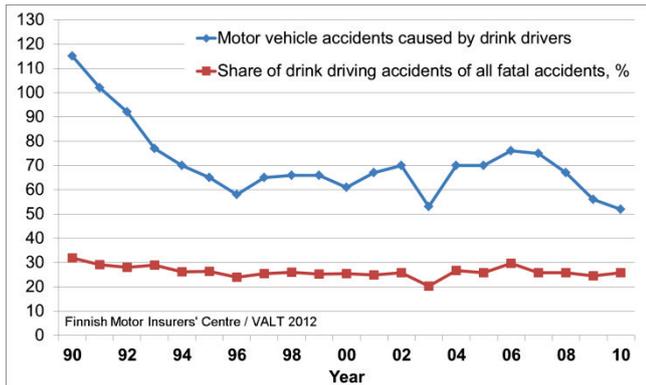


# ALCOHOL-RELATED ACCIDENTS OF MOTOR VEHICLE DRIVERS

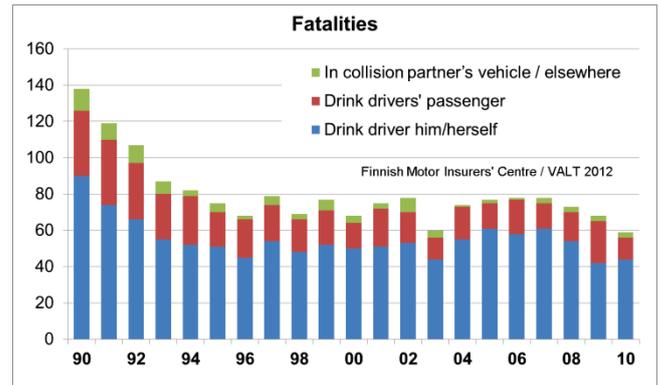
## On the report

This report examines the fatal road accidents surveyed by the road accident investigation teams\* where the motor vehicle driver has been under the influence of alcohol. The survey focuses on accidents examined in 2006–2010 where the driver's blood alcohol content has exceeded the drink driving limit 0.5 ‰.

## MOTOR VEHICLE ACCIDENTS



Motor vehicle accidents caused by drink drivers.



Fatalities in motor vehicle accidents caused by drink drivers.

### Accidents

In 2006–2010, the road accident investigation teams surveyed a total of 326 fatal motor vehicle accidents caused by a drink driver (at least 0.5 ‰). Of the accidents, head-on collisions totalled 92 and the number of single-vehicle accidents involving only the drink driver was 234. In addition, a drink driver was the collision partner in two fatal head-on collisions.

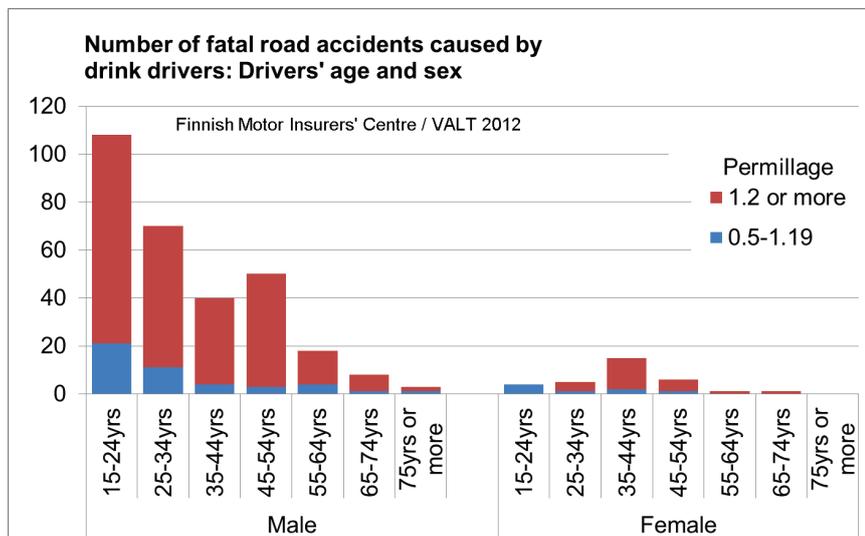
### Fatalities

In 2006–2010, a total of 356 people lost their lives in motor vehicle accidents caused by drink drivers. Of those who died, 259 were drink drivers, 84 were passengers in a vehicle driven by a drink driver, and 13 died in other vehicles.

Of the passengers travelling in a drink driver's car, 42 (50%) were under 25 years of age.

### Drivers' age and sex

In the motor vehicle accidents caused by drink drivers, in 297 (91%) cases the accident was caused by a man and in 29 (9%) cases it was caused by a woman. Of the drivers causing the drink driving accidents, 112 (34%) were under 25 years of age and 183 (56%) were aged between 25 and 54. The rest of the drivers, 31 (10%), were at least 55 years of age.



The biggest age groups of male drivers were the age group 15 to 24 (n=108, 37% of male drivers) and 25 to 34 (n=70, 24%).

The biggest age group of female drivers was 35 to 44 (n=13, 45% of female drivers).

The limit of aggravated drink driving, 1.2‰, was exceeded in 85 per cent of male drink drivers and in 83 per cent of female drink drivers.

### Accident types

Of the accidents caused by drink drivers, 216 (66%) were running-off-the-road accidents and 77 (24%) were collisions of vehicles travelling in the opposite direction. The rest, 33 (10%) were collisions of vehicles travelling in intersecting or same directions, as well as accidents classed in the category of 'others'.

### Permillage

Of the drink drivers causing the accident, 50 (15%) had a blood alcohol content between 0.5 and 1.19‰, and the limit of aggravated drink driving (1.2‰) was exceeded by a total of 276 drivers (85%).

*In 2006–2010, 27 of all drivers causing a motor vehicle accident (2% of all drivers) were mildly intoxicated, i.e. the driver's blood alcohol content was between 0.2 and 0.49‰.*

### Other substances having an impact on driving ability

Of the drink drivers, 72 (22%) were also under the influence of other substances having an impact on driving ability (medication, drugs) in addition to alcohol.

### Use of safety equipment

Of all drink drivers causing an accident, 84 (26%) were wearing a seat belt or helmet. Of the drivers of a passenger car, 67 (25%) were wearing a seat belt, and 56 (33%) of the passengers travelling in a passenger car driven by a drink driver were wearing a seat belt.

### Place of accident

Of the accidents caused by drink drivers, 67 (21%) took place in a built-up area, 55 (17%) close to a built-up area and 201 (62%) in a rural area.

### Vehicles

Of the drink drivers causing a motor vehicle accident, 266 (82%) were driving a passenger car. A total of 29 (9%) drink drivers causing an accident were driving a motorcycle or a moped. The average age of the passenger cars driven by the drink drivers was 14.

The category Others in the following table includes 11 class L three- or

Permillage Accident type	0.5-1.19 ‰		1.2 ‰ and over		Total	
	number	%	number	%	number	%
Running off the road	30	60	186	67	216	66
Opposite directions	16	32	61	22	77	24
Intersecting directions	1	2	7	3	8	2
Same directions	1	2	4	1	5	2
Other	2	4	18	7	20	6
<b>Total</b>	<b>50</b>	<b>100</b>	<b>276</b>	<b>100</b>	<b>326</b>	<b>100</b>

four-wheelers, 2 snowmobiles and 7 tractors or public works vehicles.

**Speeding** Of the drink drivers causing an accident, 208 (70%) were speeding by at least 10 km/h and 150 (50%) exceeded the speed limit of the road by at least 30 km/h at the time of the accident.

### Time

The majority of fatal motor vehicle accidents caused by drink drivers took place in June–August (an average of 8/month/year). An average of 3 drink-driving accidents per month took place in December–March each year.

Of the motor vehicle accidents caused by drink drivers, 100 (31%) took place on a Saturday. The total number of accidents that happened over the weekend between Friday and Sunday was 203 (62%).

In terms of the time of day, more drink-driving accidents took place in the evening and during the night: 103 accidents (32%) between 6 pm and midnight and 139 accidents (43%) between midnight and 6 am.

### Passengers

Of the drink drivers who were driving a passenger car, 106 (40%) had at

least one passenger in the car. Most typically, there were one or two passengers of the same age and sex.

### Purpose of the journey

At the time of the accident, 180 (55%) of the drink drivers were on a leisure trip, 26 (8%) were running an errand, 13 (4%) were on their way to or from work, 4 (1%) were driving on business, and the purpose of driving for 103 (32%) drivers was 'other' or 'unclear'.

### Right to drive and ownership of vehicle

Of the drivers causing a drink-driving accident, 229 (73%) had a valid driving licence at the time of the accident, although some of them (n=9) did not have a right to drive the vehicle they were driving.

A total of 59 (18%) drink drivers had been banned from driving or were without a right to drive for another reason. Of the drivers causing a drink-driving accident, 22 (7%) had never held a driving licence.

Of the drink drivers, 24 (7%) were driving a stolen vehicle and 47 (15%) were driving a legitimately borrowed vehicle.

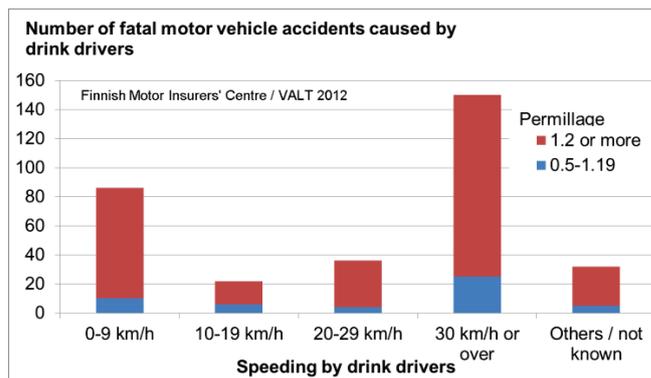
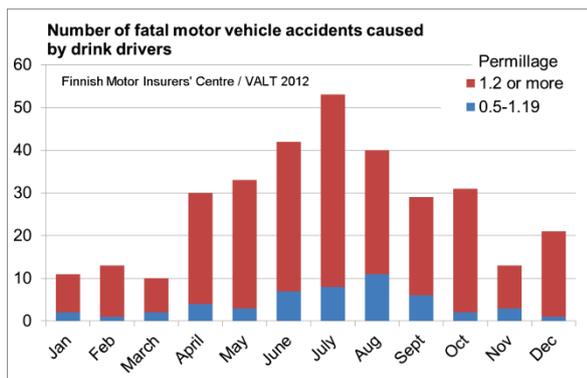
Permillage Vehicle type	0.5-1.19 ‰		1.2 ‰ and over		Total	
	number	%	number	%	number	%
Passenger car	42	84	224	81	266	82
Van	0	0	8	3	8	2
Heavy vehicle	0	0	3	1	3	1
Motorcycle	4	8	14	5	18	6
Moped	3	6	8	3	11	3
Other	1	2	19	7	20	6
<b>Total</b>	<b>50</b>	<b>100</b>	<b>276</b>	<b>100</b>	<b>326</b>	<b>100</b>

## Previous convictions

Of the drink drivers causing an accident, 204 (66%) had had at least one previous traffic conviction and 54 (26%) at least five convictions. Of the drink drivers, 105 (34%) had had no traffic convictions during the five years before the accident.

Of the drink drivers, 175 (58%) had no previous drink-driving convictions over the previous five years.

Permillage Previous drink-driving convictions	0.5-1.19 ‰		1.2 ‰ and over		Total	
	number	%	number	%	number	%
None	26	54	149	58	175	58
One	9	19	49	19	58	19
2 or more	13	27	57	22	70	23
<b>Total</b>	<b>48</b>	<b>100</b>	<b>255</b>	<b>100</b>	<b>303</b>	<b>100</b>
Not known	2		21		23	
<b>All in total</b>	<b>50</b>	<b>100</b>	<b>276</b>	<b>100</b>	<b>326</b>	<b>100</b>



## PEDESTRIAN/CYCLIST ACCIDENTS

*This report has focused on motor vehicle drivers under the influence of alcohol who have been involved in road accidents resulting in the death of a pedestrian or cyclist.*

### Accidents

In 2006–2010, the road accident investigation teams surveyed a total of 302 fatal pedestrian or cyclist accidents, in which 109 cyclists and 193 pedestrians were killed.

A total of 274 motor vehicle drivers were involved in the pedestrian or cyclist accidents, and 140 of them were the main cause of the accident.

Ten of the motor vehicle drivers had a blood alcohol content of at least 0.5‰ (all of them had caused the accident). Moreover, the blood alcohol content of one driver who caused the accident was between 0.2 and 0.49‰.

### Fatalities

In 2006–2010, nine pedestrians and one cyclist were killed in accidents caused by drink drivers (at least 0.5‰).

### Age and vehicle of drink driver

Of the drink drivers causing the accident, 4 were under 25 years of age, 3 were aged between

25 and 44, and 3 were at least 45 years of age. Nine of the drink drivers who caused an accident were driving a passenger car or a van and one was riding a moped.

### Place of accident and speeding

Six of the accidents took place in built-up areas, one close to a built-up area and three in rural areas. Eight of the drivers were speeding by at least 10 km/h and two were not speeding.

Two of the accidents caused by drink drivers resulting in the death of 9 pedestrians took place on a pedestrian crossing and 7 elsewhere than on a pedestrian crossing.

### Blood alcohol content of parties involved in pedestrian/cyclist accidents

Of the 10 pedestrian or cyclist accidents caused by drink drivers, 4 were of the type where the party involved in a pedestrian or cyclist accident was also under the influence of alcohol.

### Time and purpose of travel

Five of the accidents took place on a Saturday night or early on Saturday morning, 2 took place on a Friday or Sunday evening and three in the morning and afternoon between Monday and Thursday.

Five of the accidents took place between May and July, 3 between September and November and 2 between January and March.

Four of the accidents took place during daylight hours, one at dusk or dawn and 5 during the hours of darkness (in 3 cases the street lights were working, in 2 cases there were no street lights).

Seven of the drivers were on a leisure trip and three were travelling for other reasons at the time of the accident.

# RISK FACTORS DISCOVERED AND SAFETY IMPROVEMENT PROPOSALS MADE BY THE ROAD ACCIDENT INVESTIGATION TEAMS

## Risk factors

In addition to the influence of alcohol, the most typical risk factors discovered by the road accident investigation teams in accidents caused by drink drivers are speeding, non-use of safety belt and general disregard for the traffic regulations.

Other common risk factors with regard to human actions include risks related to the driver's state of mind and medication, tiredness, not having a driving licence, driver's inexperience, and drunken travel companions.

General risk factors related to the drink driver's vehicle include non-use of seat belt, various shortcomings in the wheels and poor structure or rust-weakening of vehicle body.

The most typical risks related to the traffic environment are the lack of central or hard shoulder barriers, fixed crash barriers (trees, poles, etc.) and darkness.

## Improvement proposals

In their safety improvement proposals, the investigation teams emphasise the significance of alcohol ignition locks in the prevention of drink driving. Traffic control-related proposals that emphasise general improvement in the efficiency of speeding and drink driving control and the development of regional allocation are very common.

The investigation teams regard it as important to spread knowledge and information especially of the risks related to the impacts of alcohol, but also of other risks in traffic.

In safety proposals related to vehicles, the investigation teams regarded measures promoting the turnover of the vehicle fleet as of primary importance. Moreover, the most common proposals are those related to the support of driver's performance (e.g. driving stability) and techniques ensuring safety belt use.

Safety proposals related to the traffic environment focus on the prevention of veering off the driving lane with various railings and the removal of fixed crash barriers from the traffic environment.

## PRELIMINARY DATA ON ALCOHOL-RELATED ACCIDENTS 2011

Fatal motor vehicle accidents where the driver of the motor vehicle was under the influence of alcohol in 2007–2011 and the distribution of alcohol-related accidents.

Alcohol-related accidents	2007		2008		2009		2010		2011		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Collisions	28	37	20	30	12	21	13	25	15	27	88	29
Single-vehicle accidents	47	63	47	70	44	79	39	75	41	73	218	71
<b>Total</b>	<b>75</b>	<b>100</b>	<b>67</b>	<b>100</b>	<b>56</b>	<b>100</b>	<b>52</b>	<b>100</b>	<b>56</b>	<b>100</b>	<b>306</b>	<b>100</b>

Source: VALT Preliminary data on alcohol-related accidents 2011 (publ. 27 April 2012)

## Publications:

**VALT Annual Report.** Accidents investigated by the road accident investigation teams.

**VALT Preliminary Report on alcohol-related accidents.** A report on alcohol-related accidents investigated by the road accident investigation teams

**Fatal motor vehicle accidents while under the influence of alcohol.** Katila et al. University of Turku. Published in the VALT report series on 29 April 2011. 47 pages.

## Further information available from

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*\*The Finnish Motor Insurers' Centre is responsible for the investigation of fatal road and terrain accidents (Act on Investigation into Road and Terrain Accidents 24/2001), as prescribed by law. According to the action plan for accident investigation, both fatal accidents and a selected sample of accidents with less serious consequences will be investigated. Therefore, the material can be regarded as extensive with respect to fatal accidents and indicative with respect to less serious accidents. Accident investigation is carried out by 20 investigation teams throughout Finland. The investigation is steered and supervised by the Road Accident Investigation Delegation set up by the Ministry of Transport and Communications.*