

Transports Canada

Road Safety in Canada – 2003

Prepared for:

The Canadian Council of Motor Transport Administrators (CCMTA) Standing Committee on Road Safety Research and Policies

Prepared by:

Road Safety and Motor Vehicle Regulation Directorate

April 2006



ISBN: 0-662-42007-1

Cat.: T46-31/2003E-PDF

© Her Majesty the Queen in Right of Canada Represented by the Minister of Transport, 2005

Road Safety in Canada: A Shared Responsibility

In Canada, responsibility for road safety is shared among the federal, provincial/territorial and municipal levels of government. The federal government is responsible for the regulation of the manufacture and importation of prescribed motor vehicles and equipment (the *Motor Vehicle Safety Act*), as well as the safety fitness of interprovincial motor carriers (the *Motor Vehicle Transport Act*).

Provinces, territories and municipalities are responsible for highway development and maintenance, commercial vehicle operations, driver and vehicle licensing, and the development and implementation of local safety initiatives. The Canadian Council of Motor Transport Administrators along with key non-governmental agencies, such as the Canadian Association of Chiefs of Police and the Canadian Automobile Association, also play an important role in the development and delivery of safety programs.

Canada 2003



There is no official abbreviation for Nunavut at this time. The abbreviation used here is provisional.

Canadians are among the most mobile people on earth.

Motor vehicles help Canadians overcome two fundamental features of the country: vast geography and harsh climate. Our country has more than 1,420,000 kilometres (two-lane equivalent kilometres) of roadway, and the roads are busier than ever.

Canada had over 21 million licensed drivers in 2003 – almost 10 million more than in 1975, an 81 percent increase compared to an increase in the population of 36.8 percent. In 2003, Canadians registered 18.9 million road motor vehicles – 7.6 million more vehicles than in 1975, a 67.4 percent increase.



Fatalities have decreased by over 54% while the number of motor vehicles registered has increased more than 67%

Travel is safer than it has been in almost 30 years.

Despite steady increases in the number of drivers and vehicles, travel on Canadian roads is safer today than ever before.

Traffic fatalities in 2003 were less than half of the 6,061 deaths in 1975 and were at the lowest level since 1954. For the last few years, the number of persons injured hovered above the 220,000 mark, and registered at 222,455 in 2003. Throughout the 1990s, Canada's safety record continued to improve.

In terms of fatalities per 10,000 motor vehicles registered, the downward trend continued. The fatality rates declined in 2003 compared to 2002 in nine of the twelve jurisdictions shown.



Fatalities per 10,000 Motor Vehicles Registered (MVR) 2002, 2003

Note: The territory of Nunavut, with a fatality rate in 2002 of 9.2 and in 2003 of 18.1, was omitted in order to avoid obscuring the fatality rates for the other jurisdictions

Vehicle-kilometres traveled were available for the first time for 2000 from the Canadian Vehicle Survey (Statistics Canada) for each province and territory. The chart below shows a decline in fatality rates for nine of the twelve jurisdictions shown for 2003 as compared to 2002.



Fatalities per Billion Vehicle-Kilometres Travelled 2002 and 2003

Note: Fatality rates for Nunavut were 73.3 in 2002 and 222.2 in 2003

Despite huge improvements in road safety, an average of 3,000 Canadians die on the roads every year.

Improvements notwithstanding, casualty figures are a grim reminder of the high price Canadians pay for their mobility. Traffic fatalities accounted for about 95 percent of transportation fatalities nationwide in 2003. Traffic collisions in Canada claimed the lives of 2,766 road users and injured another 222,455 in 2003.



Comparison of Fatalities by Mode of Transportation, 2003

A profile of collisions in Canada

In Canada, there were approximately 1,808 motor vehicle collisions every day during 2003, of which 76.2 percent resulted in property damage only and 23.7 percent involved injury or death.

The human toll is great. In 2003, 7.6 people died on our roads every day, and 609 were injured, at a cost to society of approximately \$26 million in current dollars each day.

Year	Fatal	Non-Fatal Injury	Property Damage	Total Collisions
1994	2,869	166,780	505,027	674,676
1995	2,854	164,190	495,379	662,423
1996	2,708	156,282	476,422	635,412
1997	2,646	150,118	465,950	618,714
1998	2,612	148,414	450,286	601,312
1999	2,636	151,110	442,816	596,562
2000	2,569	156,000	463,492	622,061
2001	2,434	151,834	455,749	610,017
2002	2,593	157,074	486,258	645,925
2003	2,484	154,420	503,189	660,093

Motor Vehicle Traffic Collisions 1994-2003

Vehicles in collisions

As shown in the table below, the number of motor vehicles involved in crashes was about 1.2 million in 2003. Automobiles, light trucks and minivans accounted for 89 percent of all vehicles involved in collisions.

Type of Vehicle	Fatal	Non-Fatal Injury	Property Damage	Total Vehicles
Automobiles	2,049	191,665	569,698	763,412
Light Trucks & Minivans	988	57,482	220,370	278,840
School Buses	21	536	2,308	2,865
Transit Buses	9	751	2,108	2,868
Intercity Buses	4	180	614	798
Buses - Unspecified	6	718	1,543	2,267
Motorcycles	173	5,423	1,987	7,583
Mopeds	6	739	140	885
Bicycles	49	7,818	1,008	8,875
Straight Trucks > 4536 kg	172	5,145	23,228	28,545
Tractor-Trailers	335	4,455	18,530	23,320
Motor Homes	9	159	658	826
Farm & Construction Equipment	41	698	3,423	4,162
Off-Road Vehicles	22	501	367	890
Snow Vehicles	19	275	219	513
Trains, Streetcars	4	32	34	70
Others	65	4,183	45,713	49,961
Total	3,972	280,760	891,948	1,176,680

Number of Motor Vehicles Involved in Collisions by Vehicle Type - 2003

Single-vehicle collisions accounted for half of all fatal collisions.

On average for the past ten years, single-vehicle collisions accounted for about 50 percent of all fatal collisions, 30 percent of collisions involving personal injury and 26 percent of property damage collisions.

About 67 percent of fatal collisions occurred on rural roads.

Most deadly collisions took place on rural roads. Approximately 67 percent of the 2,484 fatal collisions occurred on rural roads in 2003. Of all injury collisions, 42,268 or 29 percent occurred on rural roads, while the great majority occurred in urban areas where the posted speed limit was 60 km/h or less.

Four out of five serious collisions occurred in clear weather.

Over 80 percent of collisions causing death and injury occurred in clear weather. About 67 percent of fatal collisions and 64 percent of injury collisions occurred on a dry road surface.

Friday and Saturday were the peak days for fatal collisions.

There were more collisions on Friday than on any other weekday. Fatal collisions peaked on Saturday, followed by Friday and Sunday. Fewer fatal crashes occurred on the remaining weekdays, with Tuesday being the safest day by a slight edge. Non-fatal injury collisions peaked on Friday.

The peak time for collisions, as measured in three-hour periods, across all collision severities was 3:00 pm to 6:00 p.m., followed by noon to 3:00 pm. For fatal collisions, the highest risk time periods were Friday 3:00 p.m. to 6:00 p.m. and 9:00 p.m. to midnight, and on Saturday and Sunday from midnight to 3:00 a.m. The entire period between noon and midnight on Friday and Saturday showed an elevated number of collisions.

July and August had the highest frequencies of fatal collisions.

The peak months for fatal collisions were August and July. Injury collisions were more distributed, but peaked in August. Injury-producing collisions (fatal and injury) involving two vehicles peaked in June, July, and August, while single-vehicle injury-producing collisions peaked in November and December.





Fatal
Injury

People at risk

The number of fatalities showed major decreases from 1994 to 2003 in most provinces. From 1994 to 2003, fatalities at the national level decreased over 15 percent. Nova Scotia, Quebec, Ontario, British Columbia, and the Yukon showed percentage decreases in fatalities greater than the national average. Prince Edward Island, Manitoba, Saskatchewan, and Alberta showed percentage decreases less than the national average and the Northwest Territories showed no change. The percentage of fatalities increased in Newfoundland and Labrador and New Brunswick from 1994 to 2003.



Fatalities in Motor Vehicle Traffic Collisions by Province 1994 versus 2003

Fatalities i	n Motor	Vehicle	Traffic	Collisions	1994-2003	

Province	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Newfoundland & Labrador	36	31	47	34	35	41	53	43	38	41
Prince Edward Island	19	19	20	20	21	19	20	17	20	17
Nova Scotia	91	107	113	89	84	97	87	80	88	70
New Brunswick	79	113	94	105	96	110	89	95	104	93
Quebec	827	883	887	796	723	763	765	615	703	621
Ontario	999	999	929	899	854	868	849	845	873	831
Manitoba	119	128	93	119	121	113	111	94	109	104
Saskatchewan	151	157	133	165	148	186	151	166	138	148
Alberta	395	403	349	429	429	347	364	404	372	385
British Columbia	534	493	405	389	421	414	421	413	468	440
Yukon	10	13	6	4	12	16	9	4	12	7
Northwest Territories	3	5	15	14	5	11	5	3	3	3
Nunavut							3	2	3	6
Canada	3,263	3,351	3,091	3,063	2,949	2,985	2,927	2,781	2,931	2,766

Note: Fatalities in motor vehicle collisions include all road users: drivers, passengers, motorcyclists, pedestrians, and cyclists, where death occurred within 30 days of the collision. The exception to this rule is Quebec (8 days).

From 1994 to 2003, fatalities declined for nine of the ten age groups. Fatalities decreased more than the national average of 15 percent in six of the age groups. Fatalities in the 00-04, 05-09 and 10-14 age groups decreased 59 percent, 59 percent and 26 percent, respectively. This decline may reflect efforts by road safety professionals to reduce these fatalities through education and publication of information about child restraint systems and the use of clinics to promote the proper use of child restraints. The decreases of the 15-19, 20-24, 25-34, 35-44, 55-64 and 65 and over age groups were 21 percent, 16 percent, 30 percent, 4 percent, 15 percent and 12 percent, respectively. Fatalities in the 45-54 age group increased about 21 percent.



Fatalities in Motor Vehicle Traffic Collisions by Age Group 1994 versus 2003

Age Group	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
00-04	68	70	39	61	40	48	26	31	30	28
05-09	66	64	74	65	54	56	54	54	49	27
10-14	76	86	56	79	65	72	65	52	80	56
15-19	416	420	380	408	326	410	389	340	335	328
20-24	418	431	395	379	384	359	385	366	367	352
25-34	598	636	539	511	506	475	440	401	405	419
35-44	466	502	431	429	439	416	421	412	453	447
45-54	328	332	346	319	327	344	373	365	401	396
55-64	266	241	264	268	236	252	249	253	286	226
65+	530	544	549	519	556	536	502	488	515	465
Unknown	31	25	18	25	16	17	23	19	10	22
Total	3,263	3,351	3,091	3,063	2,949	2,985	2,927	2,781	2,931	2,766

Fatalities in Motor Vehicle Traffic Collisions by Age Group 1994-2003

Note: Fatalities in motor vehicle collisions includes all road users: drivers, passengers, motorcyclists, pedestrians, and cyclists, where death occurred within 30 days of the collision. The exception to this rule is Quebec (8 days).

Overall, injuries declined 9.3 percent with Nova Scotia, New Brunswick, Ontario, Manitoba, British Columbia, the Yukon Territory, and the Northwest Territories showing improvements greater than the national percentage decrease. Saskatchewan experienced a smaller decline. Alberta, Prince Edward Island, Quebec, and Newfoundland and Labrador showed increases in the percentage of persons injured.



Injuries in Motor Vehicle Traffic Collisions 1994 versus 2003

Injuries in Motor	Vehicle	Traffic	Collisions	1994-2003

Province	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
N.L.	2,767	2,453	2,605	2,701	2,577	2,980	3,068	3,180	2,687	2,862
P.E.I.	862	833	819	894	931	1,080	1,189	1,094	1,048	1,004
N.S.	6,246	6,286	6,288	6,452	6,529	6,867	6,999	6,327	5,949	5,291
N.B.	5,307	5,504	4,785	5,265	5,357	5,442	5,556	5,567	5,039	4,517
Que.	48,756	48,623	47,634	47,861	47,009	48,299	51,489	49,566	53,385	55,895
Ont.	90,063	89,612	88,445	85,565	83,320	84,107	85,009	81,783	84,199	77,888
Man.	13,832	12,138	10,467	9,148	9,531	9,697	9,485	9,002	9,533	9,782
Sask.	8,197	7,466	6,793	7,594	7,211	7,995	7,832	6,932	7,277	7,684
Alta.	20,169	20,866	22,268	23,916	24,935	25,451	26,464	27,583	28,989	26,426
B.C.	48,299	47,473	40,190	31,501	29,911	29,963	29,838	29,577	29,315	30,611
Y.T.	294	384	334	320	304	353	310	305	278	233
N.W.T.	318	297	266	282	286	345	182	205	232	172
Nvt.							95	N/A	52	90
Canada	245,110	241,935	230,894	221,499	217,901	222,579	227,516	221,121	227,983	222,455

Note: Injuries in motor vehicle collisions include all road users: drivers, passengers, motorcyclists, pedestrians and cyclists, all those who suffer any visible injury or complain of pain. N/A means Not Available. All age groups up to and including the 25-34 years showed decreases of about 13 percent or more. The 35-44 age group decreased over 4 percent. Injuries in the 45-54 and 55-64 age groups increased 18 percent each. For persons 65 years of age and older, injuries increased over 7 percent.



Injuries in Motor Vehicle Traffic Collisions by Age Group 1994-2003

_		•				•	•	•		
Age Group	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
00-04	4,015	4,003	3,645	3,421	3,204	3,339	3,148	2,967	2,862	2,873
05-09	7,301	7,013	6,774	6,462	6,283	6,051	5,879	5,376	5,483	4,944
10-14	10,239	9,801	8,840	8,531	8,297	8,057	7,587	7,348	7,523	7,434
15-19	34,370	32,755	29,863	28,894	28,836	29,338	29,670	29,127	29,260	27,809
20-24	33,594	32,735	30,173	28,402	27,966	28,903	30,187	29,197	30,113	29,317
25-34	53,937	53,014	49,539	45,700	42,970	42,847	42,777	40,660	41,289	40,091
35-44	39,971	40,337	39,630	38,473	38,183	39,216	39,950	38,942	40,202	38,302
45-54	25,494	25,955	25,952	25,919	26,078	27,169	28,367	28,516	29,885	30,103
55-64	14,530	14,634	14,432	13,796	14,168	14,680	15,376	15,355	16,639	17,171
65+	15,576	15,553	15,606	15,403	15,262	16,207	16,101	16,027	16,680	16,696
Unknown	6,083	6,135	6,440	6,498	6,654	6,772	8,474	7,606	8,047	7,715
Total	245,110	241,935	230,894	221,499	217,901	222,579	227,516	221,121	227,983	222,455

Injuries in Motor Vehicle Traffic Collisions by Age Group 1994-2003

Note: Injuries in motor vehicle collisions include all road users: drivers, passengers, motorcyclists, pedestrians and cyclists, all those who suffer any visible injury or complain of pain.

Age Group	Fatalities	% Distribution of Fatalities	Injuries	% Distribution of Injuries	Population	% Distribution of Population
00-04	28	1.0	2,873	1.3	1,714,302	5.4
05-09	27	1.0	4,944	2.2	1,949,702	6.2
10-14	56	2.0	7,434	3.3	2,117,613	6.7
15-19	328	11.9	27,809	12.5	2,120,545	6.7
20-24	352	12.7	29,317	13.2	2,188,501	6.9
25-34	419	15.1	40,091	18.0	4,346,845	13.7
35-44	447	16.2	38,302	17.2	5,200,523	16.4
45-54	396	14.3	30,103	13.5	4,692,240	14.8
55-64	226	8.2	17,171	7.7	3,239,259	10.2
65 +	465	16.8	16,696	7.5	4,060,147	12.8
Unknown	22	0.8	7,715	3.5		
Total	2,766	100.0	222,455	100.0	31,629,677	100.0

Road User Fatalities and Injuries by Age Group Compared to Canada's Population in 2003

Despite the proven success of graduated licensing programs in many jurisdictions, young Canadians in the 15-19 and 20-24 age groups were consistently overrepresented in both fatalities and injuries. These teens and young adults accounted for about 14 percent of Canada's population, yet they accounted for about 25 percent of traffic deaths and injuries. Fatalities in the 25-34 and the 65+ age groups were also overrepresented compared to their respective populations. The 25-34 age group accounted for 15.1 percent of fatalities but represented 13.7 percent of the population. The 65+ age group accounted for 16.8 percent of fatalities but represented 12.8 percent of the population. Injuries in the 25-34 and 35-44 age groups were slightly over their respective population distributions.



Comparison of Percentage Distributions of Population, Fatalities and Injuries by Age Group in 2003

High-risk behaviour on our roads

Much of this carnage is preventable. The same high-risk behaviours continued to plague Canadian roads – impaired driving, non-use of seat belts and excessive speed.

Alcohol: unsafe at any speed

In 1987, 43 percent of Canadian drivers fatally injured and tested for alcohol were found to have a blood alcohol concentration (BAC) over the legal limit of .08 (80 mg%). During the 1990s, the percentage of fatally injured drivers in this category slowly decreased to 27 percent of those fatally injured drivers tested by 1999, but increased to 32 percent in 2001. The percentage declined to 29 percent in 2002, but increased to 32 percent in 2003. Those who had been drinking (BAC > 0mg%) declined from 53 percent to 38 percent between 1987 and 2003.



Percentage of Fatally Injured Drivers Tested and Found to Have Been Drinking

BAC: Blood Alcohol Concentration

mg%: Weight of alcohol in the bloodstream stated as milligrams in 100 millilitres of blood.

*BAC categories are reported as 81-160 mg% and >160 mg% for 2001 to 2003.

While the percentage of fatally injured drivers tested and found to be over the legal blood alcohol limit has generally declined over the years, there are significant variations among age groups, which are presented in the following table.

Age Group	198	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	7																
<u><</u> 19	29.7	38.6	31.2	30.6	31.2	35.0	29.6	32.5	29.6	31.9	29.2	26.3	20.5	27.5	25.3	23.2	25.9
20 - 25	51.1	46.4	47.5	39.4	50.0	44.1	44.3	46.0	47.0	46.9	46.3	43.5	32.7	36.2	42.6	37.9	43.0
26 - 35	55.0	56.3	49.8	48.6	48.4	52.8	48.4	48.8	47.5	42.7	41.6	45.7	41.6	40.0	47.8	37.8	42.9
36 - 45	46.4	39.5	41.6	41.9	45.1	45.4	44.3	41.9	43.6	44.1	37.8	40.1	33.5	36.9	38.4	37.9	38.5
46 - 55	37.6	33.7	28.6	36.3	34.3	37.9	27.5	28.8	25.1	29.6	22.8	30.2	22.5	27.2	26.8	27.6	25.5
> 55	24.4	13.7	18.7	15.8	22.2	14.7	21.0	12.5	11.8	14.5	12.3	10.3	11.9	11.9	14.9	11.8	14.1
Total	43.2	40.4	38.9	36.6	40.3	40.1	37.9	36.0	35.5	34.9	31.7	32.8	27.1	27.1	32.2	29.1	32.0

Percentage of Fatally Injured Drivers Tested and Found to be Over the Legal Limit (BAC >80 mg%)

The alcohol-related casualty figures remain grim. Of the 2766 road users killed in 2003, alcohol was a factor in over 1,000 deaths. Many of the fatally injured drivers who had been drinking were severely impaired.

Most Canadians buckle up!

Seat belt use by Canadians is ranked among the highest in the world. Fifteen years ago, fewer than three out of four people buckled up. Since then, seat belt use has climbed steadily. From 1999 to 2001, about 90 percent of all Canadians travelling in cars, minivans and light trucks regularly used their seat belts. Among drivers, some 91 percent buckled up in 2001. Seat belt wearing rates are not consistent across the Canadian provinces and territories.

Few other countries can measure up to Canada's record. In the United States, for example, rates of seat belt use have improved, and reached 79 percent in 2003, up from 75 percent nationwide in 2002. Canada did not conduct a national seat belt use survey in 2002 or 2003. Rather, a survey of front seat occupants was conducted in rural communities in 2002 and a similar survey targeting **all occupants** was conducted in urban communities in 2003. When the results of the 2002 and 2003 surveys were combined, 87.4 percent of front seat occupants of light-duty vehicles were buckled up. For front seat occupants, 87.6 percent in urban communities used seat belts compared to 85.0 percent in rural communities. About 87.2 percent of all occupants of light-duty vehicles in urban communities used seat belts. Comparison of the 2002/2003 results to earlier results is very difficult due to the different methodology.

Province	1992	1993	1994	1996	1997	1998	1999	2000	2001	2002/2003
N.L.	90.4	94.5	93.6	91.9	92.4	86.4	82.9	92.7	92.1	82.5
P.E.I.	76.9	77.8	84.5	87.5	82.6	82.7	88.5	85.7	86.7	78.1
N.S.	82.1	83.5	83.2	88.2	87.1	88.5	86.6	86.5	88.0	89.4
N.B.	77.9	82.1	84.9	86.6	86.5	87.9	85.9	91.5	91.4	88.8
Que.	86.0	88.8	89.8	90.3	91.7	92.3	93.0	91.4	89.0	93.3
Ont.	76.6	79.4	86.3	89.9	89.2	89.1	91.0	91.7	92.5	86.5
Man.	76.5	80.2	82.6	82.4	84.8	84.4	85.3	84.2	82.3	85.3
Sask.	88.7	89.4	87.7	89.6	91.7	89.7	88.2	90.0	91.7	85.9
Alta.	80.3	81.0	83.1	85.1	83.7	82.4	89.3	87.2	84.9	84.9
B.C.	87.1	86.4	88.3	88.7	89.4	89.7	89.2	88.7	90.8	83.2
Y.T.	60.1	72.8	68.2	81.2	83.4	82.1	82.1	79.3	78.1	85.1
N.W.T.	68.7	51.5	67.4	54.9	64.3	52.6	61.1	60.7	62.7	77.3
Nvt.									13.4	21.8
Canada	81.4	83.4	86.8	88.7	88.9	88.7	90.1	90.1	89.9	87.4

Estimates of Seat Belt Use Percentage of All Occupants Wearing Seat Belts in Light-Duty Vehicles**

1992 is the first available year for this data. In 1992, the seat belt survey was expanded from driver only to occupants of the vehicle. This survey was not conducted in 1995. 2002/2003 combined rates are for front seat occupants. ** Light-duty vehicles include passenger cars, pickup trucks, minivans and sport utility vehicles (SUVs).

40 percent of Canadians killed had not buckled up

Most Canadians believe that seat belts will reduce the risk of death and injury. In 2003, despite a seat belt usage rate of about 87%, almost 40 percent of motor vehicle occupants who died and nearly 17 percent of those who were seriously injured were not using a seat belt at the time of the collision.

Drivers and passengers at risk

Seventy-five percent of road user fatalities are occupants of motor vehicles. Drivers accounted for 52 percent and passengers 23 percent. The next largest road user class, in terms of fatalities, was

pedestrians at 13 percent. Even though motor vehicle occupants make up the largest percentage of road fatalities, they are not the most vulnerable road users. Those road users not protected by a passenger compartment are most vulnerable – pedestrians, bicyclists and motorcyclists.



2003 Fatalities by Road User Class

About 70 percent of Canada's road victims are male.

In 2003, about 70 percent of all fatalities were male. Although 53 percent of Canada's licensed drivers were male, 79 percent of fatally injured drivers were male. The proportion of males and females injured was split roughly 50/50 for all injured persons as well as injured drivers.

Patterns are shifting, but young drivers are still vulnerable.

Compared to the overall population of licensed drivers in each age group, drivers 34 and under (15-19, 20-24 and 25-34) were overrepresented in collisions resulting in injury and death. Although licensed drivers in the 15-19 and 20-24 age groups accounted for 5.1 percent and 8.2 percent, respectively, of all licensed drivers, their involvement in fatal collisions represented 9.3 percent and 11.6 percent, respectively, of all drivers involved in fatal collisions, and 9.7 percent and 13.0 percent, respectively, of all drivers involved in injury collisions. Drivers in the 25-34 age group were also overrepresented, but to a much lesser degree.

As a measure of exposure to risk, drivers involved in fatal and injury collisions are shown in the table as an involvement rate per 100,000 licensed drivers. The table below demonstrates that drivers aged 24 and under, in particular, were involved in a disproportionately higher number of casualty collisions per 100,000 licensed drivers than the rate for all age groups combined. Conversely, drivers 35 years of age and over were involved in a disproportionately lower number of casualty collisions than the rate for all age groups combined. The total licensed drivers excludes 8,738 drivers for whom the age was not stated.

Age			Drivers I	Involved			Licensed Drivers		
Group	In Fatal Collisions	% Distribution	Involvement Rate*	In Injury Collisions	% Distribution	Involvement Rate*	Number	% Distribution	
15-19	347	9.3	31.9	24,648	9.7	2263.9	1,087,986	5.1	
20-24	432	11.6	24.6	33,127	13.0	1887.3	1,754,394	8.2	
25-34	729	19.5	19.0	52,966	20.8	1380.7	3,833,556	17.9	
35-44	768	20.6	16.1	56,246	22.1	1180.9	4,760,515	22.2	
45-54	674	18.1	15.5	43,394	17.0	995.0	4,358,434	20.3	
55-64	393	10.5	13.4	24,157	9.5	825.6	2,924,581	13.6	
65 +	390	10.5	14.4	20,005	7.9	738.3	2,707,821	12.6	
Total	3,733	100.0	17.4	254,543	100.0	1187.2	21,427,28 7	100.0	

Comparison of Drivers Involved in Fatal and Injury Collisions to Licensed Drivers in 2003

*Involvement Rate: Expressed per 100,000 Licensed Drivers

The following table takes the involvement rates in fatal collisions and injury collisions per 100,000 licensed drivers (from the previous table) one step further and compares the 2003 involvement rates by age group to 2001 and 2002. There was an overall decrease in driver involvement rates in fatal collisions in 2003 as compared to 2001 and 2002. The most noteworthy reduction was in the 20-24 age group in fatal collisions. The involvement rate decreased from 28.4 per 100,000 licensed drivers in 2001 to 24.6 in 2003. Also in the fatal collisions, there was a slight increase in 2003 over 2001 and 2002 for the 15-19 and the 25-34 age groups. Injuries declined for all age groups in 2003 as compared to 2002.

Despite the overall decrease, the rate for female drivers involved in fatal collisions increased from 7.5 in 2001 to 8.5 in 2002 and 8.0 in 2003. The largest increase was for females aged 15-19, from 13.9 to 18.8 in 2001 and 2003, respectively. The 20-24 female age group declined from 12.2 to 9.2 over the three years. For female drivers involved in injury collisions, the rate increased for all age groups from 2001 to 2002, but declined in all age groups in 2003 as compared to 2002. On the other hand, the overall rates for male drivers in fatal collisions decreased. Slight increases were observed from 2001 to 2003 for male drivers aged 25-54; however, decreases occurred for all male age groups in 2003 over 2002. A similar pattern was observed for male drivers in injury collisions over the three-year period. A complete table of all age groups is available on request.

Age Group	Drivers Inv	volved in Fatal	Collisions	Drivers Involved in Injury Collisions			
	2001	2002	2003	2001	2002	2003	
15 - 19	31.2	30.4	31.9	2,371	2,364	2,264	
20 - 24	28.4	28.5	24.6	1,963	2,004	1,887	
25 - 34	17.8	18.8	19.0	1,410	1,425	1,381	
35 - 44	15.2	17.4	16.1	1,163	1,210	1,181	
45 - 54	15.6	17.7	15.5	990	1,007	995	
55 - 64	13.8	14.9	13.4	828	845	826	
65 +	15.6	15.8	14.4	737	763	738	
Total	17.5	18.8	17.4	1,209	1,230	1,187	

Comparison of Drivers Involved in Fatal and Injury Collisions Per 100,000 Licensed Drivers

Almost all Canadians, regardless of age group, were safer on the roads.

Almost all Canadians, regardless of age group, were safer on the roads, but the 45-54 age group showed an increase in the number of fatalities of 21 percent over the 10-year period. The largest decreases (59 percent) were for children nine years of age and younger.

All age groups under 35 years of age showed strong double-digit decreases in injuries. Injuries in all age groups 45 years of age and over increased from 1994 to 2003. These increases were most notable in the 45-54 and 55-64 age groups with an increase of 18 percent for each group.

Commercial vehicle collisions accounted for one in five deaths.

In the *National Safety Code for Motor Carriers*, a commercial vehicle is defined as a truck, tractor, tractor-trailer, or combination thereof exceeding a registered gross weight of 4500 kilograms, or a bus designed, constructed and used for the transportation of passengers with a designated seating capacity of more than ten, including the driver, but excluding operation for personal use.

The National Safety Code currently contains fifteen standards addressing factors necessary for the safe operation of all commercial vehicles. The federal government has jurisdiction under the *Motor Vehicle Transport Act, 1987* to regulate truck and bus carriers that operate beyond the limits of a province. The Act creates a framework for shared responsibility between federal and provincial governments for the safe operation of motor carriers. The provinces and territories regulate the operations of carriers within their respective jurisdictions.

Over the period 1994 to 2003, fatalities resulting from commercial vehicle collisions decreased from 639 to 578.

Commercial vehicle crashes are often deadly, and are particularly dangerous to other users of the road. Although all vehicles involved in commercial vehicle collisions, on average, accounted for approximately 8 to 9 percent of all vehicles involved in crashes, these collisions accounted for an average of 20 percent of all road user fatalities, or one in five road fatalities in Canada.

By far, the majority of victims in commercial vehicle crashes were the occupants of the other vehicles involved. For example, in 2003, of the 578 people killed in crashes involving commercial vehicles, 402 were occupants of the other vehicles involved.

	Commercial Vehicle Occupants							
Year	Buses	Straight Trucks	Tractor- Trailers	Total Occupants	Occupants of Other Vehicles	Pedestrians	Bicyclists	All Victims
1994	10	40	34	84	479	59	17	639
1995	6	25	38	69	474	51	11	605
1996	0	25	33	58	424	64	10	556
1997	46	18	47	111	480	61	12	664
1998	4	28	40	72	413	59	17	561
1999	3	25	44	72	447	65	5	589
2000	10	30	52	92	431	48	11	582
2001	5	17	50	72	415	50	11	548
2002	3	25	59	87	424	62	8	581
2003	3	37	56	96	402	67	13	578

Fatally-Injured Victims of Collisions Involving Commercial Vehicles

The following chart shows the percentage distribution of fatalities in collisions involving commercial vehicles in 2003.



Fatally-Injured Victims of Collisions Involving Commercial Vehicles in 2003

School bus travel is very safe.

From 1994 to 2003, eight school bus occupants died in collisions – two drivers and six passengers.

	Scho	ol Bus Occu	pants	Occupants			
Year	Drivers	Passengers	All Occupants	of Other Vehicles	Bicyclists	Pedestrians	All Victims
1994	0	3	3	16	1	1	21
1995	0	0	0	10	1	2	13
1996	0	0	0	6	0	7	13
1997	0	0	0	8	1	2	11
1998	1	0	1	6	1	3	11
1999	0	1	1	7	0	5	13
2000	0	2	2	8	1	5	16
2001	0	0	0	10	0	3	13
2002	1	0	1	6	0	5	12
2003	0	0	0	14	2	4	20

Fatally Injured Victims of Collisions Involving School Buses

Of the 37 pedestrians who died in collisions involving school buses, 24 were school-age children (less than 19 years of age). Two of the seven bicyclists who died in these collisions were also school-age children. The following chart shows the percentage distribution of fatally injured victims of collisions involving school buses.



Fatally-Injured Victims of Collisions Involving School Buses 1994 - 2003

School buses are designed and manufactured to meet many safety standards to protect the occupants from serious injuries. Safety features include: high-backed, energy-absorbing seats; anchorage of the seats; brake systems; lighting; fuel system protection; emergency exits; tires; strength of body structure; stop arms; and special mirrors.

Vulnerable Road Users

Motorcyclist Fatalities by Age Group,

1994, 2003

While vehicle occupants account for over 75 percent of the deaths and injuries on Canada's roads, motorcyclists, bicyclists and pedestrians face considerable risks, since they have minimal or no protection compared to those in a motor vehicle passenger compartment. Crashes involving these vulnerable road users claimed 597 lives in 2003.

Motorcyclists accounted for about one in 16 of the total road fatalities in Canada.

Motorcycle registrations in Canada have decreased from a high of 510,000 in 1983 to 373,000 in 2003. In 2003, there was one motorcycle for every 51 motor vehicles registered. Nonetheless, motorcyclists still accounted for 6.4 percent (177) of Canada's road user fatalities in 2003.

Fatal motorcycle crashes claimed 61 percent fewer lives in 2003 than in 1983 when fatalities were at their highest (450). Motorcyclist fatalities and injuries decreased for ages less than 35 years in 2003 as compared to 1994. Fatalities and injuries for motorcyclists aged 35 years and above increased in 2003 over 1994, most notably in the 45-54 age group.



Motorcyclist Injuries by Age Group, 1994, 2003

Bicycle deaths cut by 70 percent in the 05-14 age group.

The number of Canadians killed on bicycles showed an overall downward trend throughout the 1990s and into the twenty-first century, with a low of 40 in 2000. However, the fatalities increased to 60 and 63 in 2001 and 2002, respectively, but dropped to 44 in 2003. Overall, fatalities decreased 49 percent from 1994 to 2003 and injuries declined 27 percent over the ten-year period.

Of the 44 bicyclists killed in 2003, 23 percent were over 55 years old, 20 percent were 35-44 years of age, 14 percent were 10-14 years of age, 11 percent were 45-54 years of age, 9 percent were 15-19 years of age, and 7 percent were in each of the 05-09, 20-24, and the 25-34 age groups.

Despite helmet laws and education programs, cyclists between 5 and 14 years of age were still the most likely to be injured or killed, accounting for 21 percent. The majority of these young people -8 of 9 fatalities and 76 percent of injuries – were boys.

Bicyclist Injuries by Age Group,



Bicyclist Fatalities by Age Group, 1994, 2003

Older pedestrians accounted for one-third of all pedestrian fatalities.

Across Canada, during the period 1994-2003, pedestrian deaths declined by 11.7 percent and injuries by 11.3 percent. In 2003, 379 pedestrians were killed and 13,340 were injured. That's one pedestrian killed and 37 injured each day. Over 70 percent were killed in urban areas. About 50 percent of urban pedestrian fatalities occurred at intersections.

Canada's seniors were particularly vulnerable. People aged 65 and older accounted for a 31.4 percent of pedestrian fatalities in 2003, even though they represented only 12.8 percent of the population. Pedestrian fatalities among males in the 65+ age group remained unchanged over the 10-year period, while pedestrian fatalities among females of the same age group decreased 11.3 percent.

Age Group	Male		Fer	nale	Total	
	1994	2003	1994	2003	1994	2003
00-04	1.3	0.8	1.3	0.8	1.3	0.8
05-09	1.2	0.6	0.6	0.0	0.9	0.3
10-14	0.8	0.6	0.6	0.3	0.7	0.5
15-19	1.7	2.1	1.5	0.5	1.6	1.3
20-24	3.0	1.3	1.0	0.8	2.0	1.1
25-34	1.2	1.1	0.8	0.2	1.0	0.7
35-44	1.2	1.3	0.5	0.7	0.9	1.0
45-54	1.4	1.2	0.7	1.1	1.1	1.2
55-64	2.5	1.4	1.0	1.1	1.7	1.2
65+	4.4	3.6	3.1	2.4	3.6	2.9
Total	1.8	1.5	1.1	0.9	1.5	1.2

Pedestrian Fatalities per 100,000 Population By Age Group and Gender

International Comparison

In 2003, Canada ranked seventh among top-ranked member countries of the Organisation for Economic Co-operation and Development (OECD) with a rate of 8.8 fatalities per billion vehicle kilometres travelled (VKM). A rate of 8.9 placed Canada in fifth position in 2001. In 2002, Canada ranked eighth with a fatality rate of 9.3.



Fatalities Per Billion Vehicle Kilometres Travelled Selected OECD Member Countries, 2003

Summary

Fatalities and injuries have declined about 15 percent over the ten-year period and 5.6 percent from 2002 to 2003. However, an average of 3,000 people died annually on Canadian roads and accounted for 95 percent of the transportation fatalities nationwide. The majority of fatal collisions occurred on rural roads. Fifty percent of fatal collisions were single-vehicle. There were more fatal collisions overnight on weekends than any other time and more during the summer than any other season. Most collisions, regardless of severity, occurred on dry roads and in clear weather.

The large majority of fatalities were motor vehicle occupants and most of the occupant fatalities were drivers. Males accounted for the largest proportion of total fatalities and were overrepresented as fatally injured drivers. About 40 percent of fatally injured occupants had not been wearing seat belts at the time of the collision. Drivers aged 24 years and younger tended to be involved in fatal and injury collisions more often than older drivers. Drinking and driving was still a major problem and 32 percent of the fatally injured drivers tested had been legally impaired at the time of the collision.

The injury outcome for children improved, especially those less than 15 years of age. Child pedestrians under 10 years old had the greatest reduction in fatalities. School bus travel continued to be very safe, but school age pedestrians were the most frequent fatalities in those collisions. However, among bicyclists, males aged 5 to 14 years were the most often injured or killed despite an overall decline in bicyclist fatalities.

Fatalities among senior road users 65 years and older declined from 1994 to 2003; however, these fatalities were overrepresented in 2003. Road users aged 45 to 54 years were the only age group with increased fatalities over ten years, but were underrepresented in fatalities in 2003. Even though pedestrian deaths and injuries declined overall, in 2003, pedestrians aged 65 and older were overrepresented in the fatalities. Most pedestrians were killed in urban areas and half of the urban pedestrian fatalities occurred at intersections. Fatalities for motorcyclists aged 35 and older increased over the ten-year period despite a longer-term decline. Commercial vehicle collisions accounted for 20 percent of all road user fatalities in 2003; however, the commercial vehicle fatalities declined over the ten-year period.

The national target of Road Safety Vision 2010 calls for "a 30% decrease in the average number of road users killed or seriously injured during the 2008-2010 period compared with 1996-2001 average figures". Progress toward the target for 2003 is shown by declines of 6.7 percent and 3.0 percent for fatalities and serious injuries, respectively, as compared to the 1996-2001 benchmark data.

Sources of information:

Transport Canada, Road Safety, *Traffic Accident Information Database* (TRAID). Traffic Injury Research Foundation, *Alcohol-Crash Problem in Canada: 2003*. Statistics Canada, *Canadian Vehicle Survey: 2003*, Cat. No. 53-223-XIE. Statistics Canada, Annual Demographic Statistics 2003, Cat. No. 91-213-XPB. Road Safety Vision 2010, 2002 Annual Report, Canadian Council of Motor Transport Administrators (CCMTA) and Transport Canada. Organisation for Economic Co-operation and Development, International Road Traffic and Accident Data (IRTAD).

Extracts from the Traffic Accident Information Database reflect a compilation of the collision statistics most frequently requested through our information desk, web site and communications group.

To find out more about national road safety programs and initiatives, call Transport Canada at 1-800-333-0371 or (613) 998-8616 in the Ottawa area. For comments or questions please write:

Road Safety and Motor Vehicle Regulation Directorate Transport Canada 330 Sparks Street Place de Ville, Tower C, 8th Floor Ottawa, ON K1A 0N5

or e-mail us at: *roadsafetywebmail@tc.gc.ca*. You can also visit the Transport Canada web site at *www.tc.gc.ca/roadsafety/*.