

FATALITY FACTS 2004: BICYCLES

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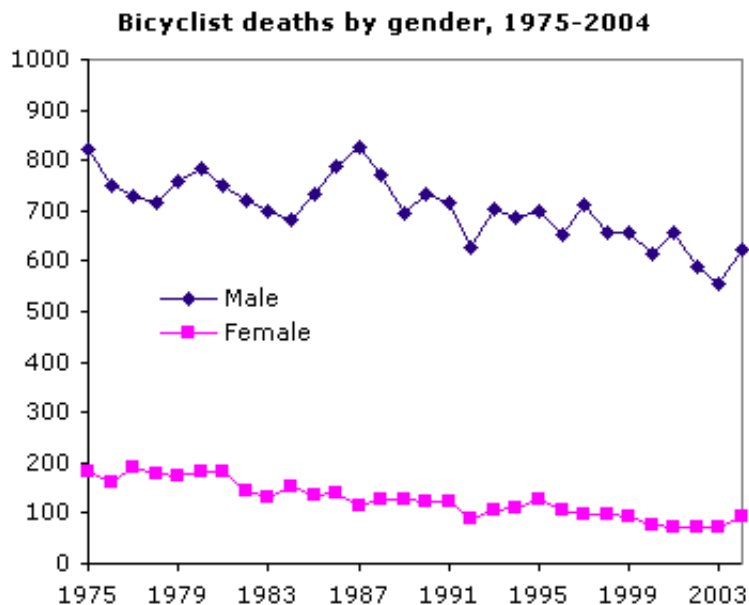
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Two percent of motor vehicle-related deaths are bicyclists. Among a majority of those killed, the most serious injuries are to the head, so it's important for bicyclists to wear helmets. Helmet use has been estimated to reduce head injury risk by 85 percent.¹ Twenty states and the District of Columbia have helmet laws applying to young bicyclists; none of these laws applies to all riders. Local ordinances in a few states require some or all bicyclists to wear helmets. A nationwide phone survey estimated that state helmet use laws increase by 18 percent the probability that a rider will wear a helmet.² Helmets are important for riders of all ages, especially because adult bicyclists represent more than three-quarters of bicycle deaths.

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

OVERVIEW

- A total of 719 bicyclists were killed in crashes with motor vehicles in 2004. This is 15 percent more than in 2003 and down 28 percent since 1975.



Bicyclist deaths by gender, 1975-2004

Year	Male		Female		Total*
	Num	%	Num	%	Num
1975	820	82	183	18	1,003
1976	751	82	163	18	914
1977	730	79	192	21	922
1978	714	80	178	20	892
1979	759	81	173	19	932
1980	782	81	183	19	965
1981	748	80	181	19	936
1982	720	83	144	17	864
1983	700	84	130	16	830
1984	684	82	153	18	838
1985	732	84	137	16	869
1986	789	85	140	15	929
1987	826	88	114	12	940
1988	773	86	128	14	901
1989	696	85	126	15	822
1990	732	86	121	14	853
1991	715	86	121	14	836
1992	627	87	90	13	717
1993	702	87	104	13	806
1994	687	86	109	14	796
1995	699	84	128	15	828
1996	654	86	107	14	761
1997	712	88	99	12	811
1998	658	87	99	13	757
1999	656	87	94	13	750
2000	613	89	76	11	689
2001	657	90	72	10	729
2002	590	89	73	11	663
2003	554	88	71	11	626
2004	624	87	95	13	719

*Total includes other and/or unknowns

- Eighty-three percent of bicyclists killed in 2004 reportedly weren't wearing helmets.

Bicyclist deaths by helmet use, 1994-2004

Year	No helmet use		Helmet use		Total*
	Num	%	Num	%	Num
1994	776	97	19	2	796
1995	783	95	34	4	828
1996	731	96	27	4	761
1997	785	97	23	3	811
1998	741	98	16	2	757
1999	698	93	42	6	750
2000	622	90	50	7	689
2001	616	84	60	8	729
2002	589	89	54	8	663
2003	535	85	58	9	626
2004	600	83	85	12	719

*Total includes other and/or unknowns

- Twenty percent of bicyclists killed in 2004 had blood alcohol concentrations (BACs) at or above 0.08 percent.

Year	Bicyclists killed	Estimated bicyclists killed with BAC≥0.08	
	Num	Num	%
1982	864	159	18
1983	830	129	16
1984	838	123	15
1985	869	105	12
1986	929	130	14
1987	940	140	15
1988	901	140	15
1989	822	123	15
1990	853	143	17
1991	836	157	19
1992	717	115	16
1993	806	146	18
1994	796	138	17
1995	828	169	20
1996	761	140	18
1997	811	150	19
1998	757	159	21
1999	750	174	23
2000	689	157	23
2001	729	173	24
2002	663	154	23
2003	626	145	23
2004	719	147	20

WHEN THEY DIED

- Bicyclist deaths in 2004 were most likely to occur during the summer and between the hours of 6 pm and 9 pm.

Month	Deaths	%
January	38	5
February	32	4
March	43	6
April	59	8
May	78	11
June	74	10
July	98	14
August	85	12
September	64	9
October	66	9
November	42	6
December	40	6
Total	719	100

Time of day	Deaths	%
Midnight-3am	38	5
3am-6am	29	4
6am-9am	66	9
9am-Noon	77	11
Noon-3pm	99	14
3pm-6pm	127	18
6pm-9pm	166	23
9pm-Midnight	113	16
Total*	719	100
*Total includes other and/or unknowns		

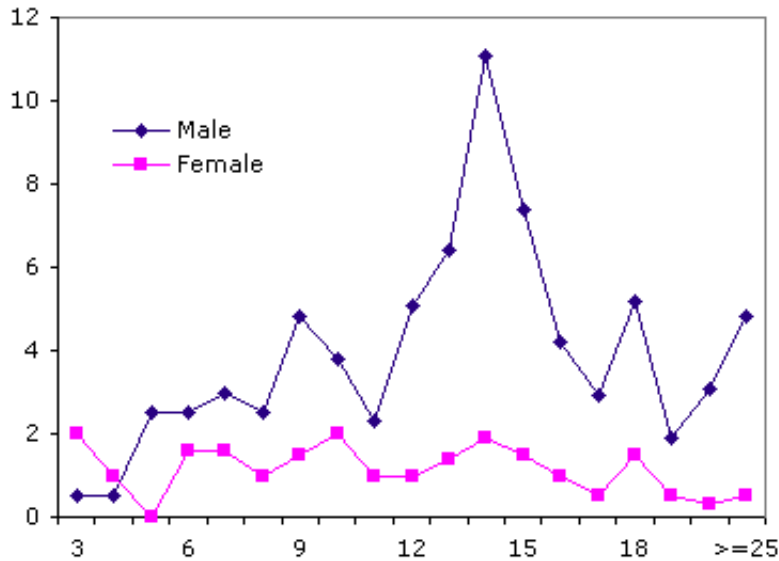
AGE AND GENDER

- Deaths among bicyclists younger than 16 have gone down dramatically since 1975 (78 percent), while deaths among bicyclists 16 and older have increased dramatically (75 percent).

Year	<16		≥16		Total*
	Num	%	Num	%	Num
1975	675	67	323	32	1,003
1976	605	66	306	33	914
1977	613	66	306	33	922
1978	570	64	320	36	892
1979	552	59	373	40	932
1980	529	55	431	45	965
1981	479	51	438	47	936
1982	413	48	446	52	864
1983	434	52	392	47	830
1984	410	49	415	50	838
1985	424	49	435	50	869
1986	435	47	485	52	929
1987	443	47	494	53	940
1988	393	44	502	56	901
1989	371	45	449	55	822
1990	292	34	551	65	853
1991	300	36	530	63	836
1992	297	41	418	58	717
1993	303	38	500	62	806
1994	294	37	495	62	796
1995	278	34	542	65	828
1996	248	33	507	67	761
1997	248	31	560	69	811
1998	229	30	526	69	757
1999	211	28	537	72	750
2000	191	28	496	72	689
2001	155	21	570	78	729
2002	153	23	503	76	663
2003	143	23	481	77	626
2004	148	21	566	79	719
*Total includes other and/or unknowns					

- About 7 times as many bicyclist deaths in 2004 were males compared with females. At every age older than 4, more male than female bicyclists were killed and the rates of bicyclist deaths per million people were higher for males than females. The highest rate of bicyclist deaths per million people occurred for 14-year-old males.

**Bicyclist deaths per million people
by age and gender, 2004**



Bicyclist deaths per million people by age and gender, 2004

Age	Males			Females			Total		
	Population	Deaths	Rate	Population	Deaths	Rate	Population	Deaths	Rate
0-2	6,193,466	0	0	5,919,833	0	0	12,113,299	0	0
3	2,069,472	1	0.5	1,981,333	4	2.0	4,050,805	5	1.2
4	2,000,054	1	0.5	1,907,110	2	1.0	3,907,164	3	0.8
5	1,969,280	5	2.5	1,882,478	0	0	3,851,758	5	1.3
6	1,976,004	5	2.5	1,887,201	3	1.6	3,863,205	8	2.1
7	1,987,194	6	3.0	1,901,881	3	1.6	3,889,075	9	2.3
8	2,027,801	5	2.5	1,934,826	2	1.0	3,962,627	7	1.8
9	2,068,862	10	4.8	1,970,045	3	1.5	4,038,907	13	3.2
10	2,085,942	8	3.8	1,987,806	4	2.0	4,073,748	12	2.9
11	2,131,574	5	2.3	2,026,863	2	1.0	4,158,437	7	1.7
12	2,170,625	11	5.1	2,071,756	2	1.0	4,242,381	13	3.1
13	2,199,816	14	6.4	2,095,698	3	1.4	4,295,514	17	4.0
14	2,243,182	25	11.1	2,131,894	4	1.9	4,375,076	29	6.6
15	2,157,782	16	7.4	2,053,952	3	1.5	4,211,734	19	4.5
16	2,123,160	9	4.2	2,020,918	2	1.0	4,144,078	11	2.7
17	2,100,934	6	2.9	1,999,256	1	0.5	4,100,190	7	1.7
18	2,117,873	11	5.2	2,006,142	3	1.5	4,124,015	14	3.4
19	2,135,647	4	1.9	2,014,138	1	0.5	4,149,785	5	1.2
20-24	10,802,990	33	3.1	10,168,312	3	0.3	20,971,302	36	1.7
>=25	91,975,750	443	4.8	99,156,554	50	0.5	191,132,304	493	2.6
Total*	144,537,408	618	4.3	149,117,996	95	0.6	293,655,404	719	2.4

*Total includes other and/or unknowns

WHERE THEY DIED

- More bicyclists were killed in urban areas than in rural areas in 2004 (66 percent compared with 34 percent).

Bicyclist deaths by land use, 1975-2004

Year	Urban		Rural		Total*
	Num	%	Num	%	Num
1975	497	50	506	50	1,003
1976	470	51	444	49	914
1977	543	59	375	41	922
1978	532	60	350	39	892
1979	541	58	367	39	932
1980	563	58	390	40	965
1981	528	56	371	40	936
1982	490	57	364	42	864
1983	502	60	324	39	830
1984	491	59	346	41	838
1985	515	59	353	41	869
1986	567	61	361	39	929
1987	532	57	406	43	940
1988	525	58	374	42	901
1989	520	63	302	37	822
1990	523	61	330	39	853
1991	539	64	297	36	836
1992	448	62	265	37	717
1993	491	61	313	39	806
1994	477	60	318	40	796
1995	540	65	284	34	828
1996	494	65	265	35	761
1997	519	64	289	36	811
1998	479	63	277	37	757
1999	484	65	266	35	750
2000	422	61	251	36	689
2001	478	66	251	34	729
2002	450	68	211	32	663
2003	435	69	189	30	626
2004	472	66	241	34	719

*Total includes other and/or unknowns

- Thirty-five percent of bicyclist deaths in 2004 occurred at intersections.

Bicyclist deaths by junction type, 1975-2004

Year	Intersection		Non-intersection		Total*
	Num	%	Num	%	Num
1975	263	26	734	73	1,003
1976	215	24	699	76	914
1977	238	26	684	74	922
1978	252	28	640	72	892
1979	284	30	647	69	932
1980	249	26	715	74	965
1981	245	26	684	73	936
1982	238	28	626	72	864
1983	223	27	607	73	830
1984	239	29	599	71	838
1985	251	29	618	71	869
1986	276	30	652	70	929
1987	266	28	674	72	940
1988	269	30	632	70	901
1989	256	31	566	69	822
1990	245	29	606	71	853
1991	261	31	575	69	836
1992	243	34	473	66	717
1993	259	32	545	68	806
1994	245	31	551	69	796
1995	276	33	549	66	828
1996	232	30	525	69	761
1997	264	33	544	67	811
1998	227	30	529	70	757
1999	247	33	500	67	750
2000	226	33	461	67	689
2001	228	31	499	68	729
2002	234	35	429	65	663
2003	208	33	418	67	626
2004	251	35	466	65	719

*Total includes other and/or unknowns

ROAD TYPES

- Sixty-three percent of bicyclist deaths in 2004 occurred on major roads other than interstates and freeways, and 31 percent occurred on minor roads.

Total bicyclist deaths by road type, 1987-2004							
Year	Interstates and freeways		Major roads		Minor roads		All road types*
	Num	%	Num	%	Num	%	Num
1987	38	4	540	57	358	38	940
1988	36	4	502	56	356	40	901
1989	44	5	455	55	320	39	822
1990	60	7	480	56	313	37	853
1991	44	5	476	57	316	38	836
1992	55	8	398	56	249	35	717
1993	66	8	435	54	293	36	806
1994	67	8	423	53	302	38	796
1995	66	8	454	55	301	36	828
1996	40	5	443	58	266	35	761
1997	28	3	476	59	289	36	811
1998	31	4	453	60	264	35	757
1999	27	4	438	58	276	37	750
2000	18	3	418	61	215	31	689
2001	31	4	440	60	253	35	729
2002	25	4	383	58	251	38	663
2003	22	4	382	61	216	35	626
2004	21	3	452	63	222	31	719

*Total includes other and/or unknowns

- Fifty-three percent of bicyclist deaths among children (younger than 16) and 25 percent among adults (16 and older) in 2004 occurred on minor roads. Adult bicyclists were more likely than child bicyclists to have been killed on major roads other than interstates and freeways (69 percent compared with 41 percent).

Bicyclist deaths by age and road type, 1987-2004														
Year	Child bicyclist deaths (<16)							Adult bicyclist deaths (≥16)						
	Interstates and freeways		Major roads		Minor roads		All road types*	Interstates and freeways		Major roads		Minor roads		All road types*
	Num	%	Num	%	Num	%	Num	Num	%	Num	%	Num	%	Num
1987	12	3	204	46	225	51	443	25	5	334	68	133	27	494
1988	5	1	171	44	212	54	393	30	6	328	65	142	28	502
1989	8	2	158	43	202	54	371	36	8	296	66	117	26	449
1990	3	1	134	46	155	53	292	55	10	341	62	155	28	551
1991	5	2	136	45	159	53	300	39	7	334	63	157	30	530
1992	9	3	134	45	147	49	297	45	11	263	63	102	24	418
1993	11	4	134	44	154	51	303	54	11	299	60	139	28	500
1994	7	2	119	40	166	56	294	58	12	302	61	133	27	495
1995	12	4	123	44	143	51	278	52	10	329	61	154	28	542
1996	3	1	111	45	132	53	248	36	7	331	65	130	26	507
1997	4	2	112	45	126	51	248	23	4	363	65	162	29	560
1998	5	2	105	46	118	52	229	26	5	347	66	145	28	526
1999	3	1	80	38	125	59	211	24	4	357	66	150	28	537
2000	1	1	87	46	86	45	191	17	3	330	67	128	26	496
2001	6	4	75	48	71	46	155	25	4	361	63	182	32	570
2002	1	1	65	42	84	55	153	24	5	312	62	166	33	503
2003	1	1	61	43	81	57	143	20	4	320	67	135	28	481
2004	4	3	60	41	79	53	148	17	3	388	69	142	25	566

*Total includes other and/or unknowns

REFERENCES

¹Thompson, R.S.; Rivara, F.P.; and Thompson, D.C. 1989. A case-control study of the effectiveness of bicycle safety helmets. *New England Journal of Medicine* 320:1361-67.

²Rodgers, G.B. 2002. Effects of state helmet laws on bicycle helmet use by children and adolescents. *Injury Prevention* 8:42-46.