The Arm Doc
GET IT RIGHT FROM THE START

Professor M. A. Imam
MD, MSc (Orth)(Hons), DSportMed, ELP (Oxon), PhD, FRCS (Tr and Orth)
Subspecialist in Upper Limb and Complex Trauma Reconstruction
Tel: 020 3384 5588
info@thearmdoc.co.uk
www.thearmdoc.co.uk

Cycling Safety

A Patient Guide to Riding Safely, Avoiding Injury, and Recovering Well

Written by an upper limb and trauma surgeon for riders of every age and ability

What this guide covers

1. Introduction

Cycling has never been more popular in the United Kingdom. Millions of us now ride for leisure, fitness, and the daily commute, and the Department for Transport continues to record a steady rise in the number of journeys made by bike. It is easy to see why. Cycling is inexpensive, it eases congestion, it cuts carbon emissions, and it is one of the simplest ways to build regular exercise into a busy life. The benefits for the heart, the joints, the waistline, and the mind are real and well established.

With that growth, however, comes a responsibility to ride well. Cycling-related injuries remain common, and the National Health Service treats tens of thousands of them every year. Most are minor, but a proportion are serious, and a small number are life-changing. The encouraging truth, and the reason this guide exists, is that the great majority of these injuries are preventable. The right equipment, sensible habits, a well-kept bicycle, and a little forward planning together remove most of the risk.

I write as an upper limb and trauma surgeon. In the operating theatre and the fracture clinic I see, week after week, the injuries that cycling can cause, and just as often the injuries that a few simple precautions would have prevented. This guide draws on that experience. It explains the injuries cyclists most commonly sustain and why the arm and shoulder are so frequently involved, sets out the measures that genuinely keep you safe, and offers clear, practical advice on what to do, and what not to do, if an accident ever happens to you or someone you are riding with.

The five habits that matter most

- Wear a correctly fitted, standards-approved helmet on every single ride.
- Make yourself easy to see, by day and in poor light alike.
- Keep your bike well maintained and check it before you set off.
- Ride predictably, follow the Highway Code, and anticipate other people.
- Know how to recognise a serious injury and when to seek help.

2. Understanding Common Cycling Injuries

Knowing how cyclists tend to be hurt is not meant to alarm you. It is meant to help you understand where the risk lies, so that the precautions later in this guide make sense. The injuries below are the ones an orthopaedic team sees most often.

When we come off a bike, instinct takes over. We throw out a hand to break the fall, or we land on the point of the shoulder. That reflex protects the head and chest, which is exactly what it is designed to do, but it channels the force of the impact straight into the arm, the wrist, and the collarbone. This is why upper limb injuries dominate a cycling trauma list, and why a surgeon who specialises in the arm and shoulder sees so many cyclists.

Injuries of the arm, shoulder, and hand

- **Collarbone (clavicle) fractures:** One of the most common cycling injuries of all. They typically follow a fall onto the shoulder or an outstretched arm. Many heal well in a sling,

but fractures that are badly displaced, shortened, or broken into several pieces often do better with surgical fixation to restore alignment and speed return to activity.

- **Wrist fractures:** A fall onto an outstretched hand frequently breaks the distal radius (the wrist end of the forearm) or the scaphoid (a small carpal bone at the base of the thumb). The scaphoid is notorious: it can be painful yet invisible on the first X-ray, and a missed scaphoid fracture risks long-term problems, so persistent pain in the anatomical snuffbox should always be reviewed.
- **Shoulder injuries:** A direct fall onto the shoulder can disrupt the acromioclavicular joint, tear the rotator cuff, or dislocate the joint entirely. These injuries can be subtle at first but limiting if left unassessed.
- **Elbow and forearm injuries:** Fractures of the radial head and olecranon, and forearm fractures, occur when the arm takes the full force of a fall.
- **Hand and finger injuries:** Bracing for impact commonly causes fractures, sprains, and soft-tissue damage to the hand and fingers, including injuries to the thumb's ligaments.

Other significant injuries

- **Head and brain injuries:** These range from concussion to serious traumatic brain injury and are the leading cause of death and lasting disability among cyclists. A properly worn helmet substantially reduces this risk and is the most important single thing you can do for your safety.
- **Facial and dental injuries:** Impact with the ground, the handlebars, or a vehicle can fracture facial bones and damage teeth.
- **Spinal injuries:** Less common but potentially severe, which is why a casualty with neck or back pain should not be moved unnecessarily.
- **Lower limb injuries:** Fractures and sprains of the knee, ankle, and lower leg occur, particularly in collisions with vehicles.
- **Road rash and lacerations:** Abrasions and cuts are very common and, if deep or contaminated with grit, can become infected and need proper cleaning.

> **Why the arm and shoulder?** The body sacrifices the limb to protect the core. Putting out a hand or rolling onto the shoulder shields the head, heart, and lungs, but it loads the wrist, forearm, and collarbone. That is the trade-off behind most cycling fractures, and it is why early, accurate assessment of an injured upper limb matters so much.

3. Protecting Yourself — The Essentials

Most cycling injuries can be avoided. The measures below are simple, inexpensive, and proven. None of them takes the joy out of riding; together they take out most of the risk.

Your helmet

A well-fitted helmet is the single most effective piece of protective equipment a cyclist can own. Choosing one and wearing it correctly takes only a moment to learn.

- **Choose the right standard:** Use a helmet that meets a recognised safety standard, such as the BS EN 1078 marking found on helmets sold in the UK.
- **Fit it properly:** It should sit level on the head, about two finger-widths above the eyebrows, never tipped back. The side straps should form a neat V beneath each ear, and the chin strap should be snug enough to admit only one finger.
- **Replace it when needed:** Replace any helmet after a significant impact, even if it looks undamaged, because the protective foam crushes once and cannot do so again. Replace it routinely every few years, as materials degrade with sweat, sunlight, and time.
- **Wear it every time:** Most head injuries happen on short, familiar journeys close to home. Make the helmet automatic, on every ride, however brief.

Being seen

Being seen is being safe. A great many collisions happen simply because a driver did not notice the cyclist in time. You can do a great deal to change that.

- **Use lights:** The law requires a white front light and a red rear light when cycling after dark, together with a red rear reflector. A steady beam shows your position; a flashing mode catches the eye. Many riders now use both, front and rear, day and night.
- **Wear bright and reflective clothing:** Light or fluorescent colours stand out by day. Reflective materials, especially on moving parts such as the ankles, are far more visible at night and in rain than reflectors that stay still.
- **Claim your road position:** Ride where drivers can see you, a sensible distance from the kerb and well clear of the door zone of parked cars. Hiding in the gutter makes you less visible, not more.

The right gear

- **Gloves:** Padded gloves protect the palms in a fall and improve grip and comfort.
- **Eye protection:** Glasses shield against grit, insects, low sun, and wind-induced watering that can blur your view.
- **Footwear and clothing:** Wear shoes that grip the pedals and clothing that will not catch in the chain. Tuck or band loose trouser legs.
- **Mudguards and a bell:** Small additions that keep you comfortable, dry, and able to warn others of your approach.

4. Riding With Traffic and Reading the Road

Riding predictably and anticipating what others will do prevents far more collisions than speed or skill ever will. Think of yourself as part of the traffic, communicating clearly and leaving yourself room to react.

- **Follow the Highway Code:** Obey traffic signals and signs, and learn the rules and new priorities that apply specifically to cyclists. You have a right to the road, and responsibilities on it.
- **Be predictable:** Hold a steady line, avoid weaving between parked cars, and never make sudden movements that other road users cannot anticipate.
- **Signal and make contact:** Give clear, early hand signals before turning or changing position, and make eye contact with drivers at junctions wherever you can. If you cannot see the driver's eyes, assume they cannot see you.
- **Anticipate hazards:** Scan ahead for opening car doors, vehicles emerging from side roads, pedestrians stepping out, drain covers, potholes, wet leaves, and tram or rail lines.
- **Beware large vehicles:** Never ride up the inside of a lorry or bus at a junction. Heavy goods vehicles have large blind spots, and a turning lorry is one of the most dangerous situations a cyclist can face. Hold back and let it go.
- **Keep your distance:** Leave space between yourself and the vehicle in front, just as you would in a car, so that a sudden stop does not catch you out.

> **If you can't see the mirrors, they can't see you.** This single rule, applied to every lorry, bus, and van, prevents some of the most serious cycling injuries of all.

5. Your Bike — Maintenance and the M-Check

A well-maintained bicycle is safer, more comfortable, and more reliable. A brief check before each ride takes moments and prevents avoidable failures at the worst possible time. A simple way to remember it is the M-check, in which your eyes and hands travel across the bike in the shape of an M, from the front wheel up to the saddle and down to the back wheel.

- **Brakes:** Squeeze both levers and confirm the brakes engage firmly well before the lever reaches the bar. Check the pads are not worn down.
- **Tyres:** Check the pressure is correct and inspect the tread and walls for wear, cuts, bulges, or embedded glass and flints.
- **Wheels and quick-releases:** Make sure the wheels spin true and that quick-release levers or thru-axles are fully closed and tight.
- **Chain and gears:** Keep the chain clean and lightly oiled, and confirm the gears shift smoothly without slipping.
- **Bolts and headset:** Check that the handlebars, stem, and seat post are secure and that the steering is firm with no play.
- **Lights and bell:** Confirm lights are present, charged, and working, and that your bell or horn sounds.

Beyond these daily checks, have your bike serviced periodically by a good mechanic. Brake and gear cables, tyres, and chains all wear out, and catching them early is cheaper and far safer than discovering the problem on the road.

6. Riding in All Conditions and Seasons

Weather and light change the road beneath you and the way others see you. A few adjustments keep you safe through the year.

- **Rain and wet roads:** Braking distances lengthen, painted lines and metal covers become slippery, and visibility drops. Brake earlier and more gently, ease off in corners, and give yourself more room.
- **Ice and frost:** Black ice forms on shaded patches, bridges, and untreated lanes. If in doubt, slow right down, avoid sudden steering or braking, or choose another way to travel that day.
- **Wind:** Strong gusts can push you sideways, especially on exposed roads and when passing gaps between buildings or large vehicles. Hold the bars firmly and anticipate the buffet.
- **Low winter light and darkness:** Use your lights early, add reflective layers, and remember that dawn and dusk glare can dazzle drivers and hide you from view.
- **Heat and long summer rides:** Carry water, pace yourself, and use sun protection. Fatigue and dehydration slow reactions and concentration just as surely as bad weather.

7. E-Bikes, Children, and Family Cycling

Electric bikes

E-bikes have opened cycling to many more people, but their extra weight and higher average speed change how they handle and how quickly situations develop.

- **Respect the speed:** You will reach junctions and corners faster than on a conventional bike. Brake earlier and read the road further ahead.
- **Mind the weight:** An e-bike is heavier to manoeuvre at low speed and to lift, so take care setting off, stopping, and parking.
- **Maintain the brakes:** Higher speeds and greater mass place more demand on the braking system, so keep it in excellent condition.

Children and young riders

Cycling is wonderful for children, building confidence, coordination, and independence. A little structure keeps it safe.

- **Helmets, always:** Set the example by wearing your own. A correctly fitted child's helmet is non-negotiable.
- **Match the road to the child:** Keep younger children to parks, paths, and quiet streets until their judgement and skills are ready for traffic.
- **Teach the basics early:** Schemes such as Bikeability teach children to ride safely and confidently, and the habits learned young tend to last.
- **Check the fit of the bike:** A bike that is too large is hard to control. The child should be able to put a foot down comfortably and reach the brakes easily.

Riding as a family or group

- **Ride in single file where needed:** On narrow or busy roads, single file lets traffic pass safely; two abreast can be sensible and lawful on quieter roads to stay visible.
- **Place the most experienced riders front and back:** They can set the pace and watch for hazards approaching from behind.
- **Agree your signals:** Calling and pointing out potholes, parked cars, and turns keeps everyone informed.

8. If You Have an Accident — What to Do

Even the most careful cyclist can be caught out. Knowing what to do calmly protects you and anyone helping you, and it supports your recovery.

1. **Make the scene safe.** If you can, move out of the carriageway, but do not move a casualty who has neck or back pain or who is unconscious unless they are in immediate danger. Do not remove a helmet if a head or neck injury is suspected.
2. **Call for help.** Dial 999 for any serious injury, loss of consciousness, heavy bleeding, breathing difficulty, or suspected spinal injury. For less severe injuries, seek prompt assessment at an urgent treatment centre or with your GP.

3. **Do not dismiss upper limb pain.** Pain over the collarbone, shoulder, or wrist after a fall can mean a fracture even when you can still move the limb. Being able to move it does not rule out a break.
4. **Watch closely for head injury.** Seek immediate medical care for any loss of consciousness, confusion or drowsiness, repeated vomiting, a severe or worsening headache, seizures, fluid from the nose or ears, or disturbed vision. These can develop in the hours after the fall, so do not be left alone if you have hit your head.
5. **Record what happened.** If a vehicle was involved, note its registration and the driver's details, photograph the scene if you safely can, gather witness contacts, and report the incident to the police where the law requires it. Keep your damaged helmet as evidence and as a reminder to replace it.

Seek urgent medical attention if you notice any of these:

- A visibly deformed, bent, or shortened limb.
- Inability to move a limb, or to bear weight.
- Numbness, pins and needles, or a cold, pale hand or foot.
- Severe or worsening pain, or pain out of proportion to the injury.
- Any loss of consciousness, confusion, or repeated vomiting.
- A wound that will not stop bleeding, or one heavily contaminated with grit.

9. Recovery and Getting Back in the Saddle

The encouraging news is that most cycling injuries recover fully when they are assessed and treated promptly. Early, accurate diagnosis is everything, particularly for wrist and shoulder injuries, where a fracture missed in the first days can cause lasting trouble that was entirely avoidable.

Where an injury is straightforward, a sling, a cast, or a course of physiotherapy is often all that is needed. Where surgery is required, modern fixation techniques are reliable and allow most people to return to cycling and an active life. A collarbone plated soundly, or a wrist fracture fixed and rehabilitated well, should not be the end of your riding.

Rehabilitation matters as much as the initial treatment. Guided physiotherapy restores movement, strength, and, just as importantly, confidence. When you return to the bike, do so gradually: begin on quiet, familiar routes, keep the first rides short, and rebuild distance and difficulty as your body and nerve allow. If pain, weakness, or stiffness persists, have it reviewed rather than riding through it.

A note from Professor Imam: I treat cyclists every week, and I see how much a good recovery depends on getting the diagnosis right early. If you have injured a shoulder, collarbone, wrist, or hand and are unsure how serious it is, it is always worth being assessed. The right answer at the right time protects the rest of your cycling life.

10. Building a Safer Cycling Culture

Individual precautions work best when the roads and the people on them support cycling too. Communities, schools, employers, and policymakers each have a part to play, and progress in one area lifts the others.

- **Public awareness:** Campaigns that encourage drivers and cyclists to understand and respect one another reduce conflict and collisions.
- **Education in schools:** Programmes such as Bikeability give children safe cycling skills and good habits that stay with them for life.
- **Better infrastructure:** Protected cycle lanes, well-designed junctions, and secure parking make everyday cycling safer and more attractive.
- **Supportive workplaces:** Cycle-to-work schemes, secure storage, and changing facilities help people commute by bike with confidence.
- **Learning from data:** Recording collisions and near-misses helps identify dangerous locations so that resources are directed where they will do the most good.

11. Quick-Reference Safety Checklist

Keep this to hand. A few seconds before each ride, and a few sensible habits on it, prevent the majority of injuries.

Before you ride	What to check or do
Helmet	Standards-approved, level, two fingers above the brow, straps snug.
Brakes	Both engage firmly; pads not worn.
Tyres	Correct pressure; no cuts, bulges, or embedded debris.
Wheels & bolts	Quick-releases closed; handlebars and seat secure.
Chain & gears	Clean, oiled, and shifting smoothly.
Lights	Front and rear fitted, charged, and working.
Visibility	Bright or reflective clothing for the conditions.
On the road	Ride predictably, signal early, avoid lorry blind spots.
If you fall	Assess for head, neck, and upper limb injury; call 999 if serious.

12. Conclusion

Cycling is one of the healthiest, greenest, and most enjoyable ways to travel, and it should be safe for everyone who chooses it. The overwhelming majority of injuries can be prevented with simple, consistent habits: wear a helmet, be visible, keep your bike in good order, ride predictably, and adapt to the conditions. And if an accident does happen, prompt assessment and the right treatment give you the best possible chance of a complete recovery.

If you have been injured while cycling, or have any concern about a shoulder, collarbone, wrist, or hand injury, expert assessment can make a genuine difference to how well and how quickly you recover. My team and I are here to help you get safely back to the activities, and the rides, you love.

Ride safely, and get it right from the start.

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