

FATALITY FACTS 2011**Fixed object crashes**

About 20 percent of motor vehicle crash deaths result from a vehicle leaving the roadway and hitting a fixed object alongside the road. Trees, utility poles and traffic barriers are the most common objects struck. About half of the deaths in fixed object crashes occur at night.

Alcohol is a frequent contributing factor in these crashes. Motorists also run off the road because of excessive speeds, falling asleep, inattention or poor visibility. Efforts to reduce these driver errors are only somewhat effective, so it's important to remove fixed objects or avoid putting them along roads in the first place, especially roads where vehicles are more likely to leave the pavement. Less preferred options include using breakaway objects or shielding or increasing the visibility of the objects.

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

The information is based on fatal crashes in which the most harmful event coded was a collision with a fixed object, regardless of whether the first harmful event also was a collision with a fixed object, or was instead another type of crash, such as a collision between two motor vehicles, that in turn led to a collision with a fixed object. Information on the most harmful event became available in FARS in 1979.

Data subsections:

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Trends

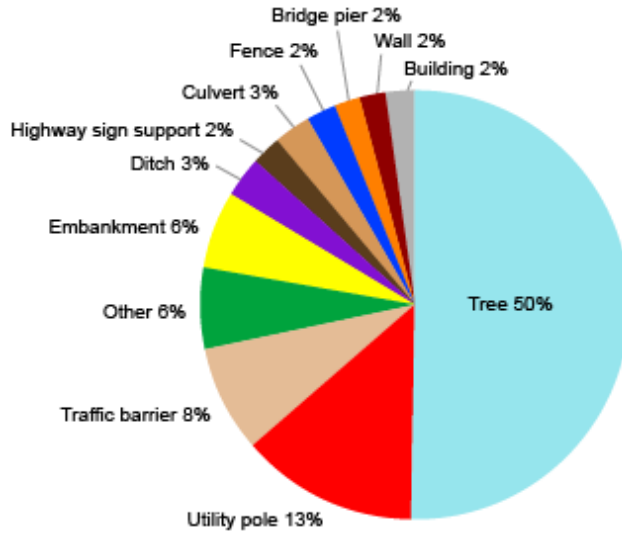
A total of 7,069 people died in fixed object crashes in 2011, 3 percent fewer than in 2010 and 33 percent fewer than in 1979. The proportion of motor vehicle crash deaths involving collisions with fixed objects has remained between 19 and 23 percent since 1979.

Deaths in fixed object crashes as a percent of all motor vehicle crash deaths, 1979-2011

Year	Fixed object crash deaths		Other deaths		All deaths	
	Number	%	Number	%	Number	%
1979	10,550	21	40,543	79	51,093	100
1980	10,968	21	40,123	79	51,091	100
1981	9,464	19	39,837	81	49,301	100
1982	8,417	19	35,528	81	43,945	100
1983	8,333	20	34,256	80	42,589	100
1984	8,796	20	35,461	80	44,257	100
1985	9,319	21	34,506	79	43,825	100
1986	9,851	21	36,236	79	46,087	100
1987	9,662	21	36,728	79	46,390	100
1988	9,865	21	37,222	79	47,087	100
1989	9,537	21	36,045	79	45,582	100
1990	9,355	21	35,244	79	44,599	100
1991	8,894	21	32,614	79	41,508	100
1992	8,221	21	31,029	79	39,250	100
1993	8,256	21	31,894	79	40,150	100
1994	8,142	20	32,574	80	40,716	100
1995	8,524	20	33,293	80	41,817	100
1996	8,442	20	33,623	80	42,065	100
1997	8,381	20	33,632	80	42,013	100
1998	8,401	20	33,100	80	41,501	100
1999	8,431	20	33,286	80	41,717	100
2000	8,899	21	33,046	79	41,945	100
2001	9,011	21	33,185	79	42,196	100
2002	9,580	22	33,425	78	43,005	100
2003	9,433	22	33,451	78	42,884	100
2004	9,123	21	33,713	79	42,836	100
2005	9,062	21	34,448	79	43,510	100
2006	9,181	21	33,527	79	42,708	100
2007	9,168	22	32,091	78	41,259	100
2008	8,661	23	28,762	77	37,423	100
2009	7,813	23	26,070	77	33,883	100
2010	7,290	22	25,709	78	32,999	100
2011	7,069	22	25,298	78	32,367	100

Trees are the most common fixed object struck. Fifty percent of deaths in fixed object crashes in 2011 involved a vehicle striking a tree. Utility poles and traffic barriers were the next most common objects struck, accounting for 13 and 8 percent of deaths, respectively.

Percent distribution of fixed object crash deaths by object struck, 2011



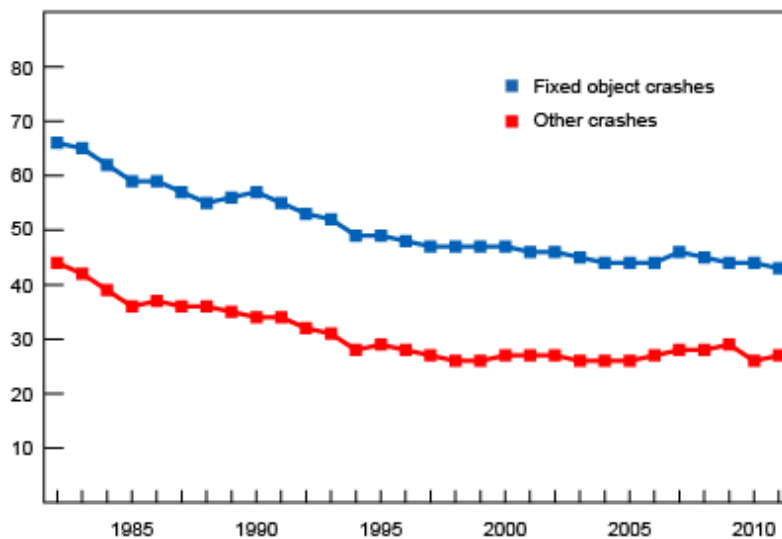
Deaths in fixed object crashes by object struck, 2011

Object struck	Number	%
Tree	3,563	50
Utility pole	910	13
Traffic barrier	573	8
Embankment	447	6
Ditch	224	3
Culvert	197	3
Building	157	2
Bridge pier	151	2
Fence	150	2
Wall	130	2
Highway sign support	119	2
Other	448	6
Total	7,069	100

Alcohol

Forty-three percent of drivers killed in fixed object crashes in 2011 had blood alcohol concentrations (BACs) at or above 0.08 percent. By comparison, 27 percent of drivers killed in other types of fatal crashes had BACs this high. The percentage of drivers killed in fixed object crashes with BACs at or above 0.08 percent declined from 66 percent in 1982 to 43 percent in 2011, a reduction of 35 percent.

Percent of fatally injured drivers with BACs \geq 0.08 percent by crash type, 1982-2011



Estimated number and percent of fatally injured drivers with BACs \geq 0.08 percent by crash type, 1982-2011

Year	Fixed object crashes			Other Crashes			All Crashes		
	Driver deaths	Estimated deaths with BACs \geq 0.08		Driver deaths	Estimated deaths with BACs \geq 0.08		Driver deaths	Estimated deaths with BACs \geq 0.08	
	Number	Number	%	Number	Number	%	Number	Number	%
1982	6,089	3,991	66	18,601	8,148	44	24,690	12,139	49
1983	6,074	3,925	65	18,064	7,618	42	24,138	11,543	48
1984	6,496	4,027	62	19,093	7,472	39	25,589	11,499	45
1985	6,927	4,078	59	18,410	6,608	36	25,337	10,685	42
1986	7,121	4,209	59	19,509	7,201	37	26,630	11,409	43
1987	6,974	3,965	57	19,859	7,093	36	26,833	11,058	41
1988	7,239	3,987	55	20,014	7,116	36	27,253	11,103	41
1989	6,962	3,926	56	19,427	6,711	35	26,389	10,637	40
1990	6,786	3,897	57	18,964	6,498	34	25,750	10,395	40
1991	6,398	3,538	55	17,532	5,947	34	23,930	9,485	40
1992	5,979	3,151	53	16,605	5,301	32	22,584	8,452	37
1993	5,957	3,079	52	17,185	5,243	31	23,142	8,322	36
1994	5,943	2,885	49	17,748	5,028	28	23,691	7,913	33
1995	6,197	3,018	49	18,193	5,289	29	24,390	8,307	34
1996	6,077	2,917	48	18,457	5,258	28	24,534	8,175	33
1997	6,081	2,881	47	18,586	4,962	27	24,667	7,843	32
1998	6,280	2,964	47	18,463	4,870	26	24,743	7,834	32
1999	6,249	2,908	47	19,008	5,010	26	25,257	7,918	31
2000	6,595	3,080	47	18,972	5,086	27	25,567	8,166	32
2001	6,685	3,050	46	19,184	5,203	27	25,869	8,252	32
2002	7,218	3,292	46	19,441	5,224	27	26,659	8,515	32
2003	7,083	3,163	45	19,696	5,191	26	26,779	8,354	31
2004	6,906	3,043	44	19,965	5,112	26	26,871	8,155	30
2005	6,944	3,060	44	20,547	5,430	26	27,491	8,489	31
2006	7,180	3,145	44	20,168	5,433	27	27,348	8,578	31
2007	7,107	3,244	46	19,463	5,374	28	26,570	8,617	32
2008	6,839	3,082	45	17,415	4,879	28	24,254	7,961	33
2009	6,147	2,734	44	15,688	4,479	29	21,835	7,213	33
2010	5,725	2,517	44	15,347	4,062	26	21,072	6,579	31
2011	5,630	2,436	43	15,123	4,071	27	20,753	6,507	31

Age and gender

Twenty-nine percent of drivers killed in fixed object crashes in 2011 were males younger than 30. Overall, males accounted for 81 percent of drivers killed in fixed object crashes in 2011.

Driver deaths in fixed object crashes by age and gender, 2011

Age	Male		Female		Total	
	Number	%	Number	%	Number	%
<16	10	<1	4	<1	14	<1
16-19	378	7	103	2	481	9
20-24	712	13	160	3	872	15
25-29	545	10	111	2	656	12
30-34	452	8	91	2	543	10
35-39	323	6	74	1	397	7
40-44	337	6	74	1	411	7
45-49	361	6	79	1	440	8
50-54	357	6	78	1	435	8
55-59	306	5	56	1	362	6
60-64	244	4	54	1	298	5
65-69	169	3	51	1	220	4
≥70	355	6	144	3	499	9
Total*	4,550	81	1,079	19	5,630	100
*Total includes other and/or unknowns						

Crash types

Ninety-five percent of fixed object crash deaths in 2011 occurred in single-vehicle crashes.

Deaths in fixed object crashes by crash type, 2011

Crash type	Deaths	%
Single-vehicle crashes	6,731	95
Multiple-vehicle crashes	338	5
All crashes	7,069	100

Eighteen percent of deaths in fixed object crashes in 2011 involved vehicles rolling over.

Deaths in fixed object crashes by rollover occurrence and object struck, 2011

Object struck	Rollover		No rollover		All crashes	
	Number	%	Number	%	Number	%
Culvert	67	35	130	66	197	100
Boulder	14	31	31	69	45	100
Embankment	124	28	323	72	447	100
Ditch	56	25	168	75	224	100
Bridge rail	17	22	59	78	76	100
Guardrail	76	19	321	81	397	100
Wall	23	18	107	82	130	100
Tree	604	17	2,959	83	3,563	100
Utility pole	146	16	764	84	910	100
Concrete	27	15	149	85	176	100
Bridge pier	21	14	130	86	151	100
Fence	21	14	129	86	150	100
Building	14	9	143	91	157	100
Other post/pole	10	8	109	92	119	100
Curb	8	8	90	92	98	100
Other	31	14	198	86	229	100
Total	1,259	18	5,810	82	7,069	100

About 19 percent of passenger vehicle occupant deaths in fixed object crashes in 2011 involved ejection; 13 percent of the occupants killed were fully ejected, and 6 percent were partially ejected.

Passenger vehicle occupant deaths in fixed object crashes by occupant ejection status, 2011

Ejection status	Deaths	%
Not ejected	4,587	80
Fully ejected	751	13
Partially ejected	360	6
Total*	5,720	100
*Total includes other and/or unknowns		

When and where crashes occur

Fourteen percent of deaths in fixed object crashes in 2011 occurred on interstates and freeways, 48 percent occurred on other major roads, and 36 percent occurred on minor roads.

Deaths in fixed object crashes by road type, 2011

Road type	Deaths	%
Interstates and freeways	996	14
Other major roads	3,413	48
Minor roads	2,569	36
All road types*	7,069	100
*Total includes other and/or unknowns		

Fifty-eight percent of deaths in fixed object crashes in 2011 occurred on rural roads.

Deaths in fixed object crashes by land use, 2011

Land use	Deaths	%
Rural	4,129	58
Urban	2,905	41
Total*	7,069	100
*Total includes other and/or unknowns		

Forty-six percent of deaths in fixed object crashes in 2011 occurred on roads with speed limits 55 mph or higher.

Deaths in fixed object crashes by speed limit, 2011

Speed limit	Deaths	%
No limit	18	<1
<35 mph	913	13
35-40 mph	1,483	21
45-50 mph	1,344	19
55+ mph	3,311	46
Total*	7,069	100
*Total includes other and/or unknowns		

About half of deaths in fixed object crashes in 2011 occurred at night (9 p.m.-6 a.m.). The highest proportions of deaths in fixed object crashes occurred between midnight and 3 a.m. (19 percent) and between 9 p.m. and midnight (14 percent).

Deaths in fixed object crashes by time of day, 2011

Hour of day	Deaths	%
Midnight - 3 a.m.	1,340	19
3 a.m. - 6 a.m.	773	11
6 a.m. - 9 a.m.	631	9
9 a.m. - Noon	539	8
Noon - 3 p.m.	817	12
3 p.m. - 6 p.m.	940	13
6 p.m. - 9 p.m.	937	13
9 p.m. - Midnight	1,024	14
Total*	7,069	100
*Total includes other and/or unknowns		