

# ALCOHOL AND PEDESTRIAN FATALITIES

Alcohol intoxication is widely recognised as the main cause of death amongst Australian motorists, being implicated in about one third of all motorist deaths (Monograph 10, 1996). The fact that alcohol has even greater involvement in pedestrian fatalities is less widely discussed. It is implicated in some 45 per cent of fatalities amongst adult and youth pedestrians - about 140 deaths each year.

A statistical overview is presented here, based on coroners' documentation about all fatal pedestrian crashes in 1992, the most recent year for which full material is currently available. Table 1 summarises the extent of alcohol-related deaths amongst pedestrians aged 16 years or older. Of 217 victims in 1992 for whom blood alcohol concentration (BAC) was recorded, 95 may be termed "intoxicated" in that their BAC exceeded 0.05 gm/100ml. Although pedestrian behaviour is probably much less affected than motor vehicle control at low levels of intoxication, Table 1 shows relatively few in this category. Most intoxicated victims (76 of 95) could be termed "highly intoxicated" in that they had BACs at or above 0.150 gm/100ml. A further 10 had BACs between 0.100 and 0.149 gm/100ml and only 9 had BACs between 0.050 and 0.099 gm/100ml.

It is sometimes the case that the pedestrian and motorist in these collisions are both intoxicated. Amongst motorists involved in the deaths of 76 highly intoxicated pedestrians in 1992, two had been highly intoxicated themselves and 7 had been moderately intoxicated.

A further six pedestrians who were either not intoxicated or had unknown BACs died at the hands of intoxicated motorists.

Based solely on those crashes for which BACs were recorded, alcohol-related pedestrian deaths are projected to be at least 110 in 1997. As shown in Table 1,

**Table 1 Fatalities of pedestrians aged 16 years or older, by sobriety<sup>(a)</sup> of involved parties, 1992**

	Number	% (b)
<b>Fatalities of highly intoxicated pedestrians</b>		
- motorist sober	67	
- motorist intoxicated	9 (c)	
- total fatalities of highly intoxicated pedestrians	76	35%
<b>Fatalities of moderately intoxicated pedestrians</b>		
- motorist sober	18	
- motorist intoxicated	1 (d)	
- total fatalities of moderately intoxicated pedestrians	19	9%
<b>Fatalities of pedestrians who were sober or had unknown BACs at the hands of intoxicated motorists</b>		
	6 (e)	3%
<b>Fatalities not involving alcohol</b>	116	53%
<b>Fatalities where alcohol involvement is unknown</b>	62	
<b>Total pedestrian fatalities</b>	279	

(a) Sobriety has been classified as follows:

- Highly intoxicated: a blood alcohol concentration of 0.150 gm/100ml or more.
- Moderately intoxicated: a blood alcohol concentration of 0.050 to 0.149 gm/100ml.
- Sober: a blood alcohol concentration below 0.050 gm/100ml.

(b) Percentage of total pedestrian fatalities in crashes of known intoxication status.

(c) Two motorists were highly intoxicated and 7 were moderately intoxicated.

(d) Motorist highly intoxicated.

(e) Two motorists were highly intoxicated and 4 were moderately intoxicated.

BACs of crash participants sometimes go unrecorded as a result of special crash circumstances or oversight. Allowing for this, the actual toll is likely to be about 140.

## Comparison with other crashes

Crashes involving adult or youth pedestrians tend to have greater alcohol involvement than other crashes. Of those fatal crashes in 1992 for which information is recorded about the BACs of involved parties, intoxication was implicated in:

- 47 per cent of deaths amongst adult and youth pedestrians (Table 1),
- 43 per cent of deaths in other single vehicle crashes, and
- 27 per cent of deaths in multiple vehicle crashes.

BACs also tend to be more extreme in pedestrian crashes. In 1992, BACs averaged:

- 0.217 gm/100ml amongst intoxicated pedestrian victims (Figure 1),
- 0.181 amongst intoxicated motorists in other fatal single vehicle crashes, and
- 0.164 amongst intoxicated motorists in fatal multiple vehicle crashes.

## Who are intoxicated?

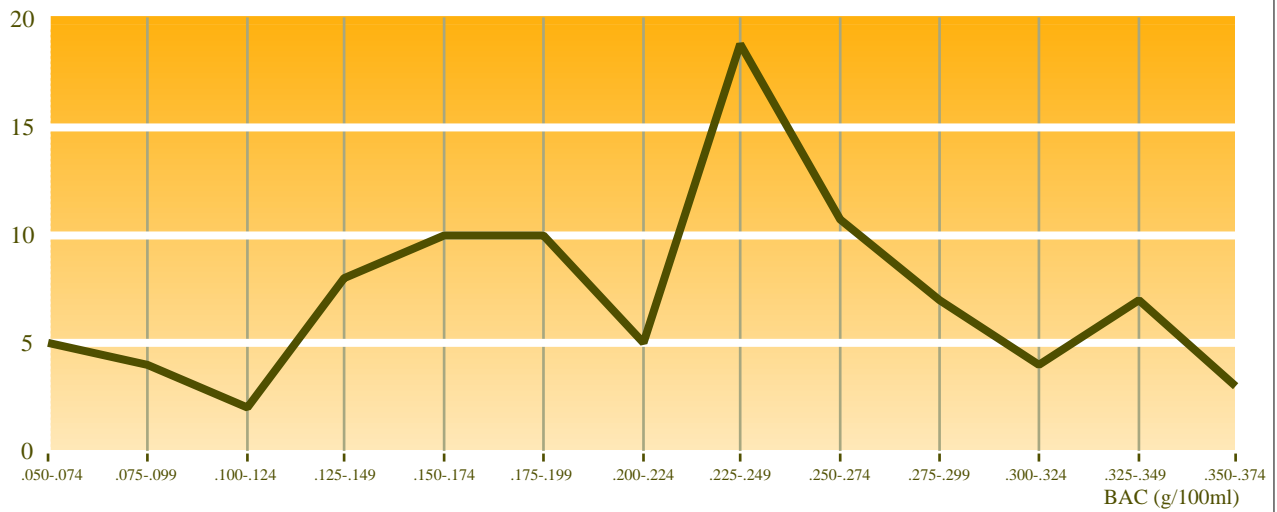
### State/Territory of crash

Table 2 shows the extent of intoxication amongst adult and youth pedestrians killed in each State and Territory in 1992.

Two extremes are apparent:

- relatively infrequent intoxication in NSW and Victoria,
- very frequent intoxication in the Northern Territory and Tasmania.

Every one of the Northern Territory victims had been highly intoxicated.

**Figure 1: BACs of intoxicated pedestrians killed in road crashes in 1992**


### Place of residence

188 of the victims in 1992 resided in metropolitan areas and 84 resided in non-metropolitan areas. Table 3 shows that those who resided in non-metropolitan areas were almost twice as likely to have been intoxicated as those who resided in metropolitan areas.

### Demographic Profile

There were 195 male victims and 84 female victims in 1992. Table 4 shows that male victims were more than twice as likely to have been intoxicated as female victims.

Worst in this regard were male victims aged 16 to 24 and, to a lesser extent, males aged 25 to 39. Table 5 shows that these victims were almost 3 times as likely to have been intoxicated as other victims.

At the other extreme, victims aged 60 or older were generally not intoxicated. They accounted for 65 per cent of sober victims in 1992 but only 18 per cent of intoxicated victims.

### Labour force activity

The overall pedestrian toll is dominated by retirees, tradespersons, labourers and the unemployed, but sobriety differs substantially between these groups.

Sobriety is least common amongst male victims from the ranks of tradespersons, labourers and the unemployed. Table 6 shows that these victims were about 3 times as likely to have been intoxicated as other victims and 3.7 times as likely to have been highly intoxicated.

At the other extreme, intoxication is uncommon amongst retiree victims. Retirees accounted for 68 per cent of sober victims in 1992 but only 30 per cent of intoxicated victims.

### Summary of main problem groups

Alcohol is commonly implicated in pedestrian road trauma amongst:

- males, particularly those aged below 40 and those from the ranks of tradespersons, labourers and the unemployed,
- residents of non-metropolitan regions, and

**Table 2 Sobriety of adult and youth pedestrians killed in 1992, by State/Territory**

State/ Territory	Number killed	BAC (gm/100ml)			Total with known BAC
		Below 0.050	0.050 to 0.149	0.150 or more	
NSW	102	61%	10%	29%	100%
Vic	68	67	3	29	100
Qld	59	45	16	39	100
SA	22	44	11	44	100
WA	16	50	6	44	100
Tas	4	25	25	50	100
NT	7	0	0	100	100
ACT	1	-	-	-	-
Australia	279	56	9	35	100

**Table 3 Sobriety of adult and youth pedestrians killed in 1992, by place of residence**

Place of residence (a)	Number killed	BAC (gm/100ml)			Total with known BAC
		Below 0.050	0.050 to 0.149	0.150 or more	
Metropolitan area	188	66%	7%	27%	100%
Non-metropolitan area	84	36	12	52	100
All pedestrians	279(b)	56	9	35	100

(a) Place of residence is defined as follows:

- Metropolitan area: has a population of 100,000 or more persons
- Non-metropolitan: has a population of less than 100,000 persons

(b) Includes 7 pedestrians for whom residence was not recorded

**Table 4 Sobriety of adult and youth pedestrians killed in 1992, by gender**

Gender	Number killed	BAC (gm/100ml)			Total with known BAC
		Below 0.050	0.050 to 0.149	0.150 or more	
Males	195	47%	11%	42%	100%
Females	84	78	3	19	100
All pedestrians	279	56	9	35	100

**Table 5 Sobriety of adult and youth pedestrians killed in 1992, by gender and age**

Gender & age	Number killed	BAC (gm/100ml)			Total with known BAC
		Below 0.050	0.050 or more		
Males	16 - 24	39	13%	87%	100%
	25 - 39	40	28	72	100
	40 - 59	32	47	53	100
	60 or more	84	76	24	100
	All males	195	47	53	100
Females	16 - 24	11	78	22	100
	25 - 39	14	60	40	100
	40 - 59	10	29	71	100
	60 or more	48	94	6	100
	All females	84 <sup>(a)</sup>	78	22	100

(a) Includes one pedestrian for whom age was not recorded

- residents of regions with a pattern of excess drinking such as the Northern Territory.

## Tackling the problem

A major Vicroads study<sup>1</sup> describes three main levels at which countermeasures may be directed:

1. preventing potential pedestrians from becoming highly intoxicated,
2. minimising pedestrian activity amongst people who have become intoxicated, and

3. minimising risk of injury once intoxicated people become pedestrians.

The hospitality sector has a key role in preventing potential pedestrians from becoming highly intoxicated. It is being encouraged to develop industry-based initiatives aimed at:

- slowing patrons' alcohol intake (eg by discouraging "happy hours" and by providing meals or complimentary bar snacks),

- training of staff in responsible serving practices and "server intervention" where patrons display extreme intoxication, and
- marketing low alcohol beverages (particularly beneficial in regions with a pattern of excess drinking).

Lobby groups have canvassed a number of complementary roles for government, including:

- reducing taxes on low alcohol beverages,
- limiting alcohol advertising,
- developing media campaigns and educational programs directed at responsible drinking practices, and
- funding alcohol treatment programs.

The hospitality sector has a further role in discouraging pedestrian activity amongst their patrons who have become intoxicated. A number of measures developed against drink driving might be modified for pedestrian safety. These include:

- provision of courtesy buses,
- promotion of taxi schemes, and
- provision of warning messages in hotels and clubs.

Measures directed at minimising pedestrian injury are often ineffective on those whose cognitive abilities have been affected by alcohol. However, two

**Table 6 Sobriety of adult and youth pedestrians killed in 1992, by labour force activity and gender**

Labour force activity	Number killed	BAC (gm/100ml)			Total with known BAC
		Below 0.050	0.050 to 0.149	0.150 or more	
Retired males	89	70%	12%	19%	100%
Retired females	44	90	0	10	100
Tradesperson/labourer males	31	26	15	59	100
Unemployed males	21	0	6	94	100
Females keeping house	13	60	10	30	100
Professionals, managers and para-professionals	10	83	0	17	100
Skilled machine operators or drivers	8	86	14	0	100
Students	7	67	17	17	100
Other known activities	20	47	6	47	100
All pedestrians	279 <sup>(a)</sup>	56	9	35	100

(a) Includes 36 pedestrians for whom labour force activity was not recorded

measures of major potential benefit have been included in the 1996 National Road Safety Action Plan<sup>2</sup> and are currently being discussed with State, Territory and local governments.

These are:

- introduction of 50km/h speed limits in urban residential streets, and
- introduction of treatments to physically reduce vehicle speeds in towns.

### Notes

1. Alexander, K, Cave, T. & Lyttle, J (1990) 'The role of alcohol and age in predisposing pedestrian accidents' Pedestrian Project: Report 6, Vicroads.
2. National Road Safety Action Plan 1996, published by Federal Office of Road Safety on behalf of the National Road Safety Implementation Task Force representing road safety stakeholders in government, police and other organisations.

People tend to underestimate the amount of alcohol in drinks.

In general:

- Men can have two standard drinks in the first hour, and one drink per hour after that and remain under 0.050.
- Women can have one standard drink in the first hour and one every hour after that.

A standard drink contains 10gm of alcohol. This is approximately equivalent to:



Remember, this is a guide only. Some people will reach 0.050 after consuming less drinks.