

Motorcycle safety –
basic facts 2013



About the IAM

The IAM (Institute of Advanced Motorists) is the UK's largest independent road safety charity, dedicated to improving standards and safety in driving, motorcycling and cycling. Best known for the advanced test the IAM has more than 100,000 members and is supported by a local volunteer network of 200 groups in the UK and Ireland. We provide driver risk management solutions to businesses through our commercial arm, IAM Drive & Survive, and driver retraining through IAM Driver Retraining Academy. The IAM's policy and research division offers advice and expertise on road safety, and publishes original research on road safety issues.

The IAM has 63 active motorcycling groups and a further 33 joint car/motorcycling groups with a total of over 18,500 motorcycling members. In a recent survey we found that ninety-nine per cent of riders felt the IAM advanced test had a permanent positive effect on them as a rider. Similarly high levels of respondents said that the IAM advanced test had increased their enjoyment from riding and made them safer riders. Sixty-one per cent of respondents said that taking the advanced test had helped them to avoid a specific accident or incident.

The IAM has produced this report from the latest official data sources in response to requests to provide basic accident data on motorcycling to help our groups promote the many benefits of advanced motorcycling.



Motorcycle fatalities in Great Britain the long term trend

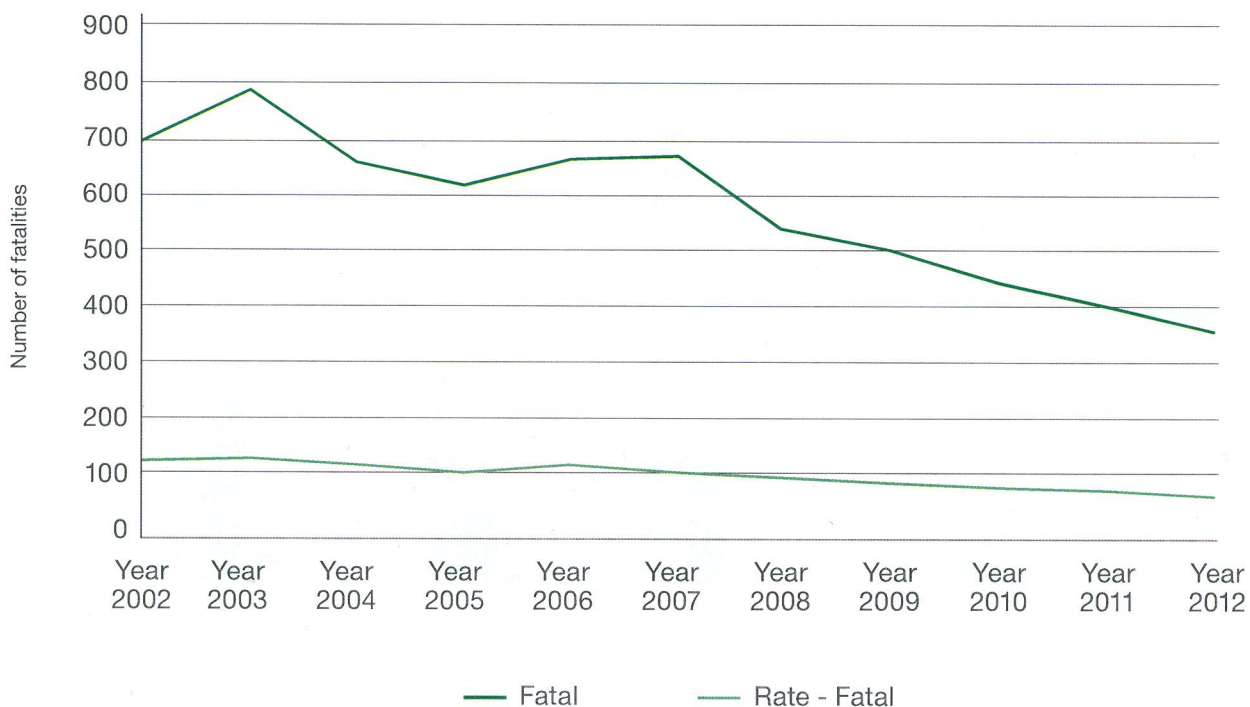
Motorcycle fatalities since 2002

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Fatal	694	783	659	620	667	676	539	512	446	411	363
Rate*	138	141	129	116	131	124	107	100	97	89	80

*per billion kilometres

In 2012 the downward trend in motorcycle fatalities continued as the total number of rider deaths dropped again. There were 48 less deaths in 2012 than in 2011, a drop of nearly 12%. This is a significant improvement and suggests that recent government campaigns to raise awareness of motorcyclists among car drivers may be having some effect.

Motorcycle Fatalities

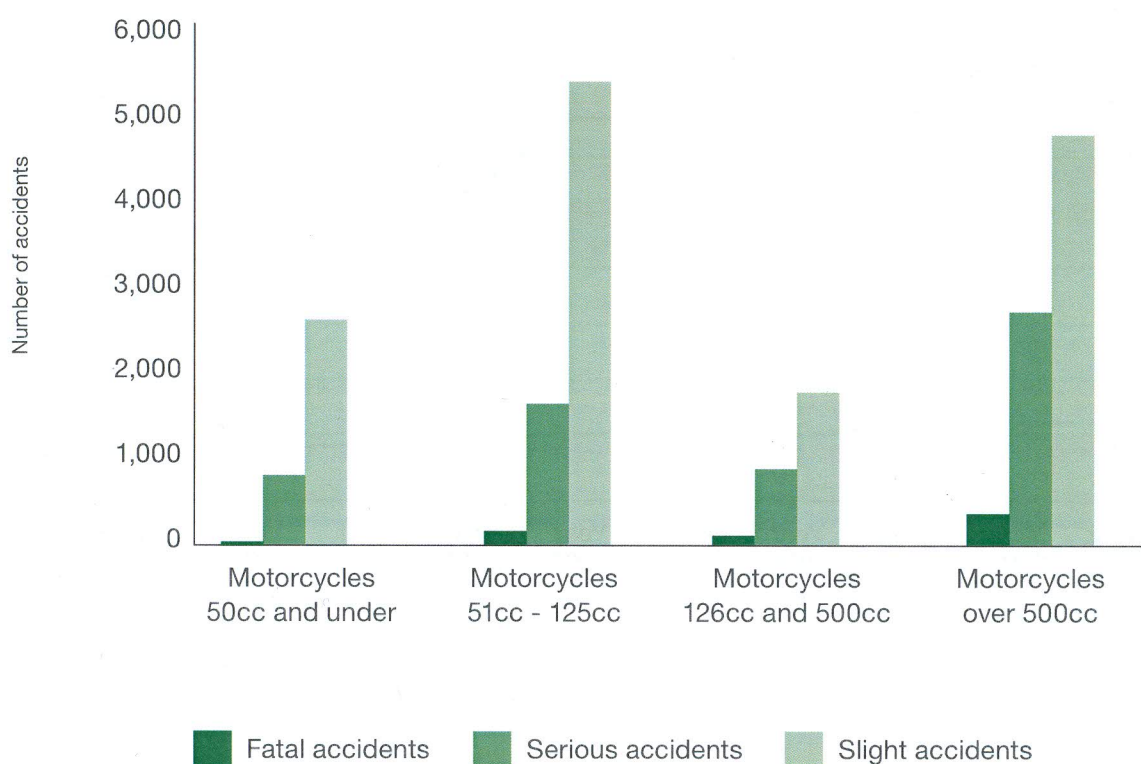


Motorcycle accidents by severity

	Fatal accidents	Serious accidents	Slight accidents
Motorcycles 50cc and under	9	567	2,788
Motorcycles 51cc - 125cc	60	1,559	5,575
Motorcycles 126cc and 500cc	45	677	1,747
Motorcycles over 500cc	297	2,706	5,025

Fatal motorcycle accidents are more than four and half times more common among bikes with engines sizes greater than 500cc compared to engines of 51cc – 125cc and six times and a half times more common than motorcycles with engines of 126cc – 500cc. Slight accidents are most common among 51cc – 125cc followed closely by bikes with engines greater than 500cc. The largest engines, greater than 500cc are also more often involved in serious accidents with over 2700 reported in 2011.

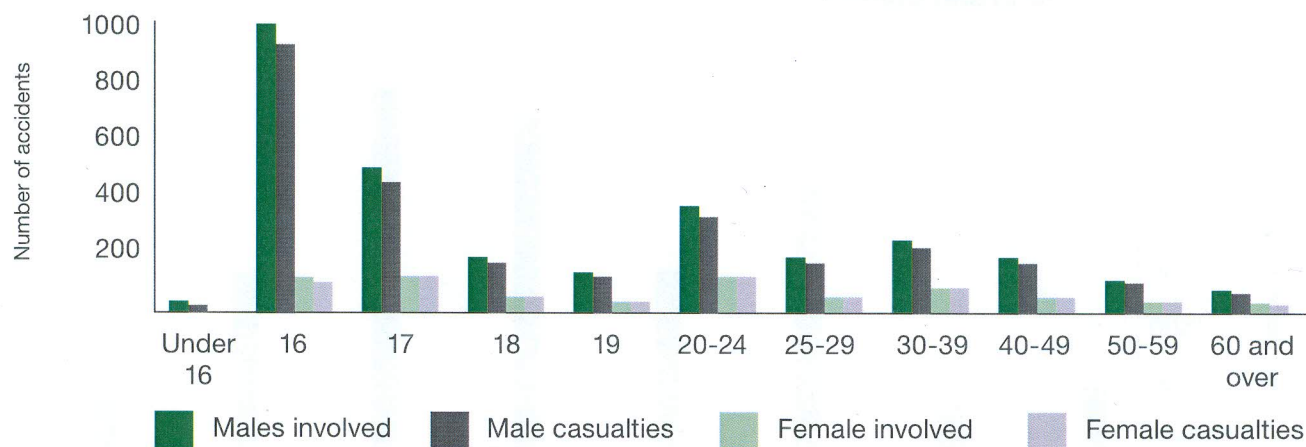
Motorcycle accidents by severity



Motorcycle accidents by gender, age and bike size

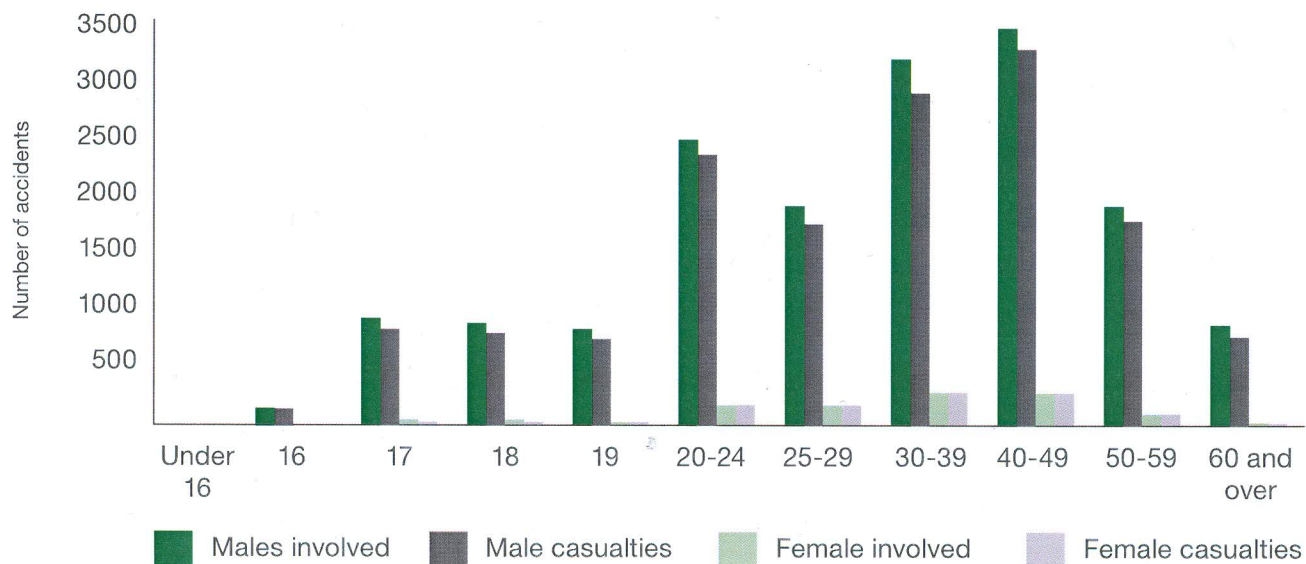
In low engine power motorcycle accidents it is unsurprising that 16 and 17 year old males have the highest involvement and casualty rates. This is because they are the most common users of this size of engine. There is a slight elevation among the early twenties and then the trend drops off again among older riders. Across all ages women are significantly less likely to be involved or to be a casualty.

Motorcycle accidents and gender - 50cc and under



In the larger engine category the highest involvement and casualty group were riders in their forties followed by riders in their thirties. As with the lower engine category, this is most likely linked to the higher number of riders in this age category riding this size of motorcycle. Riders in their early twenties also have quite a high involvement and casualty rate, perhaps because of their inexperience. Across all ages women are significantly less likely to be involved or a casualty reflecting the lower numbers of female riders generally.

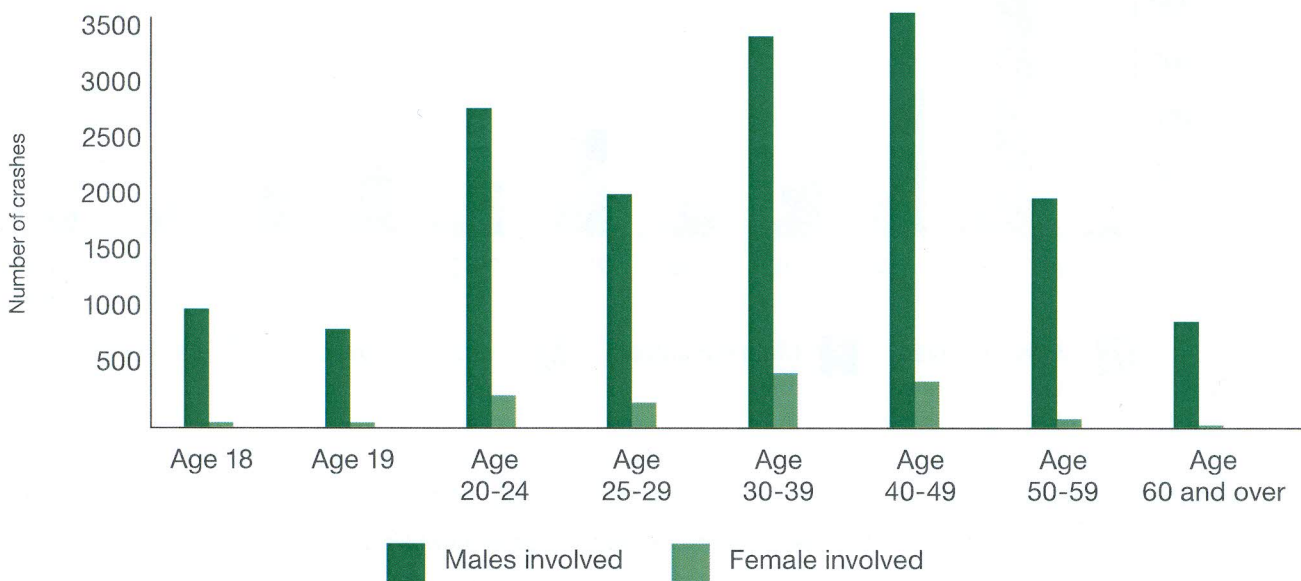
Motorcycle accidents and gender - over 50cc



Motorcycle injury crashes by age and gender

In motorcycle injury crashes the difference between male and female riders involved is significant. Women across all ages are less likely to be involved while male riders in their forties and thirties are most likely to be involved with nearly 7000 male riders in these groups involved in reported incidents. Only nine percent of motorcycle licence holders are women.

Male and female crash involvement

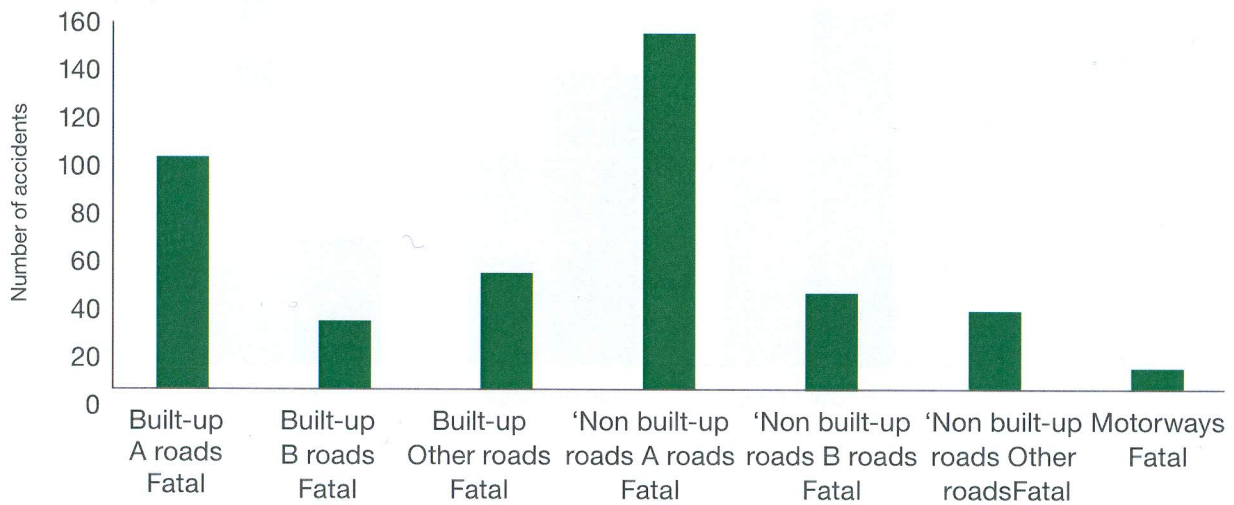


Motorcycle deaths by road type

Urban A roads Fatal	99
Urban B roads Fatal	27
Urban Other roads Fatal	52
Rural A roads Fatal	153
Rural B roads Fatal	40
Rural Other roads Fatal	32
Motorways Fatal	8

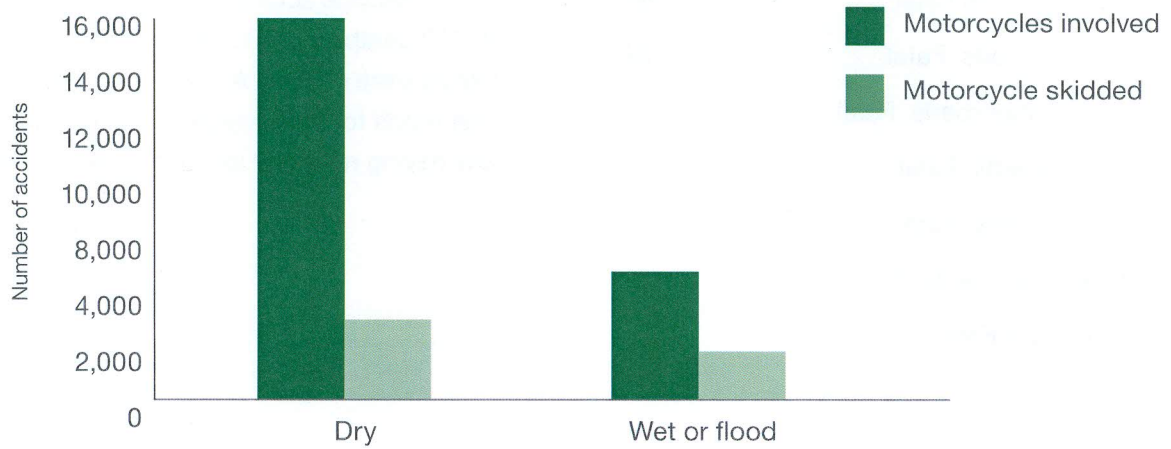
Fatal motorcycle accidents are most likely on A roads, with 252 deaths in 2011. More than 60 percent of these fatalities were on rural A roads. Motorways remain the safest roads for motorcyclists with B roads and other roads having relatively low death rates as well.

Motorcycle crash location

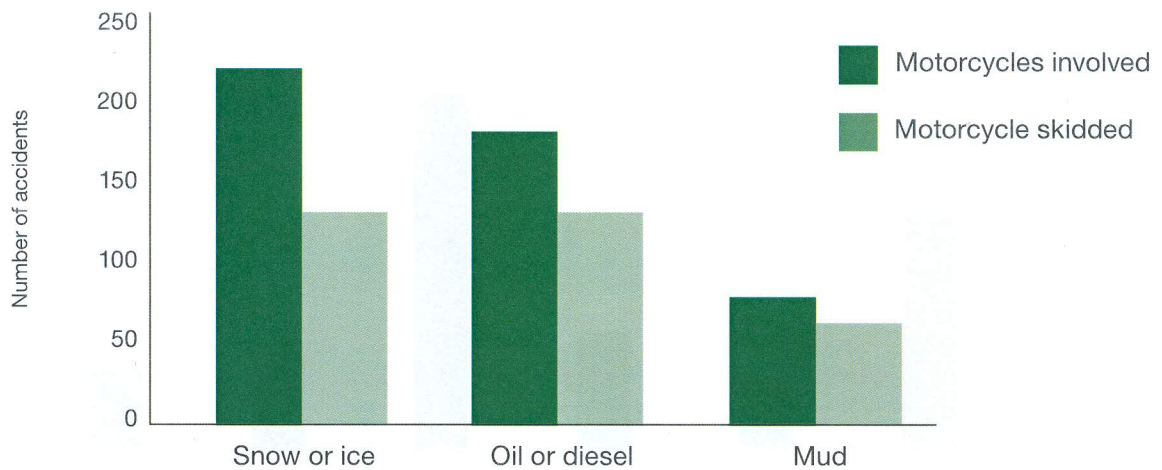


Road conditions

Wet and dry road surface condition



Special road surface conditions



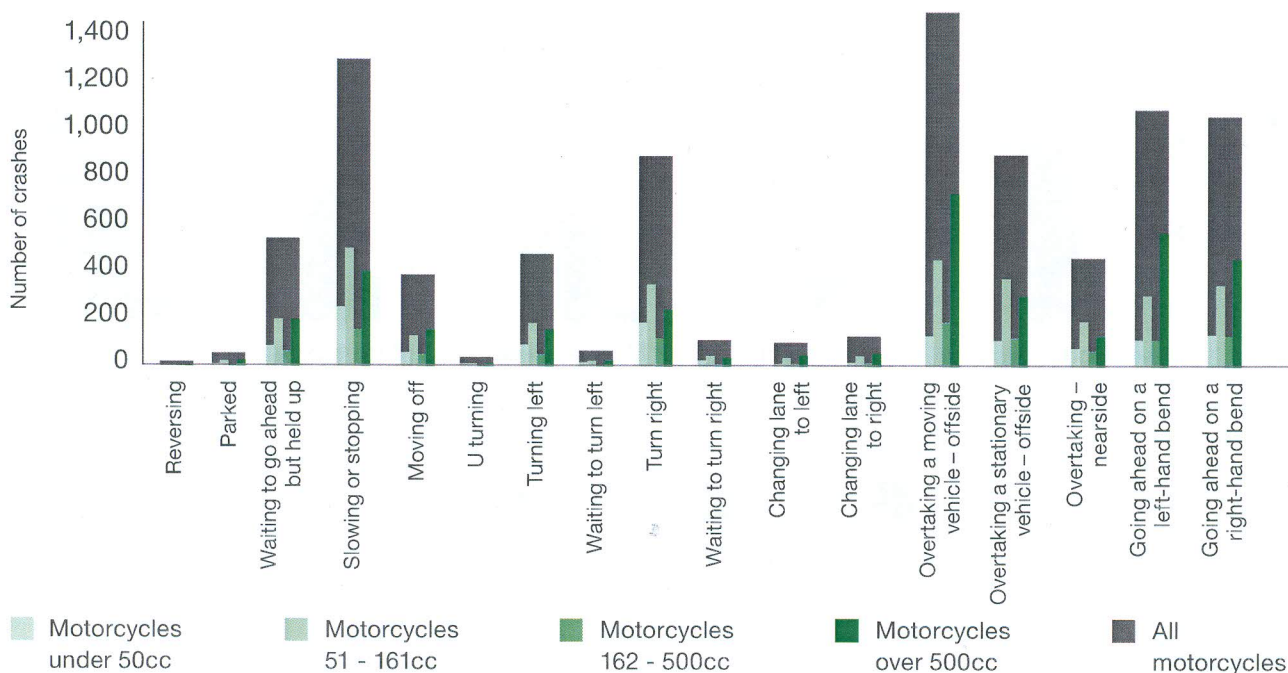
In a motorcycle incident skidding is relatively rare and most likely in wet conditions, with just under half reported incidents involving skidding compared to less than a quarter in dry conditions. Where specific road conditions such as snow and ice, oil or diesel or mud were reported, skidding was significantly more likely. However, accidents involving special conditions were not a common problem for riders.

Motorcycle manoeuvres

	Motorcycles under 50cc	Motorcycles 51 - 125cc	Motorcycles 126 - 500cc	Motorcycles over 500	All Motorcycles
Reversing	2	7	2	6	17
Parked	8	20	4	21	53
Waiting to go ahead but held up	82	191	60	189	522
Slowing or stopping	240	479	148	387	1,254
Moving off	54	125	46	147	373
U turning	9	11	5	11	36
Turning left	86	174	48	149	458
Waiting to turn left	15	21	4	23	63
Turning right	178	334	114	231	859
Waiting to turn right	22	43	8	35	108
Changing lane to left	9	34	9	45	97
Changing lane to right	15	43	12	53	123
Overtaking a moving vehicle - offside	125	436	179	707	1,448
Overtaking a stationary vehicle - offside	105	359	115	285	865
Overtaking - nearside	74	182	63	124	443
Going ahead on a left-hand bend	108	288	109	544	1,049
Going ahead on a right-hand bend	130	330	125	438	1,023
Going ahead other	1,750	4,392	1,448	3,775	11,380
All known manoeuvres	3,012	7,469	2,499	7,170	20,171
Number of vehicles involved in accidents	3,012	7,469	2,499	7,170	20,171
of which - at a junction	2,045	5,482	1,752	4,574	13,868

Motorcycles of all engine size have the highest involvement when over taking a moving vehicle on the offside with 1618 incidents reported. 'Slowing or stopping' and 'going ahead on bends' in either direction are also of note with over a thousand reported crashes for each of these. Waiting to turn right had nearly 900 crashes reported. Motorcyclists need to be aware where they are most at risk and tailor their training to reduce it.

Motorcycle crashes by manoeuvre

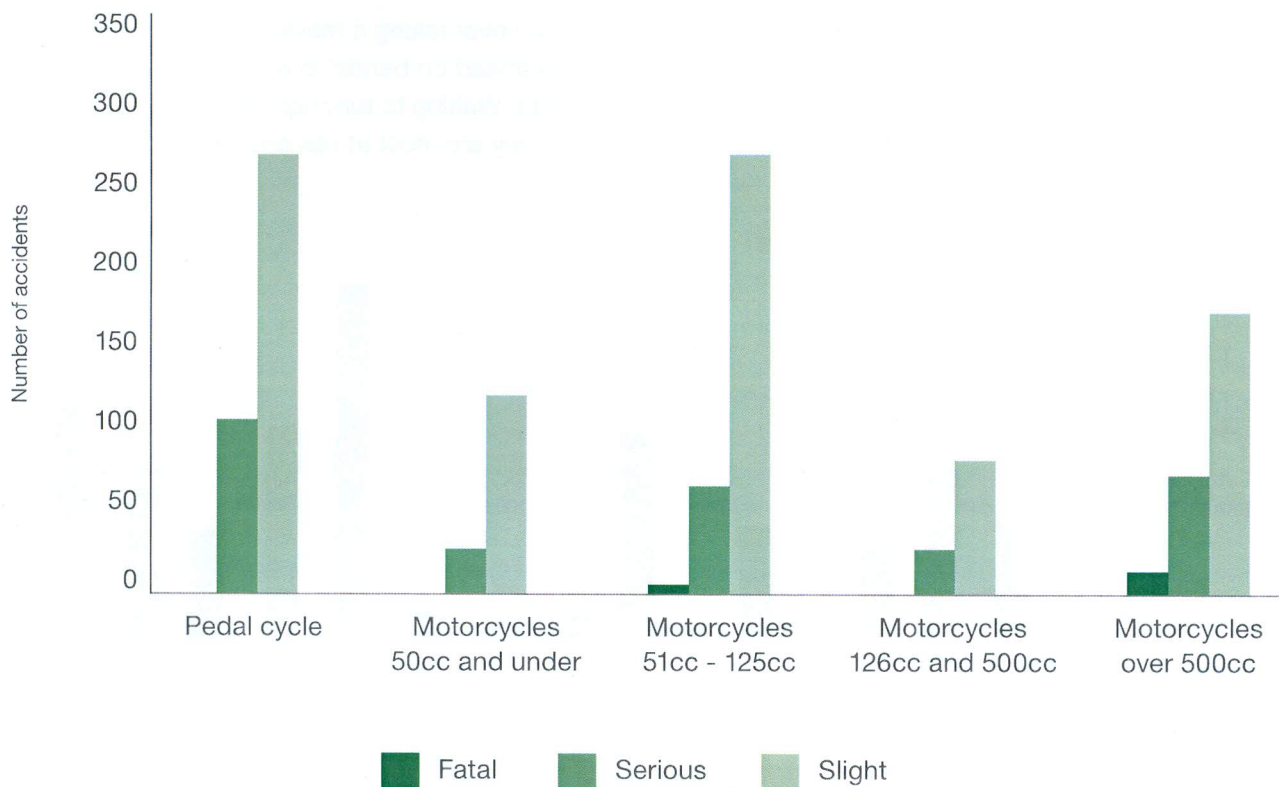


Pedestrian Safety - Motorcycles versus cyclists

	Fatal	Serious	Slight	% of all accidents involving pedestrians
Pedal cycle	2	99	268	2%
Motorcycle 50cc and under	1	25	117	1%
Motorcycle 51cc - 125cc	6	60	271	1%
Motorcycle 126cc - 500cc	1	28	84	0%
Motorcycle over 500cc	10	64	170	1%

Collisions involving pedestrians and pedal cycles caused 2 fatalities and 99 serious injuries, whereas in total motorbikes killed 18 pedestrians and seriously injured 177. The greatest number of fatal accidents involves the largest motorcycles (engines over 500cc), however in this category serious and slight injuries were significantly lower than with pedal cycles. The most common sources of slight injuries came from motorcycles between 51cc - 125cc as this is the most common motorcycle engine size.

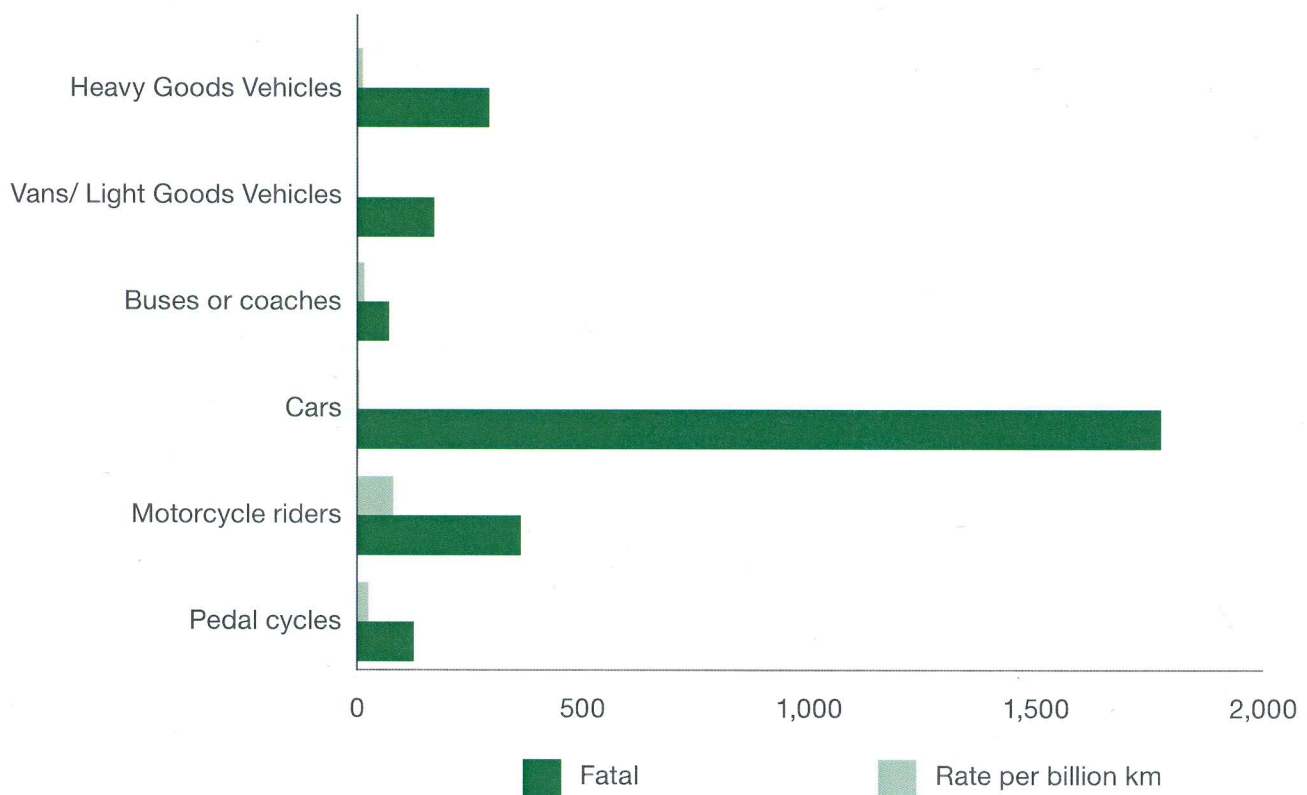
Accidents involving pedestrians and motorcycles/cyclists



Fatal accidents - vehicles involved and involvement rates 2012

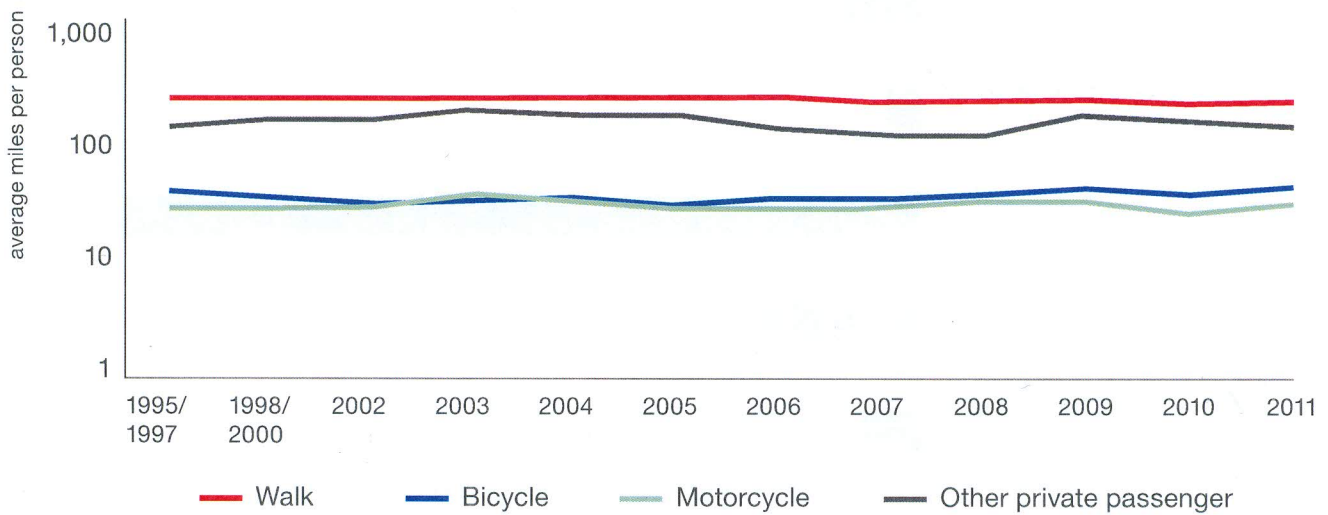
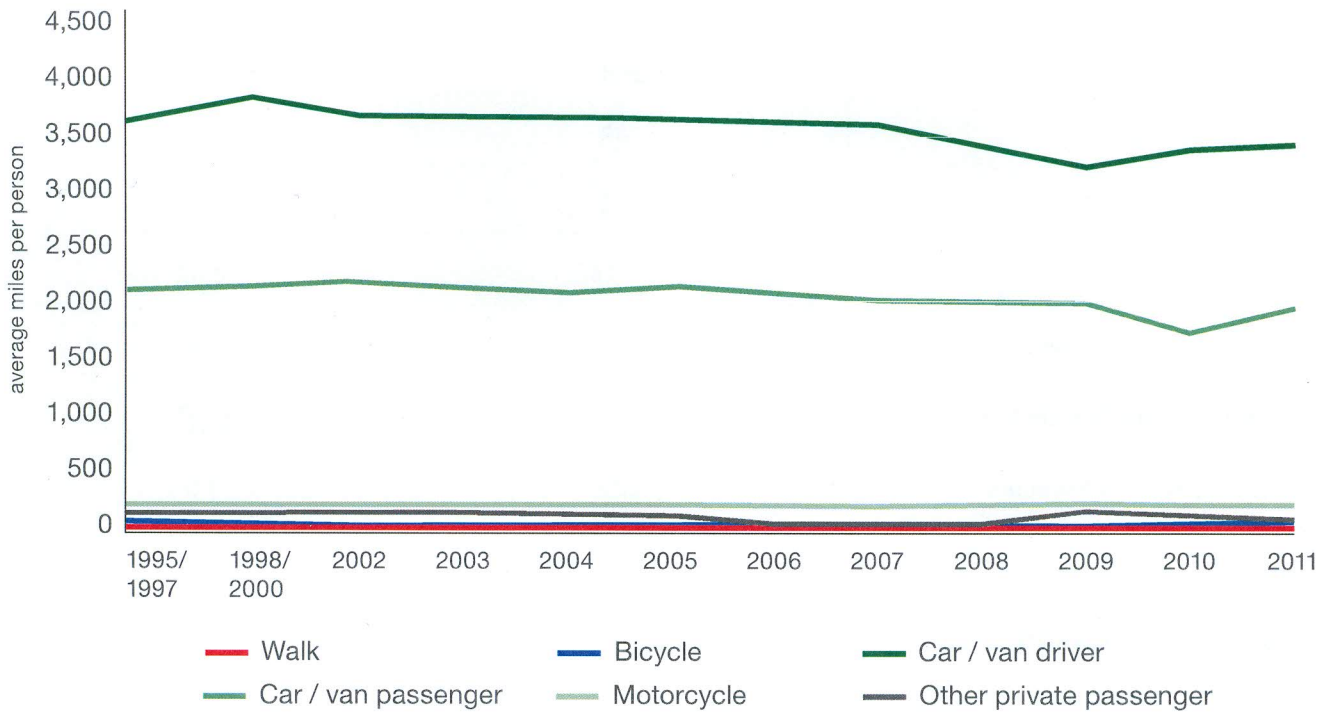
2012	Fatal	Rate per billion km
Pedal cycles	125	25
Motorcycle riders	363	80
Cars	1,775	4.6
Buses or coaches	70	16
Vans / Light Goods Vehicles	170	2.6
Heavy Goods Vehicles	292	12

Vehicles involved



When looking at the total vehicle accidents by vehicle type, motorcycles contribute more than 3 and a half times more accidents than pedal cycles and less than a quarter of those for cars. Motorcycles are considerably the most high risk of all vehicle types with 80 accidents per billion kilometres. Pedal cycles have the next highest rate with 25 accidents per billion kilometres and cars just 4.6.

How do we travel? - average miles per person per mode



Car drivers and passengers are the most common travel modes in the country, maintaining the previous decade's trend. Motorcycling has flat lined over the past 15 years although it still accounts for more miles travelled than walking or cycling.

Conclusion

The good news is that over the last decade the number of motorcyclist being killed on our roads has reduced substantially. However the statistics do reveal key high risks groups such as young scooter users and those riding bigger bikes and high risk locations such as rural roads and junctions. Raising awareness among car drivers, building more motorcycling friendly roads and new bike designs all have a role to play but if we are to make more substantial progress we must address the behaviour and attitude of male riders. In our view, the best way to do this is by taking an IAM advanced riding test.

Motorcycling has a very positive role to play in reducing congestion and emissions and should not be held back by safety concerns. We want to work with the government, manufacturers, dealers, police and road safety officers to promote the many benefits of safe motorcycling. In particular the IAM want to see police and courts routinely recommending IAM motorcycle training to motorcyclists caught behaving badly. There must be a safe road design 'champion' for motorcyclists in every highway authority and motorcyclists should be allowed to use all bus lanes. The CBT system should be reviewed to protect 16 year old moped and scooter riders and the government should encourage the uptake of new technology such as ABS for motorbikes.



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