

STATUS REPORT

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DRIVER DEATHS

**BY MAKE & MODEL: FATALITY RISK
IN ONE VEHICLE VERSUS ANOTHER**

More than 125,000 occupants of passenger vehicles died in crashes during 2002-05. Most were drivers. The impacts varied from single-vehicle rollovers on rural roads to multiple-vehicle pileups in urban traffic. Something else that varied was the risk of dying in one vehicle versus another. Some

cars, minivans, SUVs, and pickup trucks have much higher driver death rates than others. The average rate in 2001-04 models during 2002-05 was 79 per million registered vehicle years. But the rates in some models were more than twice as high, while rates in other vehicles were only a fraction of the average.

Chevrolet models take prizes for both best and worst. The lowest death rate among more than 200 vehicles is the Astro minivan's 7 per million registered vehicle years. The highest is 232 per million in the 2-door, 2-wheel-drive version of the Chevrolet Blazer, a midsize SUV.

"This range from best to worst has been the pattern since we began comparing deaths by make and model in the late 1980s," says Anne McCartt, Institute senior vice president for research. "The rates vary not only among groups of vehicles by type, size, and weight but also among individual models within the groups of similar vehicles."

As high as death rates are in some models, the average rate for all vehicles is going down over time. The average driver death rate in 1989-93 models during 1990-94 was 110 per million registered vehicle years (see *Status Report*, Oct. 14, 1995). When the Institute later computed the rates in 1999-2002 models, the average was 87 per million (see *Status Report*, March 19, 2005; on the web at iihs.org), and now it's down to 79.

"This is a big improvement over time. The rates have gone down about 30 percent since the mid-1990s," McCartt points out. The Institute computes death rates for drivers only, not passengers, because varying numbers of passengers in crashes of one vehicle versus another would affect the rates.

"Though the focus is on drivers, the rates reflect the relative fatality risk for all occupants," McCartt adds.

Death rates by vehicle size and weight: Characteristics that influence vehicles' death rates include type and body style (2-door car, 4-door SUV, etc.). Another important factor is size. The smallest vehicles in any type/body style group generally have the highest rates.

None of the 15 vehicles with the lowest driver death rates is a small model. In contrast, 11 of the 16 vehicles with the highest death rates are mini or small models, and none is large or very large.

LOWEST RATE
Fewer than 20 driver deaths per million
2001-04 models during 2002-05

MODELS WITH HIGHEST & LOWEST DEATH RATES

Chevrolet Astro	minivan	very large
Infiniti G35	luxury car	midsized
BMW 7 series	luxury car	very large
Toyota 4Runner	4WD SUV	midsized
Audi A4/S4 Quattro	4dr car	midsized
Mercedes E class	luxury car	large
Toyota Highlander	4WD SUV	midsized
Mercedes M class	4WD SUV	midsized
Toyota Sienna	minivan	very large
Honda Odyssey	minivan	very large
Lexus ES 330	luxury car	midsized
Lexus RX 330	2WD SUV	midsized
Toyota Sequoia	2WD SUV	large
Honda Pilot	4WD SUV	midsized
BMW X5	4WD SUV	midsized



Among all types and sizes of cars, the smallest 4-door models have the highest driver death rate at 148 per million registered vehicle years. Next highest among cars is 137 in mini 2-door models. Mid-size (33) and very large (34) luxury cars have the lowest rates.

There are exceptions to the general rule that bigger is safer. For example, the driver death rate is higher in midsized sports cars (115 per million) than in mini (107) or small (71) ones.

Another exception is very large 4-wheel-drive SUVs. This group is mostly Ford Excursions, which have a driver death rate of 115

per million — higher than the death rates in large 4-wheel-drive SUVs and higher than in all but 4 of the midsized and small counterparts.

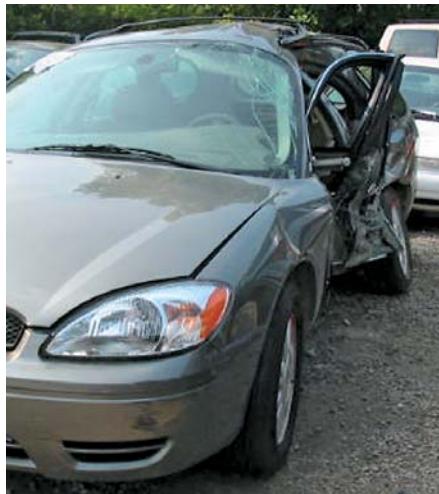
Excursions so dominate the group of very large 4-wheel-drive SUVs that they push up this group's average death rate to 76 per million compared with 47 in large counterpart vehicles and 59 in midsized ones. About half of the deaths in 2001-04 model Excursions during 2002-05 occurred in rollover crashes.

Vehicle size and weight are strongly related, so it's not surprising that driver death rates generally are higher in lighter vehicles. For example, the rate in (continues on p. 6)

CAUSES OF DRIVER DEATH

on registered vehicle years,
using calendar years 2002-05

overall	mv	/ sv	/ roll
7	4	4	4
11	7	3	0
11	4	7	0
13	4	8	8
14	9	4	4
14	5	9	5
14	9	5	5
14	10	5	0
17	4	13	4
17	8	8	4
18	8	11	6
18	15	3	0
18	7	11	0
19	7	14	6
19	8	11	9



BIGGER USUALLY IS BETTER, BUT NOT IN STATION WAGONS

Death rates generally are lower in bigger vehicles. An exception is large station wagons with a driver death rate (99) that's higher than in small (87) or midsize (51) wagons. The Ford Taurus accounts for most vehicles in the large group, and the rest are Mercury Sables. Their high death rates drive up the group's rate. Driver age might be a factor. The woman who died in this Taurus (above) was 77 years old, and about half of the drivers who died in Taurus station wagons during 2002-05 were older people. Institute researchers adjust the rates for driver demographics, but this adjustment doesn't eliminate all driver effects, and older people have high death rates by some measures (see *Status Report*, March 15, 2003; on the web at iihs.org).

HIGHEST RATES OF DRIVER DEATH

**More than 140 driver deaths per million registered vehicle years,
2001-04 models during calendar years 2002-05**

				overall	mv	/ sv	/ roll
Chevrolet Blazer	2dr	2WD SUV	midsize	232	83	151	134
Acura RSX		2dr car	small	202	80	113	65
Nissan 350Z		sports car	midsize	193	65	123	74
Kia Spectra	hatchback	4dr car	small	191	128	57	41
Pontiac Sunfire		2dr car	small	179	100	77	40
Kia Rio		4dr car	mini	175	105	68	35
Chevrolet Cavalier		2dr car	small	171	93	76	45
Mitsubishi Eclipse		2dr car	small	169	76	94	37
Dodge Neon		4dr car	small	161	107	49	26
Pontiac Grand Am		2dr car	midsize	160	89	65	35
Chevrolet Cavalier		4dr car	small	150	82	68	35
Ford Mustang		sports car	midsize	150	67	83	42
Ford Ranger		4WD pickup	small	150	42	106	77
Mazda B series		2WD pickup	small	147	48	95	78
Mitsubishi Eclipse	convertible		sports car	146	53	93	33
Mitsubishi Montero Sport		2WD SUV	midsize	146	40	112	75



DEATH RATE IN FORD PICKUP MATCHES ITS PERFORMANCE IN CRASH TESTS

The purpose of Institute crash tests is to pressure automakers to improve the crashworthiness of poor performers, and the Ford F-150 is a good example. The 2001 model was one of the worst performers ever in the 40 mph frontal offset test. When the Institute later tested a redesigned 2004 F-150, the performance improved dramatically (see *Status Report*, Jan. 3, 2004; on the web at iihs.org). The death rate also has improved. The old F-150's rate of 118 during 2002-05 was much worse than average. In contrast is the rate of 58 in the new F-150. The crash of a 2004 model (above) demonstrates the point. This impact was serious, but the driver's injuries weren't. The outcome might not have been the same in the old model.

BODY STYLE AND SIZE

Driver death rates by size and body style group

overall	mv	sv	roll	
148	92	55	32	CARS
103	61	42	20	4-DOOR
71	41	30	14	mini
81	53	27	13	small
61	43	19	3	midsize
				large
				very large
137	75	61	48	2-DOOR
134	65	68	37	mini
103	50	52	26	small
				midsize
107	54	54	26	SPORTS
71	23	48	15	mini
115	51	64	31	small
41	13	28	16	midsize
				large
33	17	16	6	LUXURY
41	24	17	4	midsize
34	15	19	10	large
				very large
50	37	11	6	SPECIALTY
				small
87	48	38	23	STATION WAGONS
51	24	28	12	small
99	83	11	4	midsize
				large
66	44	21	9	MINIVANS
39	25	14	8	large
				very large
77	34	43	29	SUVs
59	20	40	28	4 WHEEL DRIVE
47	16	33	23	small
76	21	57	47	midsize
				large
				very large
76	40	37	23	2 WHEEL DRIVE
81	32	51	38	small
57	20	39	34	midsize
				large
97	33	64	42	PICKUP TRUCKS
83	27	57	38	4 WHEEL DRIVE
89	19	70	53	small
				large
				very large
110	50	59	37	2 WHEEL DRIVE
102	38	66	40	small
60	23	37	24	large
				very large

KEY TO TABLES

overall: driver death rate per million registered vehicle years
 mv: driver death rate in multiple-vehicle crashes
 sv: driver death rate in single-vehicle crashes
 roll: driver death rate in single-vehicle rollovers

DRIVER DEATHS

PER MILLION REGISTERED VEHICLE YEARS

ABOUT THESE TABLES: Rates are for 2001-04 model year cars, minivans, large vans, SUVs, and pickups during 2002-05. However, every model year isn't included for every vehicle. If a vehicle was substantially redesigned during the 2001-04 model years, only the most recent design is included.

Rates are driver deaths per million registered vehicle years. Two vehicles registered for 12 months each yield 2 vehicle years.

Sources of data are the National Highway Traffic Safety Administration's Fatality Analysis Reporting System and The Polk Company's National Vehicle Population Profile.

		MODELS	EXPOSURE	DRIVER DEATH RATES						MODELS	EXPOSURE	DRIVER DEATH RATES			
				OVERALL	MV	SV	SV ROLL	OVERALL	MV			OVERALL	MV	SV	SV ROLL
ALL PASSENGER VEHICLES		111,769,810		79 (77-81)	39	41	24								
4-DOOR CARS															
MINI		725,984													
Toyota Echo	2001-04	231,328		70 (34-106)	53	16	16								
Kia Rio	2001-04	438,916		175 (126-225)	105	68	35								
SMALL		11,905,765													
Volkswagen Golf	2001-04	142,926		45 (0-90)	31	10	5								
Saturn ION	2003-04	259,436		67 (29-105)	38	30	23								
Nissan Sentra	2001-04	950,566		68 (49-86)	46	21	4								
Volkswagen Jetta	2001-04	1,302,374		70 (53-87)	30	40	21								
Honda Civic	2001-04	1,961,781		74 (60-89)	47	27	7								
Toyota Corolla	2003-04	871,698		79 (56-102)	46	32	13								
Volvo S40	2001-04	193,160		89 (35-143)	62	24	11								
Kia Spectra	2002-04	272,944		93 (51-135)	64	27	14								
Hyundai Elantra	2001-04	1,089,616		100 (76-123)	64	34	20								
Ford Focus	2001-04	1,682,100		118 (98-138)	67	52	29								
Mitsubishi Lancer	2002-04	360,168		125 (86-163)	60	66	35								
Chevrolet Cavalier	2001-04	1,285,773		150 (125-175)	82	68	35								
Dodge Neon	2001-04	1,067,248		161 (133-189)	107	49	26								
Kia Spectra hatchback	2001-04	161,528		191 (105-277)	128	57	41								
MIDSIZE		11,664,572													
Audi A4/S4 Quattro	2004	166,231		14 (0-29)	9	4	4								
Volkswagen Passat	2001-04	578,385		35 (15-54)	18	18	10								
Honda Accord	2003-04	1,020,937		35 (21-48)	19	16	6								
Infiniti I35	2002-04	290,774		38 (12-63)	21	15	5								
Toyota Avalon	2001-04	688,130		39 (23-56)	19	21	12								
Subaru Legacy	2001-04	147,824		40 (3-76)	16	26	25								
Toyota Camry	2002-04	2,360,173		55 (44-66)	40	14	6								
Saturn LS	2002-04	406,163		63 (34-91)	40	23	11								
Mazda 6	2003-04	166,506		66 (21-110)	30	36	36								
Hyundai Sonata	2001-04	656,378		67 (47-98)	40	31	15								
Chrysler Sebring	2001-04	493,913		77 (46-108)	43	33	18								
Nissan Altima	2002-04	1,098,380		79 (60-99)	48	30	13								
Kia Optima	2001-04	285,362		101 (56-146)	35	70	26								
Pontiac Grand Am	2001-04	1,284,737		115 (92-138)	56	60	30								
Dodge Stratus	2001-04	591,771		116 (82-150)	60	55	20								
Oldsmobile Alero	2001-04	705,801		119 (89-149)	77	41	20								
Mitsubishi Diamante	2001-04	132,285		130 (52-209)	68	57	17								
LARGE		11,147,671													
Buick Regal	2001-04	406,370		57 (31-84)	32	26	4								
Buick LeSabre	2001-04	1,317,342		62 (48-75)	48	14	5								
Pontiac Grand Prix	2004	176,487		70 (22-117)	19	52	25								
Mercury Sable	2001-04	808,105		71 (50-92)	48	23	13								
Chevrolet Impala	2001-04	2,087,761		76 (63-88)	46	28	15								
Ford Taurus	2001-04	2,989,340		78 (66-90)	50	27	14								
Dodge Intrepid	2001-04	1,032,943		81 (61-102)	53	26	11								
Pontiac Bonneville	2001-04	384,628		85 (46-124)	53	30	12								
Chrysler Concorde	2001-04	268,476		95 (54-136)	64	31	17								
Chrysler 300M	2001-04	306,052		115 (67-163)	64	50	34								
Buick Century	2001-04	1,255,441		118 (96-140)	88	30	15								
VERY LARGE		547,457													
Ford Crown Victoria	2003-04	248,411		45 (22-69)	34	12	3								
Mercury Grand Marquis	2003-04	299,046		75 (45-104)	50	24	2								
2-DOOR CARS															
SMALL		4,201,562													
Mini Cooper	2002-04	148,376		68 (14-121)	48	15	10								
Honda Civic	2001-04	1,054,582		82 (64-101)	40	41	26								
Volkswagen Golf	2001-04	162,428		97 (55-139)	19	76	41								
Toyota Celica	2001-04	250,385		119 (69-169)	67	51	12								
Ford Focus	2001-04	385,478		124 (85-162)	42	81	42								
Mitsubishi Eclipse	2001-04	434,810		169 (124-214)	76	94	37								
Chevrolet Cavalier	2001-04	914,589		171 (141-201)	93	76	45								
Pontiac Sunfire	2001-04	409,405		179 (131-227)	100	77	40								
Acura RSX	2002-04	192,774		202 (134-270)	80	113	65								
SMALL		2,207,847													
Chrysler Sebring convertible	2001-04	375,432		59 (29-90)	29	31	12								
Honda Accord	2003-04	199,196		63 (28-98)	12	52	11								
Dodge Stratus	2001-04	214,297		101 (50-153)	30	75	52								
Chevrolet Monte Carlo	2001-04	662,527		106 (76-136)	49	58	31								
Chrysler Sebring	2001-04	195,935		109 (48-170)	63	43	23								
Oldsmobile Alero	2001-04	171,210		136 (70-201)	93	39	22								
Pontiac Grand Am	2001-04	317,350		160 (109-212)	89	65	35								
MIDSIZE		2,167,977													
Mazda Miata convertible	2001-04	144,427		65 (16-115)	29	37	10								
SMALL		685,364													
Mitsubishi Eclipse convertible	2001-04	178,493		146 (78-214)	53	93	33								
MIDSIZE		3,220,062													
Infiniti G35	2003-04	208,264		11 (0-23)	7	3	0								
Lexus ES 330	2004	399,988		18 (4-33)	8	11	6								
Mercedes C class	2001-04	397,704		24 (8-40)	14	12	0								
Volvo S60	2001-04	294,235		34 (7-61)	20	13	8								
BMW 3 series 2dr	2001-04	168,988		35 (3-66)	25	9	4								
BMW 3 series 4dr	2001-04	566,851		35 (17-53)	18	16	8								
BMW 3 series convertible	2001-04	176,135		48 (5-92)	40	4	4								
Jaguar X-type	2002-04	185,420		54 (11-97)	18	38	16								
LARGE		3,635,744													
Mercedes E class	2003-04	155,290		14 (0-31)	5	9	5								
Volvo V70 wagon 4WD	2001-04	215,511		26 (0-56)	7	22	10								
Volvo S80	2001-04	173,223		29 (0-59)	9	22	4								
Lexus GS series	2001-04	207,994		29 (8-49)	7	21	4								
Cadillac Seville	2001-04	216,363		30 (5-56)	19	10	3								
Lexus LS 430	2001-04	278,235		30 (12-47)	22	8	0								
Volvo V70 wagon	2001-04	147,419		35 (0-69)	28	5	0								
Cadillac DeVille	2001-04	841,756		51 (36-66)	37	14	2								
Lincoln LS	2001-04	393,213		53 (26-81)	18	37	8								
Cadillac CTS	2003-04	187,442													

KEY

overall: driver death rate per million registered vehicle years
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 sv: driver death rate in single-vehicle crashes
 sv roll: driver death rate in single-vehicle rollover crashes



		DRIVER DEATH RATES						DRIVER DEATH RATES				
		OVERALL	MV	SV	SV ROLL			OVERALL	MV	SV	SV ROLL	
MINIVANS												
LARGE		1,938,290						4,774,268				
Mazda MPV	2001-04	279,895	36 (10-62)	24	10	8	2004	279,251	18 (0-37)	15	3	0
Chevrolet Venture LWB	2001-04	588,603	63 (37-89)	45	17	9	2001-04	458,255	30 (10-50)	17	12	5
Dodge Caravan	2001-04	590,413	65 (41-89)	42	22	5	2002-04	688,495	57 (35-79)	17	43	33
Chevrolet Venture	2001-04	142,022	72 (20-123)	40	32	5	2001-04	174,465	64 (25-102)	35	30	25
Oldsmobile Silhouette	2001-04	229,442	97 (44-149)	77	13	6	2001-04	424,165	68 (39-98)	33	36	24
VERY LARGE		4,336,292					2003-04	122,351	76 (12-140)	49	26	6
Chevrolet Astro	2001-04	205,411	7 (0-18)	4	4	4	2001-04	394,621	82 (45-118)	20	65	34
Toyota Sienna	2004	172,902	17 (0-35)	4	13	4	2003-04	192,882	102 (49-155)	26	79	65
Honda Odyssey	2002-04	842,313	17 (6-28)	8	8	4	2001-04	395,245	113 (77-149)	46	71	60
Kia Sedona	2002-04	266,669	35 (9-62)	23	11	0	2002-04	223,267	115 (57-173)	67	44	36
Dodge Grand Caravan	2001-04	1,296,920	48 (33-62)	35	12	6	2001-04	157,325	123 (52-194)	27	104	99
Chrysler Town & Country	2001-04	1,047,309	54 (37-71)	33	21	14	2001-04	202,732	131 (66-195)	61	68	47
SUVs: 4 WHEEL DRIVE												
SMALL		3,297,723					2001-04	235,928	146 (84-208)	40	112	75
Mazda Tribute	2001-04	226,895	44 (9-79)	15	31	10	2001-04	160,222	232 (146-318)	83	151	134
Honda Element	2003-04	131,864	49 (0-98)	0	53	34						
Subaru Forester	2003-04	175,049	53 (8-98)	24	32	13						
Ford Escape	2001-04	741,369	65 (42-88)	30	34	20						
Saturn Vue	2002-04	176,181	65 (19-112)	34	30	21						
Honda CR-V	2002-04	602,689	67 (40-95)	41	24	22						
Jeep Wrangler	2001-04	590,694	91 (62-120)	26	67	55						
Chevrolet Tracker	2001-04	244,352	132 (73-191)	75	53	39						
MIDSIZE		9,667,032										
Toyota 4Runner	2003-04	175,152	13 (0-28)	4	8	8						
Toyota Highlander	2001-04	416,179	14 (4-25)	9	5	5						
Mercedes M class	2002-04	159,033	14 (0-30)	10	5	0						
Honda Pilot	2003-04	343,446	19 (0-38)	7	14	6						
BMW X5	2001-04	417,020	19 (3-35)	8	11	9						
Lexus RX 330	2004	428,474	28 (7-49)	17	11	2						
Nissan Pathfinder	2001-04	424,382	36 (15-57)	12	25	10						
Jeep Liberty	2002-04	780,814	46 (27-65)	25	20	12						
Ford Explorer	2002-04	1,397,783	47 (33-62)	11	39	24						
Buick Rendezvous	2002-04	167,788	51 (5-97)	27	23	18						
Jeep Grand Cherokee	2001-04	1,399,506	57 (42-72)	19	38	26						
Nissan Xterra	2001-04	378,882	59 (30-89)	18	42	31						
Suzuki Grand Vitara XL-7	2001-04	157,538	78 (25-131)	33	43	33						
Mercury Mountaineer	2002-04	254,025	88 (42-133)	29	65	58						
GMC Envoy	2003-04	146,980	88 (25-150)	10	85	60						
Chevrolet TrailBlazer	2003-04	334,643	108 (66-150)	25	87	46						
Land Rover Discovery	2001-04	155,768	111 (44-177)	39	74	43						
Chevrolet Blazer	2001-04	534,317	119 (84-155)	38	87	75						
Ford Explorer Sport Trac	2001-04	330,189	119 (71-167)	27	102	90						
Mitsubishi Montero Sport	2001-04	201,137	127 (61-194)	21	118	88						
LARGE		3,055,389										
Chevrolet Avalanche 1500	2003-04	136,127	21 (0-54)	0	23	22						
Infiniti QX56	2004	133,822	21 (0-54)	6	18	17						
Ford Expedition	2003-04	261,630	31 (8-54)	9	23	11						
Toyota Sequoia	2001-04	299,263	36 (9-63)	17	21	20						
Chevrolet TrailBlazer EXT	2003-04	129,400	39 (0-79)	12	30	29						
Chevrolet Tahoe	2003-04	297,652	51 (21-81)	14	38	30						
Cadillac Escalade	2002-04	191,051	58 (23-93)	20	39	12						
GMC Yukon XL	2003-04	132,709	59 (2-116)	6	60	50						
Chevrolet Suburban	2001-04	677,681	66 (43-89)	23	44	33						
GMC Yukon	2003-04	151,550	92 (39-145)	43	49	24						
VERY LARGE		283,043										
Ford Excursion	2001-04	174,543	115 (50-180)	35	84	68						
SUVs: 2 WHEEL DRIVE												
SMALL		1,596,709										
Hyundai Santa Fe	2003-04	182,885	47 (9-86)	23	25	24						
Honda CR-V	2002-04	159,770	49 (1-96)	12	39	5						
Saturn Vue	2002-04	197,646	73 (29-118)	23	55	26						
Ford Escape	2001-04	577,818	84 (54-115)	52	30	23						
Mazda Tribute	2001-04	199,590	85 (31-140)	49	35	19						
PICKUP TRUCKS: 4 WHEEL DRIVE												
SMALL		2,165,382										
Nissan Frontier	2001-04	180,021	61 (19-102)	32	29	12						
Dodge Dakota	2001-04	547,871	62 (41-83)	21	42	24						
Toyota Tacoma	2001-04	559,347	85 (61-109)	23	62	38						
Chevrolet S10	2001-04	149,314	98 (44-153)	71	24	10						
Ford Ranger	2001-04	622,872	150 (119-180)	42	106	77						
LARGE		4,543,554										
Dodge Ram 1500	2002-04	602,179	46 (30-62)	24	22	18						
Ford F-150	2004	142,764	58 (23-93)	16	41	10						
Toyota Tundra	2001-04	369,036	65 (40-89)	22	41	34						
GMC Sierra 1500	2001-04	568,152	71 (48-95)	27	47	22						
Chevrolet Silverado 1500	2001-04	1,841,919	85 (72-99)	29	57	40						
Ford F-150 Heritage	2001-04	980,918	118 (95-141)	29	89	60						
VERY LARGE		3,742,737										
GMC Sierra 2500	2001-04	368,306	53 (32-74)	19	33	24						
Chevrolet Silverado 2500	2001-04	1,108,228	72 (57-88)	24	48	37						
Dodge Ram 2500	2003-04	222,406	73 (39-108)	10	63	57						
Ford F-350	2001-04	625,768	103 (79-128)	16	87	69						
Ford F-250	2001-04	1,196,931	122 (101-143)	21	102	78						
PICKUP TRUCKS: 2 WHEEL DRIVE												
SMALL		3,686,487										
Nissan Frontier	2001-04	556,874	67 (46-87)	36	30	19						
Toyota Tacoma	2001-04	843,700	96 (73-118)	45	50	35						
Dodge Dakota	2001-04	650,572	103 (77-129)	51	53	18						
Ford Ranger	2001-04	1,421,002	135 (114-156)	60	76	50						
Mazda B series	2001-04	151,952	147 (89-205)	48	95	78						
LARGE		5,999,208										
Ford F-150	2004	130,026	40 (10-71)	24	17	0						
Toyota Tundra	2001-04	492,087	69 (44-93)	16	53	32						
GMC Sierra 1500	2001-04	574,459	82 (59-106)	35	47	22						
Dodge Ram 1500	2002-04	915,411	99 (78-120)	31	69	40						
Chevrolet Silverado 1500	2001-04	2,042,947	106 (91-120)	43	64	40						
Ford F-150 Heritage	2001-04	1,789,282	119 (103-136)	44	78	50						
VERY LARGE		1,298,958										
Ford F-350	2001-04	175,367	50 (15-85)	18	34	25						
Chevrolet Silverado 2500	2001-04	397,815	56 (34-78)	25	32	20						
Ford F-250	2001-04	463,906</td										

(continued from p. 2) the lightest SUVs is much higher than in the heaviest ones — 131 per million versus 47.

Pound for pound across vehicle types, cars almost always have lower death rates than pickups or SUVs. An exception is that the rate in pickups weighing 2,500-3,000 pounds is lower than in cars or SUVs weighing about the same.

"There's no ready explanation for this," McCullum says. "It probably has to do with how light pickups are driven and use patterns compared with heavier pickups."

Similar vehicles but different rates: Besides death rate differences across vehicle groups, the rates vary within groups of vehicles similar in both body style and size. In almost every size group of 2- and 4-door cars, for example, the rate in the worst car is at least twice as high as the rate in the best one.

Among midsize 4-door cars, the spread is much wider — a rate of 14 per million in the Audi A4/S4 Quattro versus 130 in the Mitsubishi Diamante. The upper confidence bound for the Audi's death rate is well below the lower bound for the Mitsubishi, which means the lower death rate in the A4/S4 is unlikely to be due to chance.

Rollovers and importance of ESC: Nine vehicles, all SUVs and pickups, have more than 75 driver deaths per million vehicles in single-vehicle rollover crashes, compared with an average of 24 in all 2001-04 vehicles during 2002-05. This higher rate is largely because of their relatively high centers of gravity.

The vehicle with the very highest death rate in rollovers is the 2-door, 2-wheel-drive Chevrolet Blazer (this SUV also has the worst overall driver death rate). Its 134 deaths per million registered years in rollovers compare with an average of 38 in all midsize 2-wheel-drive SUVs and 28 in 4-wheel-drive versions.

Not all midsize SUVs have high death rates in single-vehicle rollovers. No driver deaths were recorded in the 2-wheel-drive Lexus RX 330, for example, nor were any recorded in this vehicle the last time the Institute computed model-by-model death rates. This doesn't mean its rate will be zero every year, but it does mean very low rates can be expected.

The RX 330 and increasing numbers of other passenger vehicles, especially SUVs, are be-



INFLUENCE OF VEHICLE WEIGHT
Driver deaths per million registered vehicle years, 2001-04 models during 2002-05

vehicle weight:	CARS				SUVS				PICKUP TRUCKS			
	overall	mv	sv	roll	overall	mv	sv	roll	overall	mv	sv	roll
2,500 lbs. or less	94	55	38	17	—	—	—	—	—	—	—	—
2,501-3,000 lbs.	115	64	50	26	131	72	59	41	96	45	50	35
3,001-3,500 lbs.	77	43	33	16	74	34	41	27	115	47	69	44
3,501-4,000 lbs.	55	35	19	7	67	28	39	28	104	37	69	44
4,001-4,500 lbs.	38	22	16	8	65	21	47	35	93	33	60	38
4,501-5,000 lbs.	34	18	15	4	65	23	44	32	55	24	32	21
more than 5,000 lbs.	—	—	—	—	47	15	34	25	81	20	61	45

overall driver death rate per million registered vehicle years

mv driver death rate in multiple-vehicle crashes

sv driver death rate in single-vehicle crashes

roll driver death rate in single-vehicle rollover crashes

— no exposure or insufficient exposure



ing equipped with standard or optional electronic stability control (ESC). This feature has been shown to significantly reduce the risk of fatal single-vehicle crashes including rollovers (see *Status Report*, June 16, 2006; on the web at iihs.org).

More evidence of ESC effectiveness is that all but 3 of the 15 vehicles with the lowest overall death rates have this feature, usually standard (the Chevrolet Astro, Honda Odyssey, and Honda Pilot don't). In contrast ESC isn't standard on any of the 16 vehicles with the highest death rates, and it's optional on only 1 (the Nissan 350Z).

How the rates are computed: Institute researchers computed driver death rates in all crashes and in multiple-vehicle, single-vehicle, and single-vehicle rollover crashes for 202 passenger vehicle models (2001-04) with at least 120,000 registered years or 20 driver deaths during the study years (2002-05).

Each model's rate represents the reported number of driver deaths divided by the model's number of registered years. Data are from the federal government's Fatality Analysis Reporting System and registration counts from The Polk Company.

Exposure varies considerably among the vehicles. For example, the number of registered years for midsize 4-door cars exceeds 11 million. This compares with about 550,000 for very large 4-door cars. Because of this variability, researchers computed 95 percent confidence intervals with upper and lower bounds indicating the precision of the computed rates.

The rates reflect the influences of both vehicle design and patterns of use. Rates are displayed by market group because of the influence of driver demographics and the increased likelihood of similarity among drivers of similar vehicles.

Researchers adjusted each of the 202 vehicles' rates according to the proportion of deaths of women 25-64 years old (drivers in this group are in fewer fatal crashes per licensed driver). For most vehicles the rates changed by less than 20 percent. These adjustments take away most of the differences among vehicles caused by driver gender, though other demographics still influence the rates.

STATUS REPORT

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Special issue

STATISTICS ARE ONE THING, INDIVIDUALS ANOTHER

This *Status Report* presents a wide view of deaths in crashes, reporting fatality rates by vehicle make and model.

The next *Status Report* will profile people who were killed in crashes on a single day in 2005, homing in on how and why their crashes occurred.



Emily Lopes-Fontes Silveira
June 4, 1975-June 7, 2005

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