

**Alberta
Traffic Collisions Involving
Drinking Pedestrians**

2004 - 2008

**Government
of Alberta ■
Transportation**

Alberta Transportation
Office of Traffic Safety
June 2009

**ALBERTA
TRAFFIC COLLISIONS INVOLVING
DRINKING PEDESTRIANS
2004 - 2008**

SUMMARY

This document was prepared under the Alberta Traffic Safety Plan, Strategic Research Plan for 2008 – 2010, with the objective of examining the scope of collisions involving these vulnerable road users.

- Of pedestrians involved in non-fatal injury collisions, 14.8% had consumed alcohol before the crash. This compares to 37.4% of pedestrians involved in fatal collisions (Table 1).
- Three quarters of drinking pedestrians involved in casualty collisions were male. Involvement rates per 100,000 population were highest for persons between the ages of 20 and 24 (Table 2).
- The months of April and July (13.3%) accounted for the largest proportion of fatal collisions involving drinking pedestrians. The month of August (11.0%) accounted for the largest proportion of non-fatal injury collisions involving drinking pedestrians (Table 3).
- The highest number of fatal collisions involving drinking pedestrians occurred on Saturday (20.0%). The highest number of non-fatal injury collisions also occurred on Saturday (28.8%) (Table 4).
- The late night, early morning period (11:00 p.m. – 2:59 p.m.) was most likely to record casualty collisions involving drinking pedestrians (38.9%). The morning hours (7:00 a.m. – 10:59 p.m.) were least likely to record casualty collisions involving drinking pedestrians (2.3%) (Table 5).
- Half of the fatal collisions (56.7%) and almost all of the injury collisions (89.8%) involving drinking pedestrians occurred in urban areas. Casualty collisions involving drinking pedestrians occurred more often in rural areas than casualty collisions involving all pedestrians. Of all casualty collisions involving drinking pedestrians, 18.9 % occurred in parking lots (Table 6).
- The majority of casualty collisions involving drinking pedestrians occurred in clear weather conditions (83.5%) and 12.4% occurred during rainy or snowy conditions (Table 7).
- Over half (53.5%) of the vehicles involved in a casualty collision with a drinking pedestrian were passenger cars (Table 8).
- Almost all fatal collisions (91.7%) and 76.9% of injury collisions involving a drinking pedestrian occurred between sunset and sunrise (Table 9).

- Over one third (36.3%) of drinking pedestrians in casualty collisions were crossing the road without the right of way (Table 10).
- The most common errors made by drivers involved in casualty collisions with drinking pedestrians were failure to yield right of way to the pedestrian (40.2%) and backing unsafely (20.1%). Drivers involved in casualty collisions with drinking pedestrians were over 11 times more likely to fail to yield right of way and over 8 times as likely to back unsafely compared to drivers in all casualty collisions (Table 11).
- Of drivers involved in non-fatal injury collisions with drinking pedestrians, 18.1% had consumed alcohol before the crash, compared to 27.8% in fatal collisions. Overall, 19.0% of drivers involved in casualty collisions with drinking pedestrians were judged to have consumed alcohol before the crash - these drivers were over three times more likely to have consumed alcohol than drivers in all casualty crashes (5.3%) (Table 12).
- Drinking pedestrians sustained all of the fatalities in casualty collisions with pedestrians. The drinking pedestrians also sustained almost all (94.6%) of the injuries sustained in casualty collisions with drinking pedestrians (Table 13).

Table 1
ALBERTA
PEDESTRIAN CONDITION IN CASUALTY COLLISIONS*
2004 - 2008

Condition of Pedestrian	Pedestrians in Fatal Collisions		Pedestrians in Non-Fatal Injury Collisions		Pedestrians in Casualty Collisions	
	N	%	N	%	N	%
Normal	101	58.0	4163	83.6	4264	82.8
Had Been Drinking	41	23.6	355	7.1	396	7.7
Impaired by Alcohol	24	13.8	380	7.6	404	7.8
Total Alcohol Involvement	65	37.4	735	14.8	800	15.5
Impaired by Drugs	2	1.1	28	0.6	30	0.6
Other	6	3.4	52	1.0	58	1.1
Total Number of Pedestrians	174	100.0	4978	100.0	5152	100.0

Observations

Of pedestrians involved in non-fatal injury collisions, 14.8% had consumed alcohol before the crash. This compares to 37.4% of pedestrians involved in fatal collisions.

*Based on those cases where pedestrian condition was specified on the collision report form.

Table 2
ALBERTA
AGE AND SEX OF DRINKING PEDESTRIANS*
INVOLVED IN CASUALTY COLLISIONS
2004 - 2008

Age in Years	N	Male		Female		Total*			
		%	Rate Per 100,000 Population**	%	Rate Per 100,000 Population**	%	Rate Per 100,000 Population**		
Under 15	2	0.3	0.1	3	0.4	0.1	5	0.6	0.1
15 – 19	65	8.1	5.2	40	5.0	3.2	106	13.3	8.9
20 – 24	148	18.5	10.9	43	5.4	3.2	191	23.9	14.1
25 – 29	87	10.9	6.4	21	2.6	1.6	108	13.5	8.2
30 – 34	56	7.0	4.4	14	1.8	1.1	71	8.9	5.6
35 – 44	125	15.6	4.7	28	3.5	1.1	153	19.1	5.7
45 – 54	74	9.3	2.8	16	2.0	0.6	90	11.3	3.3
55 – 64	32	4.0	2.0	6	0.8	0.4	38	4.8	2.1
65 +	14	1.8	0.8	1	0.1	--	15	1.9	0.7
Unspecified	14	1.8		5	0.6		23	2.9	
Total Drinking Pedestrians	617	77.1		177	22.1		800	100.0	

Observations

Three quarters of drinking pedestrians involved in casualty collisions were male. Involvement rates per 100,000 population were highest for persons between the ages of 20 and 24.

*Total includes drinking pedestrians whose sex was not specified on the collision report form.

**Based on estimates of the Alberta population by age groups and sex based on the 2006 census, July 1, 2004 to 2008, Statistics Canada

Table 3
ALBERTA
MONTH OF OCCURRENCE OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

Month	Fatal Collisions		Non-Fatal Injury Collisions		Total Casualty Collisions	
	N	%	N	%	N	%
January	4	6.7	43	6.0	47	6.1
February	5	8.3	48	6.7	53	6.8
March	4	6.7	46	6.4	50	6.4
April	8	13.3	51	7.1	59	7.6
May	3	5.0	65	9.1	68	8.8
June	5	8.3	58	8.1	63	8.1
July	8	13.3	73	10.2	81	10.4
August	7	11.7	79	11.0	86	11.1
September	5	8.3	75	10.5	80	10.3
October	5	8.3	73	10.2	78	10.1
November	4	6.7	42	5.9	46	5.9
December	2	3.3	63	8.8	65	8.4
Total Number of Collisions	60	100.0	716	100.0	776	100.0

Observations

The months of April and July (13.3%) accounted for the largest proportion of fatal collisions involving drinking pedestrians. The month of August (11.0%) accounted for the largest proportion of non-fatal injury collisions involving drinking pedestrians.

Table 4
ALBERTA
OCCURRENCE DAY OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

Day of Week	Fatal Collisions		Non-Fatal Injury Collisions		Total Casualty Collisions	
	N	%	N	%	N	%
Monday	10	16.7	53	7.4	63	8.1
Tuesday	10	16.7	66	9.2	76	9.8
Wednesday	7	11.7	55	7.7	62	8.0
Thursday	9	15.0	65	9.1	74	9.5
Friday	9	15.0	144	20.1	153	19.7
Saturday	12	20.0	206	28.8	218	28.1
Sunday	3	5.0	126	17.6	129	16.6
Unspecified	--	--	1	0.1	1	0.1
Total Number of Collisions	60	100.0	716	100.0	776	100.0

Observations

The highest number of fatal collisions involving drinking pedestrians occurred on Saturday (20.0%). The highest number of non-fatal injury collisions also occurred on Saturday (28.8%).

Table 5
ALBERTA
OCCURRENCE TIME OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

Time Period	Fatal Collisions		Non-Fatal Injury Collisions		Total Casualty Collisions	
	N	%	N	%	N	%
11:00 p.m. - 2:59 a.m.	19	31.7	283	39.5	302	38.9
3:00 a.m. - 6:59 a.m.	11	18.3	88	12.3	99	12.8
7:00 a.m. - 10:59 a.m.	3	5.0	15	2.1	18	2.3
11:00 a.m. - 2:59 p.m.	1	1.7	34	4.7	35	4.5
3:00 p.m. - 6:59 p.m.	4	6.7	116	16.2	120	15.5
7:00 p.m. - 10:59 p.m.	21	35.0	173	24.2	194	25.0
Unspecified	1	1.7	7	1.0	8	1.0
Total Number of Collisions	60	100.0	716	100.0	776	100.0

Observations

The late night, early morning period (11:00 p.m. – 2:59 p.m.) was most likely to record casualty collisions involving drinking pedestrians (38.9%). Morning hours (7:00 a.m. – 10:59 a.m.) were least likely to record casualty collisions involving drinking pedestrians (2.3%).

Table 6
ALBERTA
LOCATION OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

Location	Fatal Collisions		Non-Fatal Injury Collisions		Total Casualty Collisions		All Pedestrian Casualty Collisions	
	N	%	N	%	N	%	N	%
Urban	34	56.7	643	89.8	677	87.2	6027	95.7
Rural	26	43.3	73	10.2	99	12.8	271	4.3
Total Number of Collisions	60	100.0	716	100.0	776	100.0	6298	100.0

Observations

Half of the fatal collisions (56.7%) and almost all of the injury collisions (89.8%) involving drinking pedestrians occurred in urban areas. Casualty collisions involving drinking pedestrians were more likely to have occurred in rural areas (12.8%) compared to casualty collisions involving all pedestrians (4.3%).

Of all casualty collisions involving drinking pedestrians, 18.9 % occurred in parking lots.

Figure 3
ALBERTA
MONTH OF OCCURRENCE OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

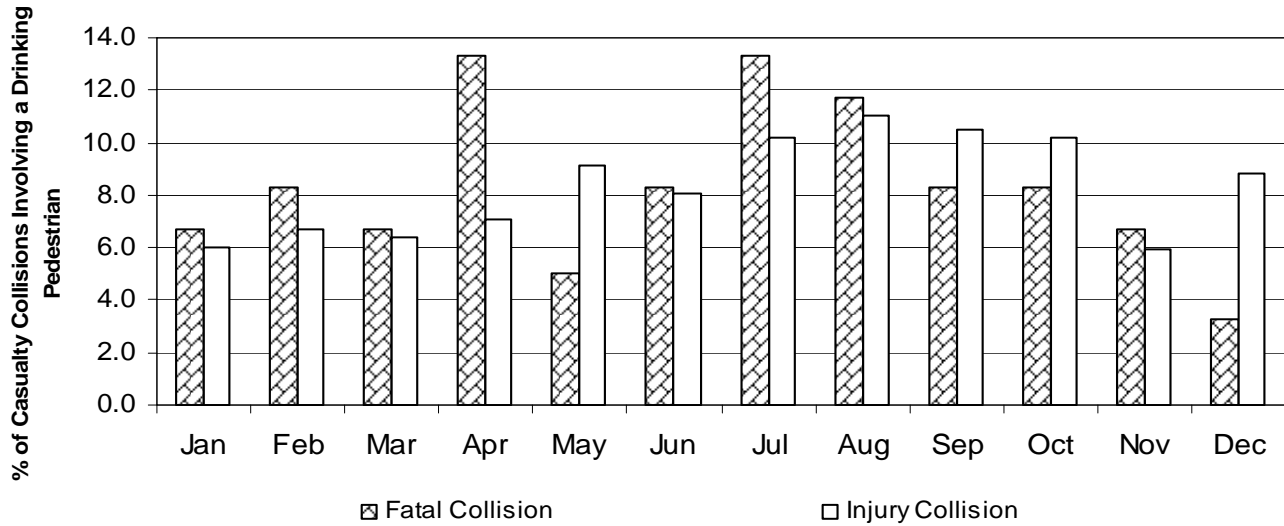
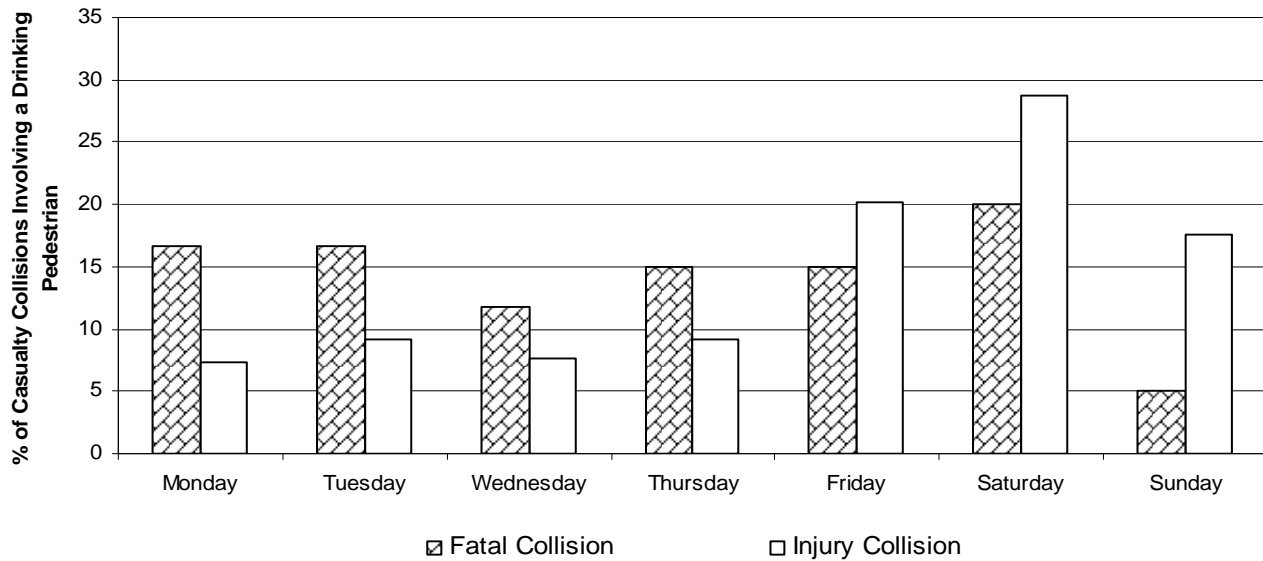


Figure 4
ALBERTA
OCCURRENCE DAY OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008



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Figure 5
ALBERTA
OCCURRENCE TIME OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

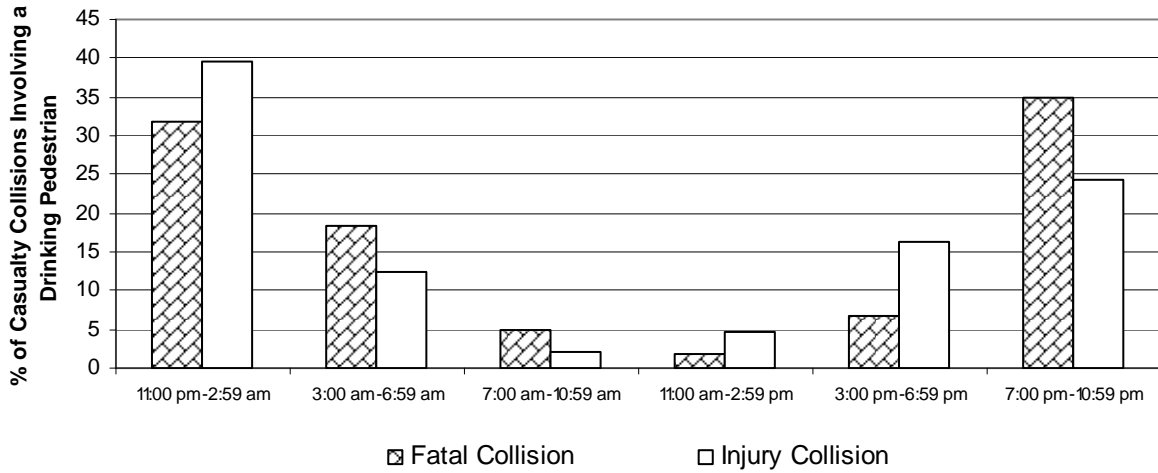
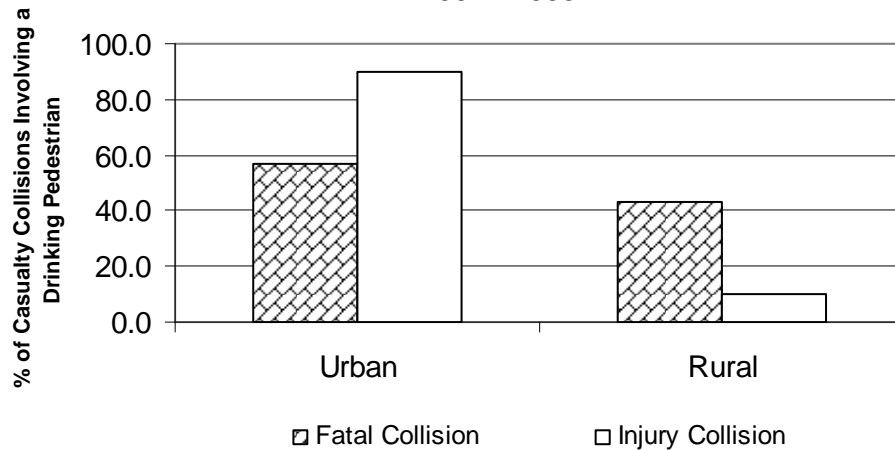


Figure 6
ALBERTA
LOCATION OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008



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Table 7
ALBERTA
ENVIRONMENTAL CONDITION OF CASUALTY COLLISIONS
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

Environmental Condition	Fatal Collisions		Non-Fatal Injury Collisions		Casualty Collisions	
	N	%	N	%	N	%
Clear	54	90.0	594	83.0	648	83.5
Rain	3	5.0	52	7.3	55	7.1
Snow	--	--	41	5.7	41	5.3
Fog/Smog/Smoke/Dust	--	--	3	0.4	3	0.4
High Wind	--	--	2	0.3	2	0.3
Hail/Sleet	--	--	1	0.1	1	0.1
Other	1	1.7	5	0.7	6	0.8
Unspecified	2	3.3	18	2.5	20	2.6
Total Casualty Collisions	60	100.0	716	100.0	776	100.0

Observations

The majority of casualty collisions involving drinking pedestrians occurred in clear weather (83.5%) and 12.4% occurred during rainy or snowy conditions.

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Table 8
ALBERTA
VEHICLES INVOLVED IN CASUALTY COLLISIONS*
WITH DRINKING PEDESTRIANS
2004 - 2008

Type of Vehicle	Vehicles in Fatal Collisions		Vehicles in Non-Fatal Injury Collisions		Vehicles in Casualty Collisions	
	N	%	N	%	N	%
Passenger Car	20	36.4	383	54.9	403	53.5
Pick-up Truck/Van	15	27.3	141	20.2	156	20.7
Mini-Van/MPV	11	20.0	126	18.1	137	18.2
Truck 4500 kg+	4	7.3	16	2.3	20	2.7
Transit Bus	--	--	16	2.3	16	2.1
Tractor-Trailer	4	7.3	7	1.0	11	1.5
Motorcycle	--	--	5	0.7	5	0.7
Other	1	1.8	4	0.6	5	0.7
Total Number of Vehicles	55	100.0	698	100.0	753	100.0

Observations

Over half of the vehicles involved in a casualty collision with a drinking pedestrian were passenger cars (53.5%).

*Based on those cases where type of vehicle was specified on the collision report form.

Table 9
ALBERTA
LIGHT CONDITION FOR DRIVERS INVOLVED IN CASUALTY COLLISIONS*
WITH DRINKING PEDESTRIANS
2004 - 2008

Light Condition	Drivers in Fatal Collisions		Drivers in Non-Fatal Injury Collisions		Drivers in Casualty Collisions	
	N	%	N	%	N	%
Darkness	55	91.7	542	76.9	597	78.0
Daylight	5	8.3	157	22.3	162	21.2
Sunglare	--	--	6	0.9	6	0.8
Total Number of Drivers	60	100.0	705	100.0	765	100.0

Observations

Almost all fatal collisions (91.7%) and 76.9% of injury collisions involving a drinking pedestrian occurred between sunset and sunrise.

*Based on those cases where light condition was specified on the collision report form.

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Table 10

**ALBERTA
ACTIONS OF DRINKING PEDESTRIANS*
IN CASUALTY COLLISIONS
2004 - 2008**

Actions of Drinking Pedestrians	Drinking Pedestrians in Casualty Collisions	
	N	%
Crossing without Right of Way	255	36.3
Walking/Working on Roadway	196	27.9
Crossing with Right of Way	77	11.0
Getting On/Off Vehicle	21	3.0
Other	153	21.8
Total Number of Drinking Pedestrians	702	100.0

Observations

Over one third (36.3%) of drinking pedestrians in casualty collisions were crossing the road without the right of way.

*Based on those cases where pedestrian action was specified on the collision report form.

Table 11

**ALBERTA
IMPROPER ACTIONS OF DRIVERS IN CASUALTY COLLISIONS
WITH DRINKING PEDESTRIANS
2004 - 2008**

Improper Actions of Drivers	Driver Action in Casualty Collisions		Improper Driver Actions in Total Pedestrian Involved Casualty Collisions**	Improper Driver Actions in Total Casualty Collisions**
	N	%	%	%
Failed to Yield Right of Way to Pedestrian	78	40.2	60.6	3.5
Backed Unsafely	39	20.1	14.6	2.3
Ran Off Road	14	7.2	3.0	15.4
Improper Turn	6	3.1	2.5	2.6
Stop Sign Violation	6	3.1	1.7	8.1
Left Turn Across Path	5	2.6	2.3	12.4
Left of Centre	4	2.1	0.4	3.0
Failed to Yield Right of Way - Uncontrolled Intersection	3	1.5	1.5	1.7
Improper Passing	2	1.0	0.7	1.1
Disobey Traffic Signal	1	0.5	2.2	6.9
Improper Lane Change	1	0.5	0.3	2.7
Followed Too Closely	--	--	1.3	27.9
Yield Sign Violation	--	--	0.4	2.0
Other	35	18.0	8.3	10.1
Total Number of Drivers	194	100.0		

Observations

The most common errors made by drivers involved in casualty collisions with drinking pedestrians were failure to yield right of way to the pedestrian (40.2%) and backing unsafely (20.1%).

*Based on those cases where driver action was specified on the collision report form.

**Source: Alberta Traffic Collision Statistics 2004 - 2008

Table 12
ALBERTA
CONDITION OF DRIVERS INVOLVED IN CASUALTY COLLISIONS*
WITH DRINKING PEDESTRIANS
2004 - 2008

Condition of Driver	Drivers in Fatal Collisions		Drivers in Non-Fatal Injury Collisions		Drivers in Casualty Collisions	
	N	%	N	%	N	%
Normal	39	72.2	438	81.6	477	80.7
Had Been Drinking	7	13.0	58	10.8	65	11.0
Alcohol Impaired	8	14.8	39	7.3	47	8.0
Total Alcohol Involvement	15	27.8	97	18.1	112	19.0
Other	--	--	2	0.4	2	0.3
Total Number of Drivers	54	100.0	537	100.0	591	100.0

Observations

Of drivers involved in non-fatal injury collisions with drinking pedestrians, 18.1% had consumed alcohol before the crash, compared to 27.8% in fatal collisions.

Overall, 19.0% of drivers involved in casualty collisions with drinking pedestrians were judged to have consumed alcohol before the crash - these drivers were over three times more likely to have consumed alcohol than drivers in all casualty crashes (5.3%**).

*Based on those cases where driver condition was specified on the collision report form.

**Source: Alberta Traffic Collision Statistics 2004 - 2008

Table 13
ALBERTA
INJURY SEVERITY IN CASUALTY COLLISIONS*
INVOLVING DRINKING PEDESTRIANS
2004 - 2008

Injury Severity	Fatalities		Major Injuries		Minor Injuries		Total Casualties	
	N	%	N	%	N	%	N	%
Drivers	--	--	--	--	12	2.5	12	1.4
Motorcyclists	--	--	--	--	3	0.6	3	0.4
Pedestrians - Drinking	62	100.0	295	97.7	436	92.6	793	95.0
Pedestrians - Not Drinking	--	--	7	2.3	15	3.2	22	2.6
Total Pedestrians	62	100.0	302	100.0	451	95.8	815	97.6
Other	--	--	--	--	5	1.1	5	0.6
Total Casualties	62	100.0	302	100.0	471	100.0	835	100.0

Observations

Drinking pedestrians sustained all of the fatalities in casualty collisions with pedestrians. The drinking pedestrians also sustained almost all (94.6%) of the injuries sustained in casualty collisions with pedestrians.

*Includes only those cases where injury severity was specified on the collision report form. This refers to the total number of people killed and injured in collisions involving a drinking pedestrian.

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