

Bike smart - the facts



Cycling is a cheap and fun way to get about, and it's great for both personal health and for the planet. Cycling has become incredibly popular in the last few years and people are making longer trips by bike on average than ever before.¹ However, cyclists – and young cyclists in particular – remain some of the most vulnerable road users in the UK, and more than 18,000 people are killed or injured when riding their bikes every year.²

Under-17s are more likely to own bicycles than any other age group, but young cyclists face particular danger on the roads. Around 190 children aged 12–15 are killed or seriously injured when riding their bikes every year, and many more sustain more minor injuries.³ Just imagine: that's equivalent to all the children in your year group being killed or suffering life-changing injuries in a single year.

The benefits of cycling

Cycling is one of the healthiest, cheapest and most environmentally friendly forms of transport available, with the benefits to public health, congestion and the economy widely acknowledged.

Cycling is an excellent form of exercise and can help with both weight loss and physical fitness. It can contribute to higher overall personal wellbeing,⁴ and can boost brain power too, by increasing blood flow to the brain by around 30–40%.⁵ Teachers report that children who regularly cycle to school are more attentive and achieve better results than other pupils who travel in cars.⁶

Cycling is also much better for the environment than driving. More than a quarter of greenhouse gases come from cars and other vehicles,⁷ whereas cycling is generally considered to be a zero-emissions form of transport. Even when emissions from production and maintenance of bikes are taken into account, the emissions associated with cycling are significantly lower.⁸

The risks for cyclists

In 2017, 101 cyclists died on roads in Britain, meaning they make up 6% of all road deaths.⁹ The fatality rate is disproportionately high – on average, nearly 30 cyclists die for every billion miles they travel, compared with just two car drivers. In 2016, cyclists made up 16% of all admissions to trauma centres from people involved in road collisions.¹⁰ The vast majority (77%) of cyclist casualties are from incidents on roads with 30mph speed limits.¹¹ At this speed, cars travel an average of 23 metres (or 6 car lengths) before stopping, and anyone hit by a car travelling at 30mph has a 20% chance of dying.¹² Cyclists are also vulnerable on the roads outside towns and cities. In 2016, 59 cyclists died in collisions in rural areas.¹³



Junctions are another dangerous hotspot for cyclists, with collisions often occurring because drivers failed to look properly.¹⁴ Between 2011 and 2016, 45% of all cyclist deaths occurred at or near junctions, with more than half of these recorded at T-junctions. Just under a third of all cyclist deaths were recorded on roundabouts, mini-roundabouts and crossroads over the same period.¹⁵



Recognising danger

By the age of 11, many children will regularly be cycling unaccompanied and many may be riding bikes to school by themselves. However, this can be dangerous unless there are safe cycle paths for them to use. Busy roads are particularly dangerous. Children may struggle to focus on hazards that are in their peripheral vision, reducing their awareness of oncoming traffic.¹⁶ Children also perceive danger differently to adults, and may think that if they can see an approaching car, the driver of that car can see them too.¹⁷ Teenagers' brains undergo many changes as part of normal development, making them more likely to be influenced by their peers and more susceptible to take risks when they are cycling.¹⁸

In 2017, almost half (44%) of all cyclist deaths and injuries happened during times when children are travelling to and from school – on weekdays between 7am and 9am, or between 3pm and 7pm.¹⁹

Protecting ourselves

Although there are currently no laws that require cyclists to wear helmets in the UK, Brake and the Highway code recommend wearing them on all cycling trips.²⁰ Almost a quarter of cyclists involved in crashes suffer head injuries,²¹ and although helmets can never stop all injuries, wearing a well-fitted, good-quality helmet can protect children's heads in a collision or if they come off their bike, reducing the risk of head or brain injury by 69%.²² High-visibility and reflective clothing can also increase a rider's chances of being seen,²³ and could reduce the likelihood of being involved in a collision.²⁴

It's really important that a child's helmet fits correctly; if it moves around at all, the level of protection it offers will be reduced, and if it's too small it won't be able to protect the lower part of their head. The straps should form a 'v' under the child's ears without them being able to fit more than two fingers between it and their chin. There should also not be a gap of more than two fingers between their eyebrows and helmet.²⁵



Training builds skills

Training gives young people the skills and confidence they need to prepare them for cycling safely on the roads. Organisations like Bikeability, Cycling Scotland and Cycle Training Wales run training sessions for all ages and abilities, and cover topics from balance and control to planning independent journeys on busier roads. Schools can arrange for professional trainers to deliver courses with their pupils.



Cycling groups

The organisations listed here can provide information to help you find the safest local cycling routes, as well as point you to kit and training and link you up with other cyclists.



- bikeability.org.uk
- www.cyclinguk.org
- www.sustrans.org.uk
- www.britishcycling.org.uk
- www.cycling.scot
- www.cycletrainingwales.org.uk

Get involved

For Road Safety Week 2018, we are shouting out about the safety of those on two wheels, and encouraging everyone to be Bike Smart. We can all play our part in raising awareness about the importance of protecting those on bikes and this year's campaign will focus on policy-makers being Bike Smart by implementing a safe systems approach, mandating lifesaving technology and prioritising cycle friendly infrastructure; drivers being Bike Smart by looking out for those on two wheels, driving safely and slowly and giving riders plenty of space; and cyclists being Bike Smart through safe riding behaviours and appropriate training.

Smart drivers are Bike Smart

Smart drivers are responsible and considerate of other road users, particularly vulnerable road users such as cyclists and motorcyclists. Our short explanation film, infographics and driver advice sheet outline simple but really important measures that all drivers can use to make roads safer for everyone on two wheels.



Find out more at www.roadsafetyweek.org.uk

Powered two-wheelers

Towards the end of their secondary school years, many young people start to think about whether they will ride a powered two-wheeler such as a moped, scooter or motorcycle when they are 16. For this age group, motorbikes can offer freedom and independence, but proper training and protective equipment are essential to help riders to be safe on the roads.

Young, inexperienced motorcyclists are more likely to engage in dangerous riding behaviour, and their risk of being involved in a crash is high. In 2017, 566 motorcyclists aged 16-18 were killed or seriously injured on roads in Britain.²⁶



All the gear? Right idea!

Good quality, well-fitting protective clothing, including helmets, jackets, trousers, boots and gloves, is essential gear for all riders.

Last year, Highways England, the government company responsible for the country's motorways and A roads, launched a hard-hitting campaign aimed at young riders to highlight the potential cost of riding without wearing protective clothing. Watch their video at youtu.be/UMzVsD7F210.



Biker Down!

Biker Down! is a free first-aid course for bikers. Training comprises three modules: incident scene management, casualty care and the science of being seen. The scheme is run by fire and rescue services across the country and covers what to do if you are first to arrive at the scene of a crash, basic life support, and how riders can make themselves seen, without just covering themselves in luminous yellow from head to toe. Find out more at www.facebook.com/bikerdownuk.



References

1. Department for Transport (2018), Walking and cycling statistics, England: 2017
2. Department for Transport (2018), Reported Road Casualties Great Britain 2017
3. ibid
4. Central YMCA (2016), Eudaimonia: How do humans flourish? <https://www.ymca.co.uk/health-and-wellbeing/feature/our-eudaimonia-research-report-how-do-humans-flourish/>
5. Hura M. et al (2014), Changes in Cerebral Blood Flow During Steady-State Cycling Exercise, *Journal of Cerebral Blood Flow and Metabolism* 34(3), 389-96
6. Rajé, F. and Saffrey, A. (2016), The value of cycling https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509587/value-of-cycling.pdf
7. Department for Business, Energy and Industrial Strategy (2018), 2016 UK greenhouse gas emissions: final figures - statistical summary <https://ed.com/groups/cycle-more-often-2-cool-down-planet-quantifying-co2-savings-cycling>
8. Department for Transport (2018), Reported Road Casualties Great Britain 2017, table ras30060
9. Brake (2017), Road collisions responsible for 1 in 5 trauma admissions to hospitals <http://roadsafetyweek.org.uk/new/638-trauma-admissions>
10. Department for Transport (2017), Reported Road Casualties Great Britain 2016
11. Ashton S.J. and Mackay G.M. (1979), Some characteristics of the population who suffer trauma as pedestrians when hit by cars and some resulting implications <http://webarchive.nationalarchives.gov.uk/http://www.dft.gov.uk/foi/responses/2005/nov/203040message/paperaboutthedepartments20302445>
12. Department for Transport (2017), Reported Road Casualties Great Britain 2016, table ras40004
13. Department for Transport (2017), Reported Road Casualties Great Britain 2016, table ras50005
14. Department for Transport (2018), Pedal Cycling Road Safety Factsheet
15. Lenton, S. and Fintley, F. (2018), Public health approaches to safer cycling for children based on developmental and physiological readiness: implications for practice, *British Medical Journal* 2(1)
16. Werda, M. and Brookhuis (1991), K. A., Analysis of Cycling Skill: A Cognitive Approach, *Applied Cognitive Psychology* 5(2), 113-122
17. Sherman, C. (2012), A delicate balance: risks, rewards and the adolescent brain, http://dana.org/Braining_Papers/A_Delicate_Balance_Risks_Rewards_and_the_Adolescent_Brain/
18. Department for Transport (2018), Reported Road Casualties Great Britain 2017
19. Department for Transport (2015), The Highway Code: Rules for cyclists (69 to 82)
20. Brake (2017), Road collisions responsible for 1 in 5 trauma admissions to hospitals <http://roadsafetyweek.org.uk/new/638-trauma-admissions>
21. Olivier, J. and O'Leary, P. (2016), Bicycle injuries and helmet Use: A systematic review and meta-analysis, *International Journal of Epidemiology* 45(1), 372
22. Cycling UK (2017), What's legal - and what's not - on your bike? <https://www.cyclinguk.org/article/whats-legal-and-whats-not-your-bike>
23. Kwan, I. and Mapstone, J. (2006), Increasing pedestrian and cyclist visibility to prevent deaths and injuries, *Cochrane Library* https://www.cochrane.org/CD009438/INJ_increasing-pedestrian-and-cyclist-visibility-to-prevent-deaths-and-injuries
24. Royal Society for the Prevention of Accidents (2018), Road Safety Factsheet: Cycle helmets <https://www.rspa.com/rosapweb/docs/advice-services/road-safety/cyclists-cycle-helmets-factsheet.pdf>
25. Department for Transport (2018), Reported Road Casualties Great Britain 2017, table ras30073
26. Department for Transport (2018), Reported Road Casualties Great Britain 2017, table ras30073