting off, depending on the saddle(s) height and should agree how to control this, likely with the pilot controlling the degree of tilt with their partner supporting the weight (the weight of a tandem will be approximately twice that of a standard road bike) once they are agreed to side to tilt too (to the left fits with Irish roads)
- For a starting stoker, the saddle should be set so both feet can comfortably reach the ground



LEARNING TO CYCLE SPECIALISED BICYCLES

PILOT TRAINING GUIDELINES



- 1 Pilot is known to be a strong and safe cyclist, riding regularly at least 25 miles a week.
- 2 Pilot joins tandem group ride as a solo cyclist to observe the group's riding behaviour and familiarise themselves with the route.
- 3 Pilot is familiarised with the tandem cycle, names of parts, etc.
- 4 Pilot takes tandem solo (with no stoker) on a one-hour ride to practise controlling an empty bike (Skip this step if the pilot already has extensive tandem experience.)
- 5 Pilot rides as stoker on tandem with tandem trainer. (It is helpful to do some of this riding blind folded, to simulate the experience of visually- impaired riders) Practise take-off, stopping, and slow turns.
- 6 Pilot practises piloting, with tandem trainer as stoker. Practise: communication, take-off, stopping, slow turns, fast turns, bumps, wobbly stoker, slow speed riding.
- 7 Pilot is trained in pre-ride safety inspection and basic road repairs: flat tires, derailleur issues, brakes.
- 8 Pilot "self-certifies" when they feel ready after practising AND is "certified" by a designated tandem trainer by passing a road test and demonstrating ability to fix a flat and other minor issues.

TANDEM RIDING TIPS



- 1 Break the stoker in gently: practise starting and stopping before embarking on a ride.
2. Be more cautious than you would on a solo bike; anticipate all turns, bumps, and stops.
3. Announce all bumps. State, "Bump ahead," and count down: "3, 2, 1, BUMP." A solo rider unconsciously shifts weight from the saddle onto their legs for a bump - an unsuspecting stoker could be painfully jarred off the saddle or worse cause a crash.
4. Announce shifts up or down, and power surges for the stoker.

The listed Pilot Training Guidelines are used with kind permission and taken from THE ADAPTIVE CYCLING TRAINER'S MANUAL, an introductory manual and resource on cycling for individuals with disabilities

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AUTHOR/EDITOR

David Lee, MS, CTRS/L
Northeast Passage
Durham, NH

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CONTRIBUTORS

Greg Milano
BORP Cycling Program
Berkeley, CA
Patrick Addabbo
Adaptive Sports Center
Crested Butte, CO
Scott Moro

Ride2Recovery

Calabasas, CA
Connor Inslee
Outdoors for All Foundation
Seattle, WA
Ian Lawless
Paralympic Cycling
Colorado Springs, CO



LEARNING TO CYCLE WITH DISABILITY

PROGRESSING SKILLS



As trainees grow in skill and confidence, the trainer should look to progress through the core skills with guidance appropriate to the equipment the trainee is using.

Shoulder checking, riding one handed, freewheeling, back pedalling and cornering

Shoulder Checking

- **Steady** and controlled pace
- Hands on the handlebars – thumbs under and fingers over – looking ahead.
- Hold the **pedals still**
 - Hold the **handlebars**, keep the **arm of the checking shoulder** quite **straight** and steady for control and look smoothly back. Soften the opposite arm/elbow to help keep the handlebars straight.
 - Practise until comfortable shoulder checking to either side while cycling in a straight line.
 - If nervous, freewheel and then look behind.

Riding One Handed

- **Steady** and controlled pace, possibly freewheeling.
- Hands on the handlebars – thumbs under and fingers over – looking ahead.
- Start by **easing a hand** so only the finger tips touch the handlebar.
- Next, **hover** the hand just above the handlebar.
- Gently **remove** the hand fully off the handlebar, initially for a very short time.
- **Look ahead** to maintain a straight line.
- **Shift the body weight** between the saddle and the supporting arm to keep control.
- Keep a good, but relaxed, **grip** on the handlebar with the **supporting hand**.
- Place the **hand back on** the handlebar after 3 to 4 seconds.
- Practise until comfortable riding one-handed on both the left and right side.

Freewheeling

- **Stop pedalling**, **keep both feet on the pedals**, leading to a steadying and gradual slowing

Back Pedalling

- **Push the pedals back** instead of forward, just once, **keeping both feet on the pedals** to change pedal position without pushing the bike forward

Cornering

- **Control speed** into the corner.
- **Look forward** and **move the head to look through** and **round the corner** on approach.
- Keep **both hands on the handlebars** for control when cornering.
- Generally, take a corner with a small, smooth movement of the handlebars.
- Keep the **inside pedal** (on the turning side) up to ensure balance and readiness to cycle out the far side of the corner, and to avoid the pedal hitting the ground while leaning.
- Generally, **freewheel through**, and then **pedal out** of, the corner
- If the inside pedal is down, back pedal to bring it up just before entering the corner.



LEARNING TO CYCLE WITH DISABILITY

GAMES AND ACTIVITIES



As individual trainees become more mobile and move to cycling independently, the trainer can introduce games to further develop bike-handling skills, for example;

- Going in and out (opposite sides of alternating cones) through cones. Spacing between cones can be varied according to the ability of individuals or according to the increasing skill level of a trainee
 - Turning left and turning right – following curving lines of cones will introduce trainees to the concepts of turning. The curve can be made more acute, until it becomes an actual turn, as trainees' skill progresses
 - At all stages, trainees should be prompted to let their head lead, by looking ahead to where the curve/turn is leading
 - As a progression to turning, trainees can complete exercises in freewheeling between points, so that they learn the link between movement, speed and pushing pedals
 - As a progression to turning and gauging turning lines for hand cycles and tandems
 - wide offset slalom for cornering practice to left and right
 - cornering first to left, then to right, round a large circle decreasing in size as riders skill increases
 - cornering first to left, then to right, round a large circle increasing speed as riders skill increases
 - It is important that games and skills exercises challenge each individual to achieve within their own stage of learning and skill level eg ONE TWO THREE RED LIGHTS
 - This game focuses on pedalling and braking
 - The trainer stands at one side of the yard/hall, which is the finish line
 - All the riders are on their bikes facing him or her on the other side, this is the start line
 - The trainer turns their back on the riders and shouts "One, Two, Three", during which time the riders cycle as quickly as they can towards the trainer in a straight line
 - The trainer turns around, and shouts "Red Light"
 - At this point the riders need to brake correctly
 - ~ If the rider pulls their back brake too hard the back wheel will skid
 - ~ if the rider pulls the front brake too hard the back wheel will pop up
- The winner is the first person to reach the finish line.

For additional exercises, refer to the CYCLE RIGHT resource SKILLS AND GAMES FOR LEARNING



LEARNING TO CYCLE WITH DISABILITY

FEEDBACK AND EVALUATION



Over the course of the session the trainer should continuously monitor trainees for progress towards the target outcomes, and should give individual feedback to trainees (and those assisting them as appropriate), as required, to help improve technique.

At the end of each session the trainer should review to gauge whether the content delivery has been successful and whether trainees have achieved the required outcomes. To help analyse this, the trainer can pose questions to him/herself, samples of which follow. Trainers may also rephrase these questions directly to the trainees to prompt their knowledge on the topics.

- Do trainees display knowledge of which lever controls front and back brakes?
- Can trainees hold the bike in a safe position preventing roll before getting on?
- Are trainees getting on the bike safely and correctly?
- Are trainees taking up a position on the bike that will lead to effective movement?
- Can trainees start off independently?
- Can trainees pedal increasing distances independently while maintaining balance?
- Can trainees use their brakes to stop safely and in a controlled way?
- Can trainees corner both left and right approaching at appropriate speed and taking correct cornering lines?
- Can trainees use the gears on the bike to assist their progress at appropriate speed?

At the end of each session, the trainer should emphasise the importance of practice as an essential part of learning and should encourage participants to get out and practise their skills on the bike before the next session