

# Road Safety Factsheet

November 2020

## Cycling Accidents

In 2019, 16,884 cyclists were injured in reported road accidents, including 4,433 who were killed or seriously injured.<sup>1\*</sup>

### Cyclist Casualties, 2019<sup>2\*</sup>

	Child (0-15)	Adult	All**
<b>Killed</b>	10	90	100
<b>Seriously injured</b>	462	3,827	4,333
<b>Slightly injured</b>	1,522	10,557	12,451
<b>Total</b>	1,994	14,474	16,884

\*\*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 STATS 19 data, such as serious injuries caused by non-collision accidents, are overcome using hospital admission statistics. These statistics show that cyclists suffered a greater number of serious injuries than other road users in 2016/2017, accounting for 16,780 hospital admissions. Second in number were car occupants<sup>3</sup>.

The majority of cyclist casualties are adults, with approximately 10% being children. Cycling accidents increase as children grow older, with 10 to 15 year old riders being more at risk than other age groups, including adults until about the age of 60 years<sup>4</sup>. To some extent, this reflects increased cycling as children grow older followed by a switch to motorised transport from the late teens onwards. It also coincides 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 2019, around 80% of those injured in a reported cycling road traffic accident were male<sup>5</sup>.

Almost two thirds of cyclists killed or seriously injured were involved in collisions at, or near, a road junction, with T-junctions being the most commonly involved. Roundabouts are particularly dangerous junctions for cyclists. Not surprisingly, the severity of injuries suffered by cyclists increases with the speed limit, meaning



accidents don't have to happen

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that riders are more likely to suffer serious or fatal injuries on higher speed roads. Almost half of cyclist deaths occur on rural roads.

Around 80% of cycling accidents occur in daylight - which is when most cycling takes place. For child cyclists, 90% of their accidents occur during the day. The most dangerous hours for cyclists are 3.00 to 6.00 p.m. and 8.00 to 9.00 a.m. on weekdays<sup>6</sup>. However, cycling accidents in the dark are more likely to be fatal.

More cycle accidents occur during the spring and summer months (May to September) than the autumn and winter months (October to April). However, the casualty rate in terms of miles travelled is higher over the autumn and winter period.

Per billion vehicle miles, the casualty rate of pedal cyclists that are killed or seriously injured is 1,284, compared to a rate of 31 for car drivers<sup>7\*</sup>.

## Cycling accidents<sup>8</sup>

- Around 75% of fatal or serious cyclist accidents occur in urban areas
- Around half of cyclist fatalities occur on rural roads
- 75% happen at, or near, a road junction
- 80% occur in daylight
- 80% of cyclist casualties are male
- 10% of cyclists killed or injured are children
- Around three quarters of cyclists killed have major head injuries.

## 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.



## Types of accident<sup>6</sup>

Human error is the main contributory factor involving cyclist collisions. Driver/rider error was the most frequently reported reason for 66% of all reported accidents in 2019<sup>9</sup>.

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 about 16% 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% of serious collisions and to the cyclist in 43% of serious collisions at junctions.

Other common contributory factors attributed to drivers are 'poor turn/manoeuvre' (in 17% of serious accidents involving a cyclist) and 'careless, reckless, in a hurry (17%)'. 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% 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% of cyclist fatalities occur involve an HGV. This is despite HGVs accounting for only 4% of vehicle kilometres on London's roads in 2012<sup>10</sup>. 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



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- 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.<sup>11</sup> 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.<sup>12</sup> 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 priority to encourage the use of active travel in order to reduce carbon emissions and congestion.<sup>13</sup> 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.<sup>11</sup>

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>

## Injury Patterns

### Limb Injuries

Limb injuries are common in cyclist casualties, with over 40% suffering arm injuries and around 25% suffering leg injuries.

### Chest/Abdomen Injuries

Chest and abdomen injuries occur much less frequently (5%), but are often serious. When they do occur they are often accompanied by head injuries.



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## Head Injuries

Head injuries, ranging from fatal skull fractures and brain damage to minor concussion and cuts, are very common injuries to cyclists. Hospital data shows that over 40% of cyclists, and 45% of child cyclists, suffer head injuries. A study of 116 fatal cyclist accidents in London and rural areas found over 70% of the cyclist fatalities in London had moderate or serious head injuries in London, and over 80% of those killed in collisions on rural roads.

## References

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<sup>1</sup> DfT (2020) 'Table RAS30001: Reported road casualties by road user type and severity, Great Britain, 2019'  
URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>  
Date Accessed: 23/11/2020.

<sup>2</sup> DfT (2020) 'Table RAS30024: Reported casualties by age band, road user type and severity, Great Britain, 2019'  
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Date Accessed: 23/11/2020.

<sup>3</sup> NHS Digital. 'Hospital Episode Statistics for England. Admitted Patient Care statistics, 2016-17' URL:  
<https://files.digital.nhs.uk/publication/7/5/hosp-epis-stat-admi-ext-caus-2016-17-tab.xlsx>  
Date accessed: 10/12/2019

<sup>4</sup> DfT (2020) 'RAS30025: Reported casualty rates by age band, road user type and severity, Great Britain, 2019'  
URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>  
Date Accessed: 23/11/2020.

<sup>5</sup> DfT (2020) 'Table RAS30010: Reported casualties by gender, road user type and severity, Great Britain, 2009-2019'  
URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>  
Date Accessed: 23/11/2020.

<sup>6</sup> DfT (2014) 'Focus on Cycling in 'Reported Road Casualties Great Britain 2013''

<sup>7</sup> DfT (2020) 'RAS30070: Relative risk of different forms of transport, Great Britain, 2019'  
URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>  
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<sup>8</sup> TRL (2009) 'TRL Report PPR 445: Collisions involving cyclists on Britain's roads: establishing the causes'  
URL: [www.trl.co.uk/online\\_store/reports\\_publications/trl\\_reports/cat\\_road\\_user\\_safety/report\\_collisions\\_involving\\_pedal\\_cyclists\\_on\\_britain\\_s\\_roads\\_establishing\\_the\\_causes\\_.htm](http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_road_user_safety/report_collisions_involving_pedal_cyclists_on_britain_s_roads_establishing_the_causes_.htm)

<sup>9</sup> DfT (2020) 'RAS50001: Contributory factors in reported accidents by severity, Great Britain, 2019'

URL: <https://www.gov.uk/government/statistical-data-sets/ras50-contributory-factors> Date Accessed: 23/11/2020.

<sup>10</sup> Allen et al. (2014) 'London Freight Data Report: 2014 Update'

URL: <http://content.tfl.gov.uk/london-freight-data-report-2014.pdf> Date Accessed: 03/11/2017.

<sup>11</sup> Benington R. An introduction to non-collision cycling incidents. *NHS Bristol*.

<https://icycleweather.wixsite.com/iceandcycling/5-2-1-1> Published October 2012. Accessed October 24, 2019.

<sup>12</sup> Sustrans. 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/>. Updated November 28, 2018. Accessed October 24, 2019.

<sup>13</sup> Daniels K, Benington R. 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>. Published December 2017. Accessed October 24, 2019.

**\*Due to changes in severity reporting across some police forces since 2016, newer statistics are not comparable to earlier years. Therefore, the DfT provides both adjusted and unadjusted casualty figures in their statistical data tables. RoSPA uses adjusted figures as the DfT states that they are recommended "for the analysis of trends over time".**