

## **FATALITY FACTS 2004: CHILDREN**

Sections:

- **OVERVIEW**
- **AGE AND GENDER**
- **WHEN THEY DIED**

Child deaths in motor vehicle crashes have declined since 1975, but crashes still cause about 1 of every 3 injury deaths among children 12 and younger.<sup>1</sup> Among those 2-12 years old, motor vehicle crash injuries are the leading cause of death.<sup>2</sup> Most of these deaths occur among children traveling as passenger vehicle occupants, and proper restraint use can reduce these fatalities. Placing children in rear seats instead of front seats reduces fatal injury risk by about a third among those 12 and younger.<sup>3</sup>

All 50 states and the District of Columbia have child restraint laws on the books. However, even though more children now ride restrained because of these laws many children, particularly those 4 and older, still ride unrestrained.<sup>4</sup> Loopholes in the laws exempt many children from coverage under either safety belt or child restraint use laws. So wide were these gaps in coverage in 1984 that about 35 percent of children age 6 and younger killed in crashes before their state's child restraint law took effect wouldn't have been covered by the laws that eventually were enacted.<sup>5</sup> Gaps remain in the laws of 8 states for children 12 years and younger. These affect older children in rear seats, and in a few states additional gaps affect children transported in out-of-state vehicles or by nonresidents. Another problem is the persistence of incorrectly used child restraints and safety belts.

The following facts are based on analysis of data from the U.S. Department of Transportation's Fatality Analysis Reporting System (FARS):

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### **OVERVIEW**

- People younger than 13 represented 18 percent of the U.S. population in 2004 and 4 percent of motor vehicle crash deaths.

<b>Age</b>	<b>Population</b>		<b>Motor vehicle crash deaths</b>	
	<b>Num</b>	<b>%</b>	<b>Num</b>	<b>%</b>
<13	52,151,406	18	1,637	4
All others	241,503,998	82	40,999	96
Total	293,655,404	100	42,636	100

- A total of 1,637 children died in motor vehicle crashes in 2004. This is a slight decline from 2003 but a 55 percent decline from 1975.

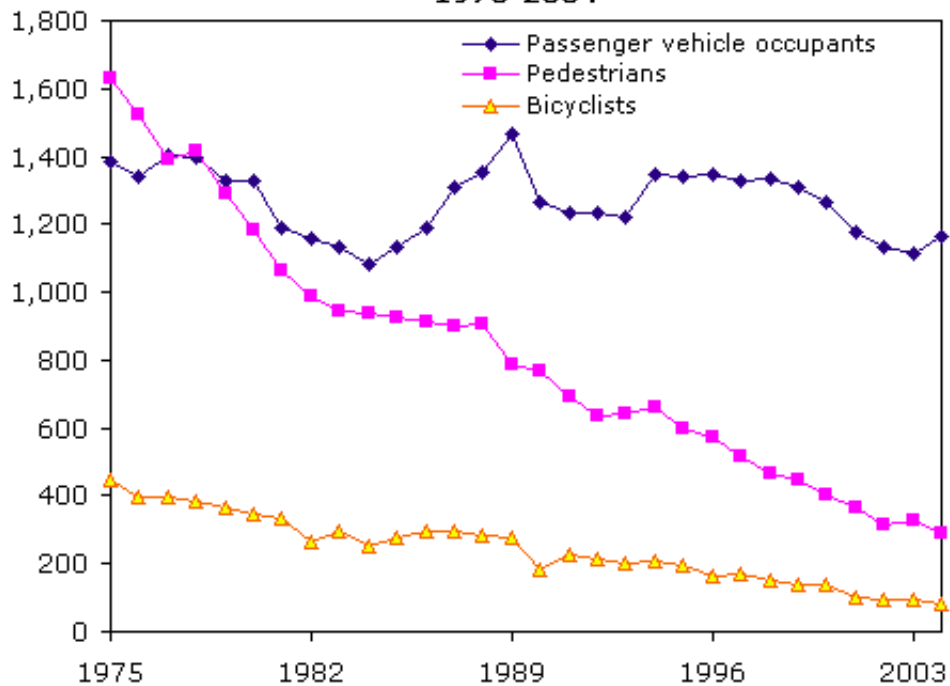
**Motor vehicle crash deaths among children younger than 13 by gender, 1975-2004**

Year	Male		Female		Total*
	Num	%	Num	%	Num
1975	2,275	62	1,368	38	3,643
1976	2,095	61	1,328	39	3,424
1977	1,996	60	1,350	40	3,347
1978	2,021	60	1,344	40	3,367
1979	1,934	61	1,237	39	3,171
1980	1,864	61	1,183	39	3,048
1981	1,668	61	1,064	39	2,733
1982	1,530	59	1,042	40	2,573
1983	1,579	63	939	37	2,518
1984	1,484	61	937	39	2,422
1985	1,464	59	1,005	41	2,469
1986	1,560	61	972	38	2,537
1987	1,635	62	1,019	38	2,654
1988	1,610	60	1,088	40	2,701
1989	1,567	59	1,090	41	2,658
1990	1,366	59	966	41	2,332
1991	1,346	60	909	40	2,257
1992	1,311	61	851	39	2,165
1993	1,230	57	932	43	2,164
1994	1,343	58	956	42	2,301
1995	1,271	58	924	42	2,201
1996	1,245	57	941	43	2,186
1997	1,170	56	935	44	2,108
1998	1,181	58	848	42	2,032
1999	1,136	57	861	43	1,997
2000	1,071	57	817	43	1,888
2001	996	57	755	43	1,751
2002	937	58	678	42	1,617
2003	934	57	709	43	1,643
2004	899	55	738	45	1,637

\*Total includes other and/or unknowns

- Seventy-one percent of child motor vehicle crash deaths in 2004 were passenger vehicle occupants, 18 percent were pedestrians, and 5 percent were bicyclists. Child pedestrian and bicyclist deaths combined have declined 82 percent since 1975. However, passenger vehicle occupant deaths among children were only 16 percent lower in 2004 than in 1975. Still, child occupant deaths are 21 percent lower than their highest number in 1989.

**Motor vehicle deaths among children younger than 13, 1975-2004**



**Motor vehicle crash deaths among children younger than 13 by type, 1975-2004**

Year	Passenger vehicle occupants		Pedestrians		Bicyclists		Total*
	Num	%	Num	%	Num	%	Num
1975	1,384	38	1,632	45	446	12	3,643
1976	1,343	39	1,522	44	394	12	3,424
1977	1,405	42	1,390	42	395	12	3,347
1978	1,395	41	1,419	42	387	11	3,367
1979	1,331	42	1,291	41	362	11	3,171
1980	1,331	44	1,183	39	346	11	3,048
1981	1,189	44	1,064	39	332	12	2,733
1982	1,158	45	986	38	265	10	2,573
1983	1,134	45	944	37	298	12	2,518
1984	1,081	45	935	39	253	10	2,422
1985	1,131	46	925	37	278	11	2,469
1986	1,188	47	913	36	293	12	2,537
1987	1,312	49	898	34	297	11	2,654
1988	1,354	50	905	34	284	11	2,701
1989	1,469	55	786	30	276	10	2,658
1990	1,268	54	768	33	185	8	2,332
1991	1,234	55	695	31	226	10	2,257
1992	1,233	57	635	29	215	10	2,165
1993	1,221	56	644	30	203	9	2,164
1994	1,344	58	659	29	205	9	2,301
1995	1,339	61	597	27	197	9	2,201
1996	1,346	62	570	26	164	8	2,186
1997	1,330	63	513	24	172	8	2,108
1998	1,333	66	464	23	152	7	2,032
1999	1,311	66	449	22	141	7	1,997
2000	1,264	67	403	21	136	7	1,888
2001	1,179	67	363	21	98	6	1,751
2002	1,131	70	317	20	92	6	1,617
2003	1,114	68	327	20	93	6	1,643
2004	1,165	71	289	18	83	5	1,637

\*Total includes other and/or unknowns

- Twenty-five percent of the passenger vehicle child occupant deaths in 2004 occurred in front seats, down from 46 percent in 1975. Sixty-eight percent occurred in rear seats, and the rest occurred in cargo or unknown areas.

**Passenger vehicle child occupant deaths by seating position, 1975-2004**

Year	Front seat		Rear seat		Cargo/unknown area		Total
	Num	%	Num	%	Num	%	Num
1975	634	46	367	27	383	28	1,384
1976	563	42	423	31	357	27	1,343
1977	654	47	383	27	368	26	1,405
1978	676	48	394	28	325	23	1,395
1979	635	48	394	30	302	23	1,331
1980	661	50	374	28	296	22	1,331
1981	547	46	406	34	236	20	1,189
1982	570	49	421	36	167	14	1,158
1983	548	48	420	37	166	15	1,134
1984	523	48	394	36	164	15	1,081
1985	515	46	428	38	188	17	1,131
1986	550	46	486	41	152	13	1,188
1987	582	44	571	44	159	12	1,312
1988	604	45	575	42	175	13	1,354
1989	637	43	655	45	177	12	1,469
1990	542	43	548	43	178	14	1,268
1991	538	44	558	45	138	11	1,234
1992	514	42	602	49	117	9	1,233
1993	509	42	613	50	99	8	1,221
1994	543	40	631	47	170	13	1,344
1995	558	42	627	47	154	12	1,339
1996	558	41	654	49	134	10	1,346
1997	493	37	692	52	145	11	1,330
1998	463	35	729	55	141	11	1,333
1999	438	33	744	57	129	10	1,311
2000	382	30	752	59	130	10	1,264
2001	368	31	707	60	104	9	1,179
2002	326	29	693	61	112	10	1,131
2003	300	27	716	64	98	9	1,114
2004	289	25	788	68	88	8	1,165

- The rate of motor vehicle crash deaths per million children has decreased 60 percent overall since 1975. The death rate for passenger vehicle child occupants decreased 26 percent, while the death rate for child pedestrians and bicyclists combined declined by 84 percent.

**Motor vehicle crash deaths per million children, 1975-2004**

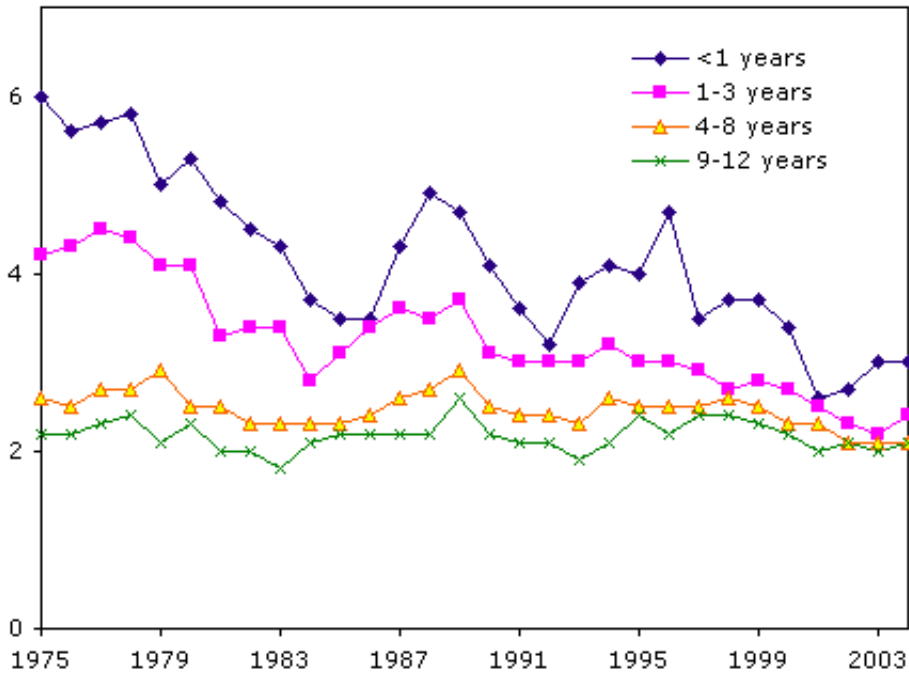
Year	Population	Passenger vehicle occupants		Pedestrians		Bicyclists		Total*	
		Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
1975	45,851,304	1,384	30.2	1,632	35.6	446	9.7	3,643	79.5
1976	45,000,704	1,343	29.8	1,522	33.8	394	8.8	3,424	76.1
1977	44,337,332	1,405	31.7	1,390	31.4	395	8.9	3,347	75.5
1978	43,907,467	1,395	31.8	1,419	32.3	387	8.8	3,367	76.7
1979	43,778,959	1,331	30.4	1,291	29.5	362	8.3	3,171	72.4
1980	43,914,342	1,331	30.3	1,183	26.9	346	7.9	3,048	69.4
1981	44,049,940	1,189	27.0	1,064	24.2	332	7.5	2,733	62.0
1982	44,131,596	1,158	26.2	986	22.3	265	6.0	2,573	58.3
1983	44,119,297	1,134	25.7	944	21.4	298	6.8	2,518	57.1
1984	43,978,044	1,081	24.6	935	21.3	253	5.8	2,422	55.1
1985	44,260,136	1,131	25.6	925	20.9	278	6.3	2,469	55.8
1986	44,755,454	1,188	26.5	913	20.4	293	6.5	2,537	56.7
1987	45,348,247	1,312	28.9	898	19.8	297	6.5	2,654	58.5
1988	45,942,966	1,354	29.5	905	19.7	284	6.2	2,701	58.8
1989	46,690,604	1,469	31.5	786	16.8	276	5.9	2,658	56.9
1990	47,472,527	1,268	26.7	768	16.2	185	3.9	2,332	49.1
1991	48,240,747	1,234	25.6	695	14.4	226	4.7	2,257	46.8
1992	48,903,668	1,233	25.2	635	13.0	215	4.4	2,165	44.3
1993	49,335,864	1,221	24.7	644	13.1	203	4.1	2,164	43.9
1994	49,692,462	1,344	27.0	659	13.3	205	4.1	2,301	46.3
1995	49,920,484	1,339	26.8	597	12.0	197	3.9	2,201	44.1
1996	50,085,188	1,346	26.9	570	11.4	164	3.3	2,186	43.6
1997	50,364,983	1,330	26.4	513	10.2	172	3.4	2,108	41.9
1998	50,527,476	1,333	26.4	464	9.2	152	3.0	2,032	40.2
1999	50,667,139	1,311	25.9	449	8.9	141	2.8	1,997	39.4
2000	52,219,423	1,264	24.2	403	7.7	136	2.6	1,888	36.2
2001	52,341,395	1,179	22.5	363	6.9	98	1.9	1,751	33.5
2002	52,332,306	1,131	21.6	317	6.1	92	1.8	1,617	30.9
2003	52,187,602	1,114	21.3	327	6.3	93	1.8	1,643	31.5
2004	52,151,406	1,165	22.3	289	5.5	83	1.6	1,637	31.4

\*Total includes other and/or unknowns

## AGE AND GENDER

- In 1975 infants had a much higher passenger vehicle occupant fatality rate per capita than children of other ages, but in 2004 the age gap had narrowed considerably. Since 1975 fatality rates have dropped 51 percent for infants, 42 percent for children ages 1-3, 19 percent for children ages 4-8, and 6 percent for children ages 9-12.

**Passenger vehicle child occupant deaths per 100,000 children, 1975-2004**



**Passenger vehicle child occupant deaths per 100,000 children, 1975-2004**

Year	<1			1-3			4-8			9-12		
	Population	Deaths	Rate	Population	Deaths	Rate	Population	Deaths	Rate	Population	Deaths	Rate
1975	3,152,345	190	6.0	9,333,943	395	4.2	17,579,867	451	2.6	15,785,149	348	2.2
1976	3,115,391	173	5.6	9,166,175	393	4.3	17,444,438	436	2.5	15,274,700	341	2.2
1977	3,278,804	188	5.7	9,129,735	412	4.5	17,194,329	459	2.7	14,734,464	346	2.3
1978	3,326,388	192	5.8	9,317,815	406	4.4	16,838,903	455	2.7	14,424,361	342	2.4
1979	3,426,309	171	5.0	9,461,992	384	4.1	16,465,482	473	2.9	14,425,176	303	2.1
1980	3,559,861	190	5.3	9,763,803	396	4.1	15,994,363	403	2.5	14,596,315	342	2.3
1981	3,607,455	172	4.8	10,011,438	332	3.3	15,894,690	401	2.5	14,536,357	284	2.0
1982	3,643,586	164	4.5	10,287,129	352	3.4	15,997,832	365	2.3	14,203,049	277	2.0
1983	3,649,198	157	4.3	10,499,379	353	3.4	16,268,975	372	2.3	13,701,745	252	1.8
1984	3,571,921	132	3.7	10,605,208	301	2.8	16,592,564	377	2.3	13,208,351	271	2.1
1985	3,678,657	130	3.5	10,594,540	326	3.1	17,015,987	385	2.3	12,970,952	290	2.2
1986	3,699,568	130	3.5	10,653,722	360	3.4	17,338,168	409	2.4	13,063,996	289	2.2
1987	3,703,294	160	4.3	10,725,924	387	3.6	17,651,459	467	2.6	13,267,570	298	2.2
1988	3,756,541	183	4.9	10,882,631	385	3.5	17,801,235	484	2.7	13,502,559	302	2.2
1989	3,858,435	183	4.7	10,981,085	402	3.7	17,938,226	526	2.9	13,912,858	358	2.6
1990	3,987,662	162	4.1	11,168,053	343	3.1	18,082,010	447	2.5	14,234,802	316	2.2
1991	4,009,515	143	3.6	11,468,844	339	3.0	18,154,546	442	2.4	14,607,842	310	2.1
1992	3,982,857	127	3.2	11,739,325	349	3.0	18,296,744	442	2.4	14,884,742	315	2.1
1993	3,908,335	152	3.9	11,898,416	361	3.0	18,612,278	431	2.3	14,916,835	277	1.9
1994	3,854,882	160	4.2	11,821,298	379	3.2	18,958,858	486	2.6	15,057,424	319	2.1
1995	3,813,169	153	4.0	11,668,778	346	3.0	19,309,487	484	2.5	15,129,050	356	2.4
1996	3,769,544	178	4.7	11,499,426	346	3.0	19,610,009	486	2.5	15,206,209	336	2.2
1997	3,779,543	133	3.5	11,371,094	327	2.9	19,788,553	502	2.5	15,425,793	368	2.4
1998	3,790,645	138	3.6	11,301,476	304	2.7	19,814,280	512	2.6	15,621,075	379	2.4
1999	3,819,903	142	3.7	11,269,665	310	2.8	19,629,729	497	2.5	15,947,842	362	2.3
2000	3,867,754	131	3.4	11,425,866	311	2.7	20,146,324	458	2.3	16,779,479	364	2.2
2001	4,025,873	106	2.6	11,497,211	290	2.5	19,875,164	450	2.3	16,943,147	333	2.0
2002	3,984,989	107	2.7	11,733,679	272	2.3	19,662,203	405	2.1	16,951,435	347	2.0
2003	4,033,482	120	3.0	11,922,039	265	2.2	19,522,343	401	2.1	16,709,738	328	2.0
2004	4,077,188	121	3.0	12,086,916	295	2.4	19,473,829	406	2.1	16,513,473	343	2.1

- The proportion of fatally injured children who are restrained has risen greatly during the past 20 years among infants and 1-3 year-olds (from around 23 percent in 1985 to 61 percent in 2004). The increase has been smaller, but still significant, among older children (from 10 to 45 percent). As children get older they are less likely to be restrained. In 2004 63 percent of fatally injured children younger than 1 were restrained compared with 43 percent of 9-12 year-olds. Note, however, that these percentages are not estimates of restraint use among all children involved in potentially fatal crashes. For example, if restraint use among fatally injured 9-12 year-olds (43 percent) is properly recorded, and if restraints are 45 percent effective in preventing fatalities, then restraint use among 9-12 year-olds in such severe crashes is estimated to be 58 percent.

**Restraint use among fatally injured children by age, 1985**

Age	Unbelted		Belt used		Child restraint		Total restrained		Unknown belt use		Total
	Num	%	Num	%	Num	%	Num	%	Num	%	
<1	85	65	2	2	29	22	31	24	14	11	130
1-3	230	71	18	6	55	17	73	22	23	7	326
4-8	267	69	41	11	7	2	48	12	70	18	385
9-12	223	77	21	7	0	0	21	7	46	16	290

<b>Restraint use among fatally injured children by age, 2004</b>											
<b>Age</b>	<b>Unbelted</b>		<b>Belt used</b>		<b>Child restraint</b>		<b>Total restrained</b>		<b>Unknown belt use</b>		<b>Total</b>
	<b>Num</b>	<b>%</b>	<b>Num</b>	<b>%</b>	<b>Num</b>	<b>%</b>	<b>Num</b>	<b>%</b>	<b>Num</b>	<b>%</b>	
<1	32	26	4	3	72	60	76	63	13	11	121
1-3	103	35	22	7	156	53	178	60	14	5	295
4-8	189	47	146	36	43	11	189	47	28	7	406
9-12	165	48	149	43	0	0	149	43	29	8	343

- Overall, 55 percent of the children killed in motor vehicle crashes in 2004 were male. The gender difference in fatalities was greater among child bicyclists (70 percent males, 30 percent females) than among child pedestrians (65 percent males, 35 percent females). There was little gender difference in fatalities among child occupants of passenger vehicles (49 percent males, 51 percent females).

<b>Motor vehicle crash deaths among children by type and gender, 2004</b>					
	<b>Male</b>		<b>Female</b>		<b>Total*</b>
	<b>Num</b>	<b>%</b>	<b>Num</b>	<b>%</b>	
Passenger vehicle occupants	573	49	592	51	1,165
Pedestrians	189	65	100	35	289
Bicyclists	58	70	25	30	83
Total*	899	55	738	45	1,637

\*Total includes other and/or unknowns

- The rate of motor vehicle crash deaths per 100,000 children in 2004 was 14 percent higher for males than for females.

<b>Motor vehicle crash deaths per 100,000 children by gender, 2004</b>			
<b>Gender</b>	<b>Number of children</b>	<b>Deaths</b>	<b>Rate</b>
Male	26,680,274	899	3.4
Female	25,471,132	738	2.9
Total*	52,151,406	1,637	3.1

\*Total includes other and/or unknowns

## WHEN THEY DIED

- The proportion of children killed in motor vehicle crashes in 2004 was greater on Friday, Saturday, and Sunday than on other days of the week.

<b>Motor vehicle crash deaths among children younger than 13 by day of week, 2004</b>		
<b>Day of week</b>	<b>Deaths</b>	<b>%</b>
Sunday	281	17
Monday	197	12
Tuesday	202	12
Wednesday	181	11
Thursday	208	13
Friday	271	17
Saturday	297	18
Total	1,637	100

- The proportion of children killed in motor vehicle crashes in 2004 was greatest during 3-6 pm.

<b>Time of day</b>	<b>Number</b>	<b>%</b>
Midnight-3am	57	3
3am-6am	37	2
6am-9am	149	9
9am-noon	173	11
Noon-3pm	279	17
3pm-6pm	453	28
6pm-9pm	339	21
9pm-Midnight	145	9
Total*	1,637	100

\*Total includes other and/or unknowns

- The proportion of children killed in motor vehicle crashes in 2004 was greatest during May-July.

<b>Month</b>	<b>Number</b>	<b>%</b>
January	123	8
February	108	7
March	113	7
April	116	7
May	167	10
June	162	10
July	158	10
August	147	9
September	138	8
October	141	9
November	141	9
December	123	8
Total	1,637	100

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## REFERENCES

<sup>1</sup>National Center for Injury Prevention and Control. 2002. Web-based Injury Statistics Query and Reporting System. Atlanta, GA. Available: <http://www.cdc.gov/ncipc/wisqars/>.

<sup>2</sup>National Center for Injury Prevention and Control. 2002. WISQARS leading cause of death reports, 1999-2002. Atlanta, GA. Available: <http://webappa.cdc.gov/sasweb/ncipc/leadcaus10.html>.

<sup>3</sup>Braver, E.R.; Whitfield, R.; and Ferguson, S.A. 1998. Seating positions and children's risk of dying in motor vehicle crashes. *Injury Prevention* 4:181-87.

<sup>4</sup>Glassbrenner, D. 2005. Child restraint use in 2004 — overall results. Report no. DOT HS-809-845. Washington, DC: U.S. Department of Transportation.

<sup>5</sup>Teret, S.P.; Jones, A.S.; Williams, A.F.; and Wells, J.K. 1986. Child restraint laws: an analysis of gaps in coverage. *American Journal of Public Health* 76:31-34.