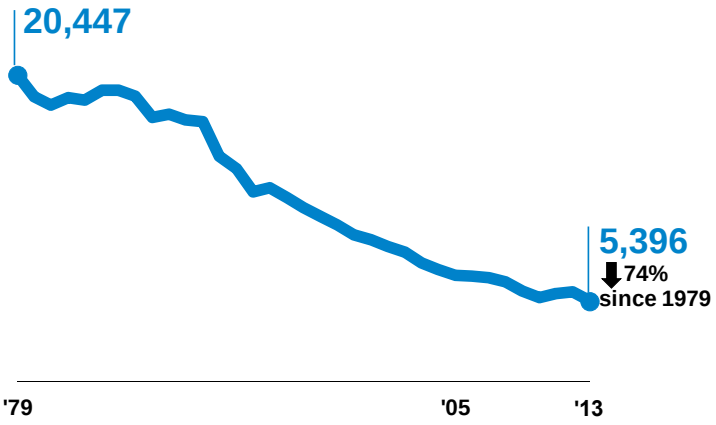
Department for Transport

Facts on Pedestrian Casualties
June 2015

Overview

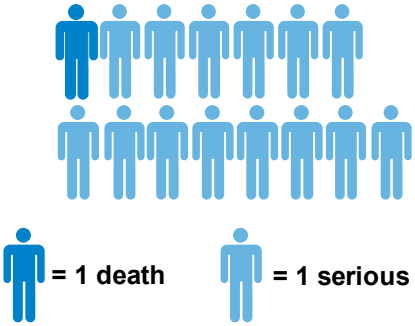
Pedestrians are one the of the vulnerable user groups, along with motorcyclists, horse riders and pedal cyclist. These groups are not protected by a vehicle body in the same way car users, etc., are, and tend to be harder for other drivers to see on the road. They, therefore, are particularly vulnerable to injuries and accidents.

Killed or seriously injured (KSI), 1979-2013



Average per day, 2013

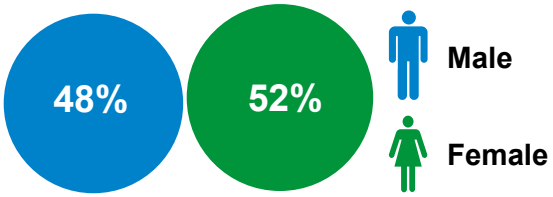
An average of 1 death and 14 seriously injured pedestrians per day



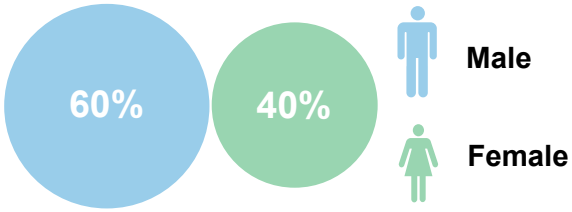
Gender differences

Although females walk further than men, a higher proportion of KSI casualties is accounted for by men.

Proportion of total distance walked

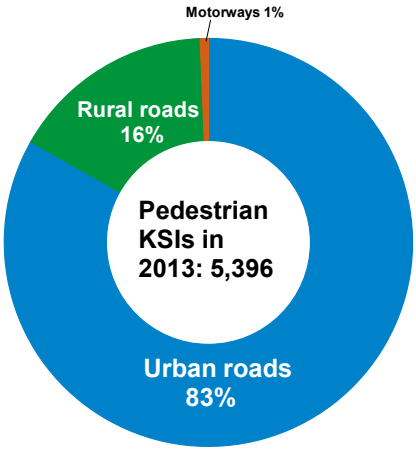


Proportion of total KSIs



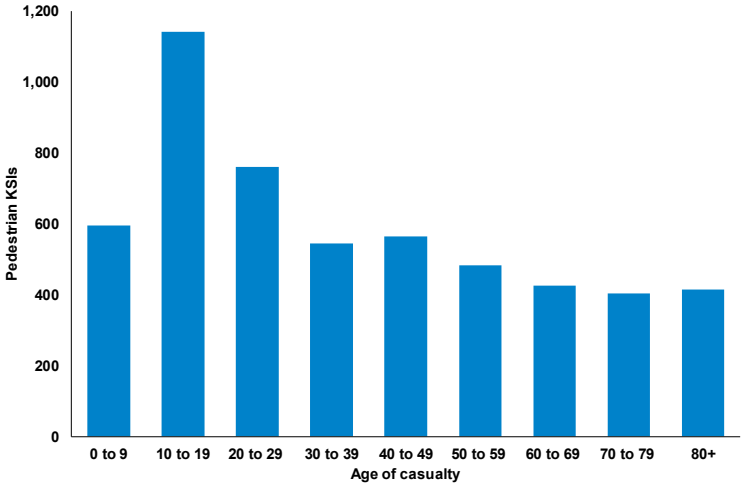
Pedestrian KSIs by road type: GB: 2013

Urban roads account for more than four fifths of pedestrian KSI casualties across all road types



Pedestrian KSIs by age, 2013

Pedestrians aged between 10 and 19 account for the majority (21 per cent) of pedestrian KSIs

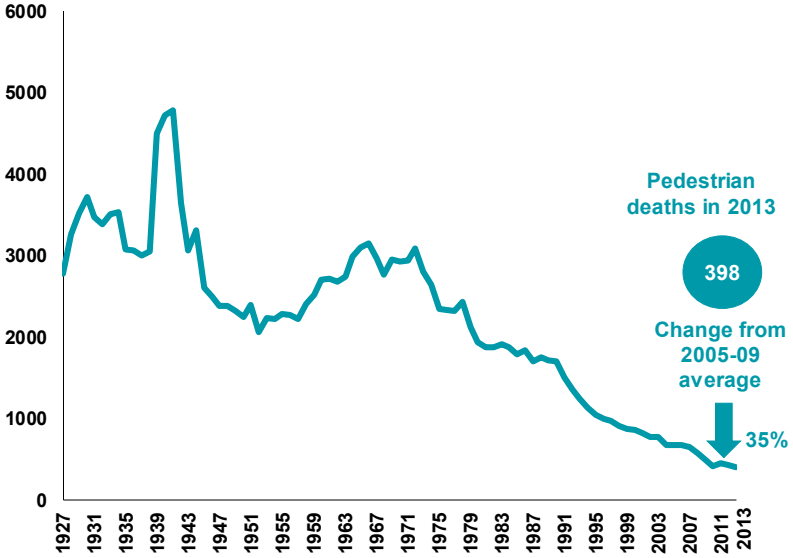


Email: roadacc.stats@dft.gsi.gov.uk Contact: 020 7944 6595 Press enquiries: 020 7944 2813

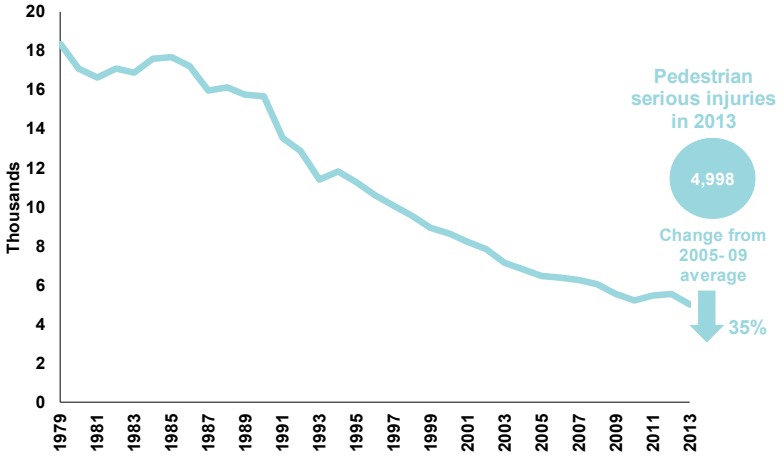
Long term trends

Reported pedestrian fatalities, GB: 1927 to 2013

- **Pedestrian fatalities** have been generally decreasing since the 1980s. The **worst post-war year** for pedestrian deaths was **1966**, with **3,183 deaths**. Since then the number of pedestrian fatalities has fallen, reaching an **all-time low of 398 in 2013**.



Reported pedestrian serious injuries, GB: 1979 to 2013

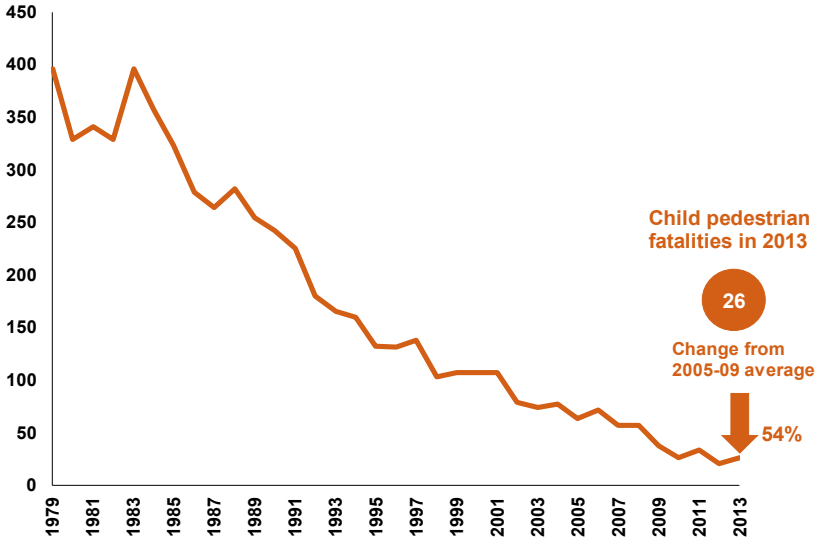


- Similar to fatalities, the number of pedestrians who were **seriously injured** has **fallen over the last 30 years.** The year **2013** was the lowest year on record with **4,998 casualties**. Serious injuries fell each year from 1995 to 2010, rose slightly in 2011 and 2012, and then fell by 10 per cent in 2013 compared with 2012.

Reported child pedestrian fatalities, GB: 1979 to 2013

- Over the long term, **child pedestrian fatalities** have also **fallen** by a significant amount since the 1980s. The highest figure was 396 child pedestrian deaths in 1983 falling to a low of 26 deaths in 2013.

- Due to the low number, changes over recent years are likely to be as a result of natural variation.



Recent trends

- Pedestrian fatalities decreased each year from 2006 to 2010. Since the rise in 2011, pedestrian fatalities continued to fall each year.
- The number of pedestrian seriously injured casualties fell year on year from 2000 to 2010 with 2011 and 2012 going against the trend. However, the year 2013 had the lowest figure recorded for pedestrian serious injuries since records began in 1979.
- Pedestrian casualties of all severities have halved since the year 2000. There were year on year decreases from 2000 to 2010 and a slight increase in 2011. Since then, pedestrian casualties continue to fall each year.

	Killed	Serious	Slight	All
2000	857	8,641	32,535	42,033
2001	826	8,238	31,513	40,577
2002	775	7,856	30,153	38,784
2003	774	7,159	28,472	36,405
2004	671	6,807	27,403	34,881
2005	671	6,458	26,152	33,281
2006	675	6,376	23,931	30,982
2007	646	6,278	23,267	30,191
2008	572	6,070	21,840	28,482
2009	500	5,545	20,842	26,887
2010	405	5,200	20,240	25,845
2011	453	5,454	20,291	26,198
2012	420	5,559	19,239	25,218
2013	398	4,998	18,637	24,033

Comparison with other road users

Relative risk of different forms of transport, Great Britain: 2013

	Casualty rate[1] per billion vehicle miles	
	Killed	Killed or seriously injured
Car occupants	2	21
Pedestrian[2]	**34**	**463**
Pedal cyclist	34	1,036
Motorcycle users	114	1,789

1 Rates calculated using traffic figures

2 National Travel Survery data used to calculate pedestrian rates. NTS data based on England only resident sample

- At 34 deaths per billion miles walked, pedestrians have a higher **fatality rate** than car occupants. However this is a significantly lower risk than for motorcyclists

- Pedestrians and pedal cyclists have the same **fatality rate**. However the **KSI (killed or seriously injured) rate** for pedestrians is less than half of that for pedal cyclists.
- The risk for pedestrian KSI casualties is **22 times higher than for car occupants** and over **four times lower than for motorcycle users**.
- The National Travel Survey (NTS) estimates that in 2013 walking trips accounted **for 22 per cent of all trips** and **3 per cent of the total distance travelled**.
- The average number of **walking trips has fallen significantly** over time. The NTS shows a 30 per cent decrease from 292 trips per person per year in 1995/97 to 203 trips in 2013.
- Measured per mile travelled, walking is a **safe activity** with injuries and fatalities **rare events**. Nevertheless, it has a **higher risk than driving**, probably as a result of a lack of pedestrian-based technologies or protection to **mitigate against injuries** once an accident has happened.
- Nevertheless improvements to vehicle design such as pedestrian impact crumple zones and bonnet airbags have helped to reduce pedestrian injuries. There is scope for further such technologies in the future as well.

Reported killed casualties per billion miles travelled, GB: 2005 to 2013

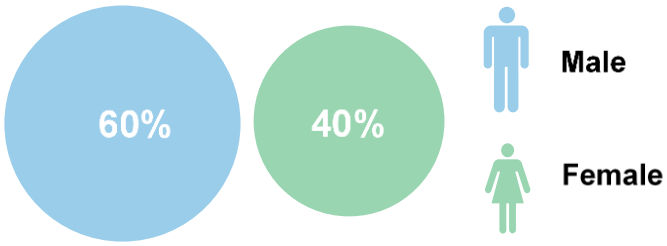
- All four main casualty groups have had a **reduction** in the **fatality rate** per billion miles travelled over the past decade.
- There has been a **36 per cent reduction** in the pedestrian fatality rate, second only to car occupants.

Who are injured as pedestrians in road accidents?

Gender comparisons

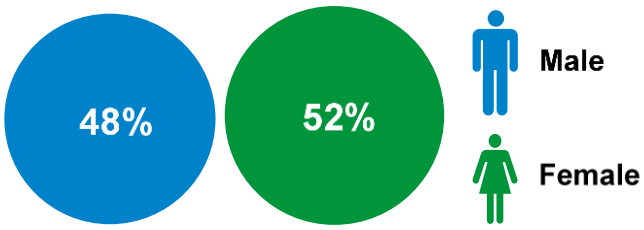
- Across all severities, **males** make up the majority of pedestrian casualties (57 per cent compared to 43 per cent of females). In 2013, of the 5,326 pedestrian killed or seriously injured casualties, 60 per cent were **male** and 40 per cent were **female**.

Pedestrian killed or seriously injured casualties by gender



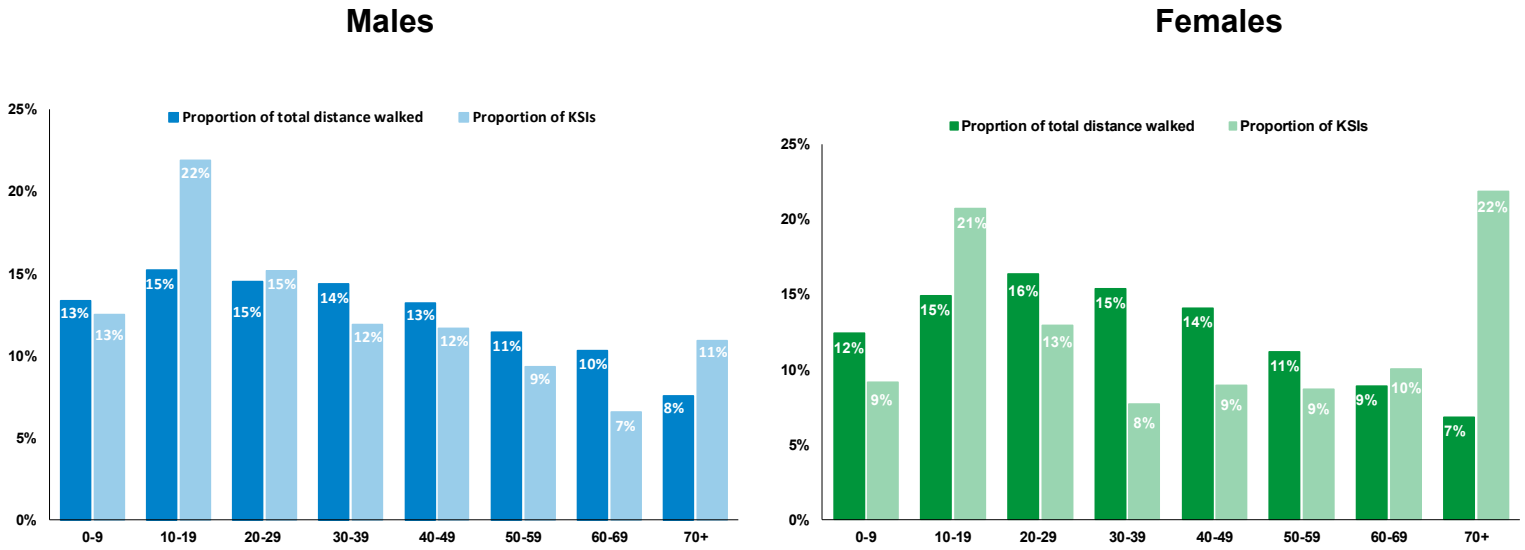
- **Females** however, tend to walk slightly further on average than males. Of the 11.6 billion miles walked in 2013, female pedestrians accounted for 52 per cent and male pedestrians accounted for 48 per cent of the total distance.

Total distance walked by gender



The chart below shows a comparison of the proportion of the **total distance walked** and the proportion of **pedestrians killed or seriously injured casualties** accounted for by **males** and **females** broken down by **age group**. Whilst the casualty distribution across ages roughly reflects the distribution of walking miles, there are a number of key deviations.

The proportion of total distance walked and the proportion of killed or seriously injured casualties by gender and age group, GB: 2013



- **Young male pedestrians** between the ages of 10 and 19 are the most **over-represented** male group as pedestrian KSI casualties. In 2013 they comprised of 22 per cent of male pedestrian KSIs, but only made up 15 per cent of miles walked. A similar pattern is evident for male pedestrians over the age of 70.
- This pattern is also similar amongst **female pedestrians** between the ages of 10 and 19. In 2013 they accounted for 21 per cent of pedestrian KSIs but only 15 per cent of total miles walked. Older female pedestrians above the age of 70 account for 22 per cent of female pedestrian KSIs but only 7 per cent of total miles walked. This is the single most over-represented group across both sexes and all ages.
- Pedestrians aged below the age of 9 and those between the ages of 10 and 19 are more likely to be **crossing the road while being masked by stationary vehicles**, **failing to look properly** or **careless** and **less aware** while **playing dangerously on the street** in comparison with older pedestrians aged 20 and above. These behaviours put **younger people more at risk of being involved in accidents** and result in the findings above.
- In contrast, pedestrians over the age of 70 tend to **move more slowly on the roads** and are more likely to be **less able to judge the path and speed of a vehicle.** They are also commonly recorded as having contributory factors related to their wellbeing e.g. **illness mental or physical**.

Road type

The number of pedestrians killed or seriously injured by road type, GB: 2013

- The majority of pedestrian KSIs occur on **urban roads**. In 2013, of the 5,396 killed or seriously injured pedestrians, 83 per cent occurred on urban roads. Pedestrians also account for the majority of KSI casualties among all road user types.

- This is due to **greater population densities** in urban areas and the average distance walked by residents in urban areas in comparison with rural areas. Urban areas have more pedestrians crossing busier roads which leads to a **greater number of interactions** between vehicles and pedestrians, increasing the risk of accidents.

- A further 16 per cent of pedestrian KSI casualties occurred on **rural roads**, and only 1 per cent occurred on **motorways**. Pedestrians killed or injured on motorways are more likely to be **road maintenance workers**, people **leaving their vehicles** in an emergency, or people who have accessed the motorway by **mistake** or **deliberately**.

- Unsurprisingly, pedestrians are more likely to be killed or seriously injured **while crossing the road**. Of the 5,396 pedestrian KSIs, 62 per cent of these occurred when the pedestrian was crossing the road **without being masked by a stationary vehicle**, and 15 per cent where they were **masked by a stationary vehicle** while crossing. A further 17 per cent were killed or injured in a **carriageway** but not crossing or on a **footway or verge.**

- Over half of pedestrian KSI casualties are in accidents reported in areas **away from pedestrian crossings** (51 per cent in 2013). A further 14 per cent of pedestrian KSIs occur at **pedestrian crossing points** and 11 per cent of occurred within **50 metres of pedestrian crossings** in 2013.

Child pedestrians on the road

- **Child pedestrians** make up the **largest user group** of child KSI casualties. In 2013 child pedestrians accounted for 69 per cent of all child KSIs. In comparison with adults, children are unable to drive motor vehicles and therefore have **less exposure to motor vehicle accidents.**

- Child pedestrians are particularly at risk when **travelling to and from school**. Around 82 per cent of all child KSI casualties were pedestrians travelling between the hours of 7.30 am and 8.59 am or 3 pm and 4.59 pm on a school day.

- The National Travel Survey (NTS) records that the most common mode of transport for travelling to and from school is walking. Since 1995/97 the proportion of trips where children walked to school has fallen from 47 per cent to 42 per cent in 2013. Child pedestrian KSI casualties have also fallen by 70 per cent over the same period. More information on child pedestrian casualties can be found in the **Focus on Child Casualties factsheet**.

Reported pedestrian KSI casualties by time of day and day of week, GB: 2009 to 2013

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
00:00 - 00:59	49	39	39	54	87	214	250
01:00 - 01:59	23	22	19	27	42	163	215
02:00 - 02:59	25	15	17	21	43	115	196
03:00 - 03:59	18	13	14	24	34	104	148
04:00 - 04:59	19	17	7	14	17	61	73
05:00 - 05:59	22	19	20	27	11	38	38
06:00 - 06:59	36	38	45	46	37	33	23
07:00 - 07:59	122	128	140	144	131	47	29
08:00 - 08:59	296	318	308	308	262	55	23
09:00 - 09:59	184	198	150	206	189	110	39
10:00 - 10:59	184	193	156	182	192	195	95
11:00 - 11:59	192	216	188	189	238	195	101
12:00 - 12:59	190	193	231	220	277	219	165
13:00 - 13:59	218	202	224	230	262	249	151
14:00 - 14:59	190	231	217	230	282	238	181
15:00 - 15:59	493	491	470	473	536	241	174
16:00 - 16:59	419	483	430	438	464	259	175
17:00 - 17:59	387	414	433	450	439	308	196
18:00 - 18:59	310	311	319	323	363	298	188
19:00 - 19:59	195	253	243	237	313	267	163
20:00 - 20:59	154	144	159	145	228	216	143
21:00 - 21:59	107	120	109	108	204	190	96
22:00 - 22:59	86	96	76	117	216	204	102
23:00 - 23:59	73	56	71	79	212	216	73

Key

Hours highlighted in **yellow** have a lower number of casualties

Hours highlighted in **orange** and **red** have a higher number of casualties.

- The heat map shows the number of pedestrian KSI casualties by hour and day.
- Between 2009 and 2013, roughly 40 per cent of pedestrian KSI casualties occurred during the week (**Monday to Friday**) between 8 am and 0859 am or 3 pm and 1959 pm. During these hours there is likely to be a large number of pedestrians walking to and from work or to and from school.
- A considerable number of pedestrian KSIs (13 per cent) also occur on **Friday or Saturday** night between 5 pm and 2359 pm. This is due to a number of people going out to social events during these hours. In particular, some of the destinations will be parties, bars, restaurants and pubs in urban areas. These destinations will often offer alcohol and will be more easily accessed on foot rather than by driving. **This increases the number of pedestrians travelling** and increases the number of them **under the influence of alcohol**.
- A further 5 per cent of pedestrian KSI casualties occur between the early morning hours of **Saturday and Sunday** (from midnight to 0359 am). This may be due to a number of people coming back from social events at this time with some **likely to be under the influence of alcohol**. In contrast, only 2 per cent of pedestrian KSIs occurred during the same period (midnight to 0359 am) in the week (Monday to Friday).

Which other types of vehicles are involved?

Proportion of traffic in Great Britain for each of the main road user types and the proportion of pedestrian casualties of all severities in which those vehicles are involved, GB: 2009 to 2013

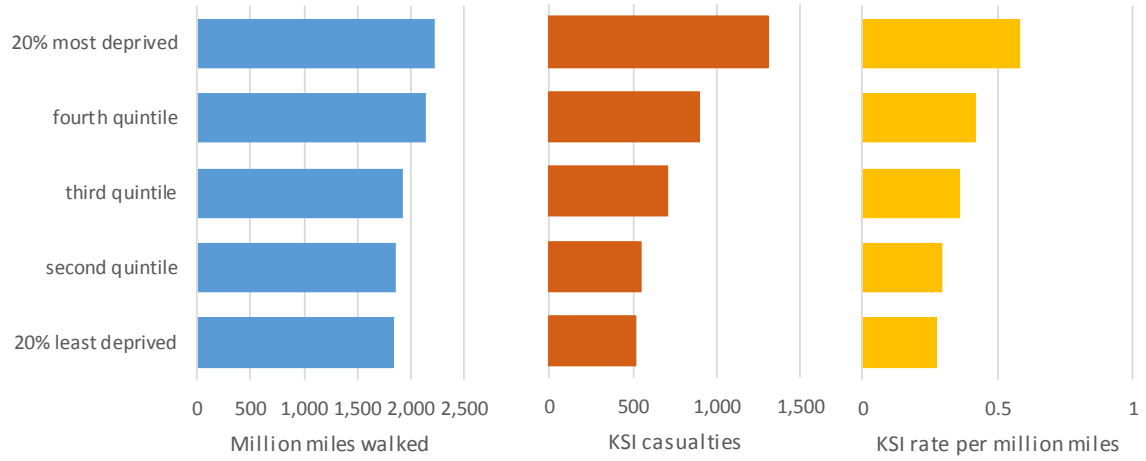
% of GB traffic	5	13	1	78	1	1
% of pedestrian deaths involved in	13	7	7	68	3	1
% of pedestrian serious injuries involved in	2	5	5	81	4	2
% of pedestrian slight injuries involved in	1	5	5	82	4	2
% of pedestrian casualties involved in	2	5	5	82	4	2

- The **distribution of involvement in accidents** with pedestrians does not directly reflect the **distribution of traffic**.
- **HGVs** are **disproportionately more likely to be involved in a pedestrian death**. Between 2009 and 2013 they made up 13 per cent of pedestrian deaths despite accounting for only 5 per cent of traffic in GB. This is because accidents with heavier and larger vehicles are more likely to result in fatalities or serious injuries even at lower speeds. The same applies for **buses**, which were involved in 7 per cent of pedestrian fatalities but only 1 per cent of GB traffic.
- In contrast**,** **cars** show the inverse pattern. Between 2009 and 2013, car traffic accounted for the majority of traffic in GB (78 per cent), however they were involved in 67 per cent of pedestrian fatalities and were slightly over-represented in lower severity accidents.
- The most common contributory factor allocated to vehicles involved in accidents with pedestrians is '**failed to look properly'**. Between 2009 and 2013, 32 per cent of **pedal cyclists** and 30 per cent of **light vans** failed to see a pedestrian. A further 24 per cent of cars and 22 per cent of HGVs also failed to look properly.
- The second most common contributory factor allocated to vehicles involved in accidents with pedestrians is '**careless, reckless or in a hurry'**. Pedal cyclists and light vans made up a higher proportion of vehicles who were careless, reckless or in a hurry at 20 per cent and 12 per cent respectively.
- The contributory factor **'passing too close to pedestrian'** is also commonly recorded for **light vans, buses** and **HGVs**. Between 2009 and 2013, 32 per cent of buses, HGVs and light vans were allocated the contributory factor 'passing too close to pedestrian'.

Levels of deprivation for pedestrian casualties

The index of multiple deprivation[1] (IMD) for England measures relative levels of deprivation in small area geographies (Lower Super Output Areas, or LSOAs). Each casualty has been put into a quintile (groups of 20 per cent of LSOAs from most deprived to least deprived) based on their home postcode. The IMD rankings are based on factors such as income, employment, health, education and crime deprivation, amongst others.

Total distance walked, pedestrian KSI casualties and KSI rate in England by IMD quintile: 2013



- The National Travel Survey shows that people living in the **more deprived areas** of England **walk, on average, further** than people who live in the least deprived areas. In 2013, the average distance walked in the 20 per cent most deprived areas was around 215 miles a year. In contrast, the average distance walked in the 20 per cent least deprived areas was around 170 miles per year.

- The likely explanation for this difference is people **from least deprived areas** are **more likely to have access to a motor vehicle** and therefore drive instead.

- Given that people in the **most deprived areas** walk further, on average, it is no surprise than they also make up a **higher proportion of pedestrian KSI casualties**. Around **one third** of KSI casualties live in **the 20 per cent most deprived areas**. Only 13 per cent of them live in the 20 per cent least deprived areas.

- However, even when combining the **total distance walked with KSI casualties**, there is a **significant discrepancy** between the quintile groups. The **casualty rate** for people in the **most deprived quintile** is **0.58 KSI casualties per million miles walked**, more than **double** the 0.28 KSI casualties per million miles rate in the least deprived quintile.

- This indicates that not only are people from **more deprived** areas at **greater risk** of being a pedestrian casualty as they are disadvantaged through the lack of access to motor vehicles, they are also disadvantaged in other ways. The increase risk they are exposed to could be as a result of a number of factors, including possibly less road safety awareness / perception (which could be as a result of road safety education), living in areas with poorer and less safe road infrastructure, or being exposed to drivers who are at higher risk of being accidents.

[1] Available for England at https://www.gov.uk/government/collections/english-indices-of-deprivation

Why are pedestrians involved in accidents?

Contributory factors provide an insight into how and why accidents occur. The factors are largely subjective as they reflect the opinion of the reporting officer, therefore they should be interpreted with caution. A maximum of six factors can be recorded for each accident.

Contributory factors allocated to killed or seriously injured pedestrian casualties by age, GB: 2009 to 2013

	Child (0-15)		Adults (16-59)		Older (60 and over)	
Contributory factor allocated to pedestrian	Number	Percent	Number	Percent	Number	Percent
Pedestrian crossing road masked by stationary or parked	2,035	*30*	1,309	*11*	483	*8*
Pedestrian failed to look properly	5,087	*74*	6,209	*51*	2,818	*50*
Pedestrian failed to judge vehicle's path or speed	1,169	*17*	2,207	*18*	1,244	*22*
Pedestrian wrong use of pedestrian crossing facility	360	*5*	808	*7*	363	*6*
Dangerous action in carriageway (e.g. playing)	819	*12*	903	*7*	67	*1*
Pedestrian impaired by alcohol	61	*1*	2,796	*23*	269	*5*
Pedestrian impaired by drugs (illicit or medicinal)	10	*0*	297	*2*	11	*0*
Pedestrian careless, reckless or in a hurry	2,483	*36*	2,911	*24*	698	*12*
Pedestrian wearing dark clothing at night	167	*2*	1,024	*8*	305	*5*
Pedestrian disability or illness, mental or physical	57	*1*	449	*4*	365	*6*
No CF recorded	712	*10*	3,025	*25*	1,853	*33*
Total	6,890	*100*	12,152	*100*	5,683	*100*

- The most common contributory factor allocated to pedestrians of all ages is '**failed to look properly**'. This is known as 'looked but failed to see' in road safety literature. Between 2009 and 2013 74 per cent of child pedestrians, 51 per cent of adult pedestrians aged between 16 and 59 and older pedestrians above the age of 60 failed to see.

- The second most common contributory factor allocated to pedestrians of all ages was **'careless reckless or in a hurry'**. This is most common among child pedestrians, of which 36 per cent of child pedestrian KSIs were careless, reckless or in a hurry in comparison to 24 per cent of adult pedestrians aged 16 to 59 and 12 per cent of older pedestrians above the age of 60.

- The most common contributory factor allocated to adult pedestrian KSI casualties aged from 16 to 19 is '**impaired by alcohol'**. Between 2009 and 2013, **23 percent of adult pedestrians were impaired by alcohol** compared with only 5 per cent of older pedestrians. Based on 2012 coroners' data, 73 per cent of pedestrians aged 16 and over who were killed in reported accidents between the hours of 10 pm and 4 am were **over the legal limit for drivers** compared with 61 per cent of car drivers who were also killed in those reported accidents. It is also estimated that in 2012 there were around 80 pedestrians killed or seriously injured in accidents where the driver was over the legal limit. The majority of these were aged between 16 and 59.

- Older pedestrians are more likely to be allocated contributory factors relating to their **wellbeing**. Between 2009 and 2013, 6 per cent of older pedestrian KSIs over the age of 60 were allocated the contributory factor '**pedestrian disability or illness, mental or physical'** compared with 4 per cent of adult pedestrians aged 16 to 59.

References and further information

Further information about the Reported Road Casualties Great Britain 2013 can be found at: Reported road casualties Great Britain: annual report 2013 - Publications - GOV.UK

Notes and definitions used in Stats19 can be found at: Road accidents and safety statistics guidance - Publications - GOV.UK

Further information on the average distance travelled is published by the National Travel Survey can be found at: National Travel Survey: 2013 - Publications - GOV.UK

Detailed statistics on (tables and charts) contributory factors for reported road accidents can be found at: Contributory factors for reported road accidents (RAS50) - Statistical data sets - GOV.UK