

Road safety factsheet: Cycling accidents

August 2022

In 2020, 16,294 cyclists were injured in reported road accidents, including 4,356 who were killed or seriously injured.^{1**}

Cyclist Casualties, 2020^{2**}

	Child (0-15)	Adult (16-59)	Adults (60+)	All**
Killed	9	76	56	141
Seriously injured	369	3,162	646	4,215
Slightly injured	1,292	9,369	932	11,938
Total	1,670	12,607	1,634	16,294

***All includes casualties where age not recorded*

These figures only include cyclists killed or injured in road accidents that were reported to the police. Many cyclist casualties are not reported to the police, even when the cyclist is injured badly enough to be taken to hospital. The figures also exclude cycling accidents that occur away from the road. Although the number of deaths is accurate, there could be two or three times as many seriously injured cyclists and double the number of slightly injured.

Hospital Admission Statistics (HES data)

Some of the shortcomings in STATS19 data, such as serious injuries caused by non-collision accidents, are overcome using hospital admission statistics. These statistics show that in 2020/21 cyclists accounted for 22,369 cyclist hospital admissions.³

¹ DfT (2021) 'Table RAS30001: Reported road casualties by road user type and severity, Great Britain, 2020' URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>: Accessed 26/07/2022

² DfT (2021) 'Table RAS30024: Reported casualties by age band, road user type and severity, Great Britain, 2020' URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>: Accessed 26/07/2022

³ NHS Digital (2022) 'Hospital Episode Statistics for England. Admitted Patient Care statistics' <https://files.digital.nhs.uk/38/00015E/hosp-epis-stat-admi-ext-cau-2020-21-tab.xlsx>: Accessed 26/07/2022

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The majority of cyclist casualties are adults, with approximately 10 per cent being children. Cycling accidents increase as children grow older, with 12-15 year old riders being more at risk than other child age groups.⁴ To some extent, this reflects increased cycling as children grow older, as well as coinciding with the age when children attend secondary school and may start to indicate riskier behaviour.

Males are far more likely to be involved in cycling accidents than females. In 2020, almost 82% of those injured in a reported cycling road traffic accident were male.⁵

Almost 40 per cent of cyclists killed and 70 per cent of cyclists seriously injured are involved in collisions at, or near, a road junction. Roundabouts are particularly dangerous junctions for cyclists. Not surprisingly, the severity of injuries suffered by cyclists increases with the speed limit, meaning that riders are more likely to suffer serious or fatal injuries on higher speed roads. Almost half of cyclist deaths occur on rural roads.

The weekday peak time for pedal cyclist fatalities and serious injuries is from 7am to 10am and from 4pm to 7pm. During the weekend, there is a single peak around mid-morning (10 am to 12 noon) which gradually tails off during the afternoon and evening⁶.

Per billion vehicle miles, the casualty rate of pedal cyclists that are killed or seriously injured is 866, compared to a rate of 29 for car drivers.⁷

⁴ DfT (2021) 'RAS30024: Reported casualty rates by age band, road user type and severity, Great Britain, 2020'
URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>: Accessed 26/07/2022

⁵ DfT (2021) 'Table RAS30011: Reported casualties by gender, road user type and age URL:
<https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>: Accessed 26/07/2022

⁶ DfT (2021) 'Reported road casualties in Great Britain: pedal cycle factsheet, 2020'
<https://www.gov.uk/government/statistics/reported-road-casualties-great-britain-pedal-cyclist-factsheet-2020/reported-road-casualties-in-great-britain-pedal-cycle-factsheet-2020>
Date accessed: 02/08/2022.

⁷ DfT (2021) 'RAS30070: Relative risk of different forms of transport, Great Britain, 2020'
URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>: Accessed 26/07/2022

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Cycling accidents⁸

Averaged over the period 2015 to 2020:

- an average of two pedal cyclists died and 83 were seriously injured per week in reported road casualties
- a majority of pedal cycle fatalities (59%) do not occur at or within 20m of a junction compared to 32% of all seriously injured (adjusted) casualties
- almost half (46%) of pedal cycle fatalities in two vehicle accidents involved a car
- 56% of pedal cycle fatalities occurred on rural roads compared to 29% of traffic
- 83% of pedal cycle killed or seriously injured casualties were male

The most common contributory factor allocated to pedal cyclists in fatal or serious accidents with another vehicle was 'Driver or rider failed to look properly'.

Use of cycling apps

There is a huge range of apps available for cyclists to use to track their rides on their smartphones. Although used well, cycling apps can be useful for their features such as route planning and activity tracking, used badly, they can be distracting. RoSPA believes it is vital that cyclists use these apps sensibly, considering not only their own safety but that of other road users.

Cyclists should not become distracted by apps on their smartphone, and when using a cycling app they should continue to use their observation skills, adapting their cycling to the conditions around them and travelling at an appropriate speed.

⁸ DfT (2021) 'Reported road casualties in Great Britain: pedal cycle factsheet, 2020'

<https://www.gov.uk/government/statistics/reported-road-casualties-great-britain-pedal-cyclist-factsheet-2020/reported-road-casualties-in-great-britain-pedal-cycle-factsheet-2020> Date accessed: 02/08/2022.



Types of accident⁹

Human error is the main contributory factor involving cyclist collisions. Driver/rider error was the most frequently reported reason for 65 per cent of all reported accidents in 2020.¹⁰

Accidents involving child cyclists are often the result of the child playing, doing tricks, riding too fast or losing control. For teenage and adult cyclists, accidents are more likely to involve collisions with motor vehicles, but a proportion of fatal or serious cyclist accidents reported to the police do not involve a collision with another vehicle, but are caused by the rider losing control of their bicycle.

In collisions involving a bicycle and another vehicle, the most common key contributory factor recorded by the police is 'failed to look properly' by either the driver or rider, especially at junctions. 'Failed to look properly' was attributed to the car driver in 57 per cent of serious collisions and to the cyclist in 43 per cent of serious collisions at junctions.

Other common contributory factors attributed to drivers are 'poor turn/manoeuvre' (in 17 per cent of serious accidents involving a cyclist) and 'careless, reckless, in a hurry (17 per cent). Cyclists are more likely to suffer serious injuries when a driver is judged to be 'impaired by alcohol', exceeding the speed limit' or 'travelling too fast for the conditions'.

The second most common contributory factor attributed to cyclists was 'cyclist entering the road from the pavement' (including when a cyclist crosses the road at a pedestrian crossing), which was recorded in about 20 per cent serious collisions (and over one third of serious collisions involving child cyclists).

The most common vehicle involved in collisions with cyclists is a car or taxi, with the rider usually being hit by the front of the vehicle. In a quarter of fatal cyclist accidents, the front of the vehicle hit the rear of the bicycle.

However, heavy goods vehicles (HGVs) present a particular danger for cyclists, especially in London where around 20 per cent of cyclist fatalities occur involve an HGV. This is despite HGVs accounting for only 4 per

⁹ Department for Transport (2015) 'Facts on pedal cycles'

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/447674/pedal-cyclists-2013-data.pdf Date accessed: 02/08/2022.

¹⁰ DfT (2021) 'RAS50001: Contributory factors in reported accidents by severity, Great Britain, 2020' URL:

<https://www.gov.uk/government/statistical-data-sets/ras50-contributory-factors>: Accessed 26/07/2022

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cent of vehicle kilometres on London's roads in 2012.¹¹ These often occur when an HGV is turning left at a junction'. About one quarter of accidents resulting in serious injury to a cyclist involved an HGV, bus or coach 'passing too close' to the rider.

Common cycling accidents

- Motorist emerging into path of cyclist
- Motorist turning across path of cyclist
- Cyclist riding into the path of a motor vehicle, often riding off a pavement
- Cyclist and motorist going straight ahead
- Cyclist turning right from a major road and from a minor road
- Child cyclist playing or riding too fast

Cycling in icy weather

Icy road surfaces pose a significant risk to cyclists. A report published by NHS Bristol states that non-collision incidents (NCIs) cause the most injuries as a result of travel in England, as well as the most harm to cyclists, and slippery road surfaces account for a substantial amount of these.¹² By analysing hospital admission statistics, it has been found that around 10,000 cyclists visit A&E every year as a result of slipping on ice. It was also found that NCIs related to ice were the second highest cause of cyclist hospital admissions in 2016/17.¹³ Furthermore, it is likely that for some individuals, the experience of even a minor NCI without injury may discourage them from cycling again. These situations need to be avoided, as it is currently a public health

¹¹ Allen et al. (2014) 'London Freight Data Report: 2014 Update' URL: <http://content.tfl.gov.uk/london-freight-data-report-2014.pdf> : Accessed 26/07/2022

¹² Benington R (2012) An introduction to non-collision cycling incidents. *NHS Bristol*. <https://icycleweather.wixsite.com/iceandcycling/5-2-1-1> : Accessed 26/07/2022

¹³ Sustrans (2018) Ice major cause of cycling accidents... and what can be done about it. <https://www.sustrans.org.uk/our-blog/opinion/2018/november/ice-major-cause-of-cycling-accidentsand-what-can-be-done-about-it/>: Accessed 26/07/2022

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priority to encourage the use of active travel in order to reduce carbon emissions and congestion.¹⁴ By surveying cyclists and analysing the available data, preventative measures can be developed with the aim of increasing cycling rates, especially during winter months. Such measures include improved gritting, and more detailed weather forecasting – cyclists frequently rely on weather forecasts in order to decide whether to cycle or not. However, the temperatures included in weather reports refer to the air temperature rather than the ground temperature, and the ground can be several degrees colder than the air, meaning individuals may think that it is safe to cycle when the ground surface is icy.¹¹

For more detailed information about NCIs and cycling in icy weather, please see RoSPA's case study:

<https://bit.ly/2WjwxUn>

This GOV.UK website allows you to find where your council will grit, which may help with cycle route planning:

<https://www.gov.uk/roads-council-will-grit>

¹⁴ Daniels K, Benington R. (2017) Delivering Accident Prevention at local level in the new public health system, Part 2: Accident prevention in practice. <https://www.rospa.com/rospaweb/docs/advice-services/public-health/rs3-non-collision-casestudy-edition2.pdf>: Accessed 26/07/2022