

FATALITY FACTS 2004: ALCOHOL

Sections:

- **OVERVIEW**
- **AGE AND GENDER**
- **WHEN ALCOHOL-IMPAIRED CRASHES OCCUR**

Progress has been made during the past 20 years to reduce the proportion of fatally injured drivers with blood alcohol concentrations (BACs) at or above 0.08 percent. Proportions are lower in all age groups and among drivers of passenger vehicles, tractor-trailers, and motorcycles. There also has been a substantial decline among those with very high BACs (at or above 0.15 percent), who often are assumed to be "hard-core" drinking drivers. However, progress has stalled in recent years and alcohol-impaired driving is still a major problem.

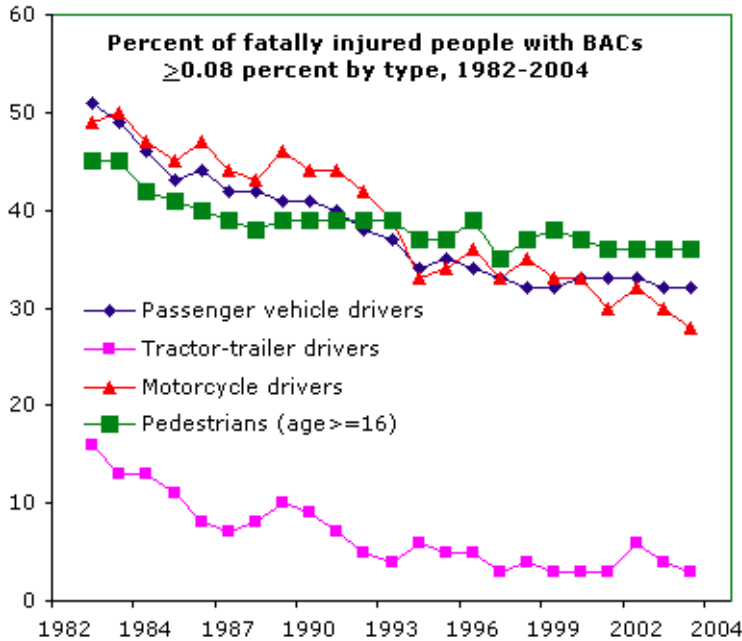
All states now have enacted a law defining impairment as driving with a BAC at or above 0.08 percent. All states also have "zero tolerance" laws that prohibit people younger than 21 from driving after drinking. Typically, these laws prohibit driving with a BAC of 0.02 percent or greater. A BAC as low as 0.02 percent has been shown to affect driving ability. The probability of a crash rises significantly after 0.05 percent BAC and even more rapidly after about 0.08 percent. Among drivers ages 35 and older with BACs at or above 0.15 percent on weekend nights, the likelihood of dying in a single-vehicle crash is 382 times higher than it is for nondrinking drivers.¹

The information in this fact sheet is based on data from all 50 states and the District of Columbia with imputations for missing BACs provided by the U.S. Department of Transportation's multiple imputation model.²

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

OVERVIEW

- The percentage of fatally injured motor vehicle drivers with BACs at or above 0.08 percent declined steadily from the 1980s to the mid-1990s. Since then, little progress has been made. The proportion of fatally injured pedestrians with BACs at or above 0.08 percent hasn't declined as much. Since 1997 about a third of fatally injured passenger vehicle drivers have had BACs of 0.08 percent or above. The group of drivers with the lowest proportion was tractor-trailer drivers (3 percent).



Estimated number and percent of fatally injured people with BACs≥0.08 percent, 1982-2004

Year	All drivers			Passenger vehicle drivers			Tractor-trailer drivers			Motorcycle drivers			Pedestrians (age≥16)		
	Deaths	Estimated deaths with BACs≥0.08		Deaths	Estimated deaths with BACs≥0.08		Deaths	Estimated deaths with BACs≥0.08		Deaths	Estimated deaths with BACs≥0.08		Deaths	Estimated deaths with BACs≥0.08	
	Num	Num	%	Num	Num	%	Num	Num	%	Num	Num	%	Num	Num	%
1982	24,690	12,139	49	19,663	10,023	51	600	97	16	3,723	1,810	49	5,993	2,668	45
1983	24,138	11,543	48	19,337	9,529	49	615	83	13	3,592	1,783	50	5,582	2,486	45
1984	25,589	11,499	45	20,298	9,378	46	720	90	13	3,896	1,834	47	5,755	2,439	42
1985	25,337	10,685	42	20,057	8,674	43	632	69	11	3,896	1,756	45	5,539	2,263	41
1986	26,630	11,409	43	21,503	9,396	44	589	45	8	3,790	1,772	47	5,547	2,242	40
1987	26,833	11,058	41	22,157	9,343	42	559	40	7	3,409	1,499	44	5,597	2,176	39
1988	27,253	11,103	41	22,884	9,580	42	614	52	8	3,139	1,338	43	5,701	2,162	38
1989	26,389	10,637	40	22,554	9,200	41	546	54	10	2,682	1,233	46	5,557	2,186	39
1990	25,750	10,395	40	21,953	8,973	41	436	39	9	2,790	1,235	44	5,488	2,137	39
1991	23,930	9,485	40	20,551	8,242	40	407	28	7	2,404	1,059	44	4,880	1,895	39
1992	22,584	8,452	37	19,573	7,434	38	369	18	5	2,079	873	42	4,734	1,861	39
1993	23,142	8,322	36	20,036	7,328	37	383	17	4	2,120	825	39	4,740	1,856	39
1994	23,691	7,913	33	20,644	7,083	34	388	23	6	1,995	663	33	4,637	1,718	37
1995	24,390	8,307	34	21,456	7,488	35	400	21	5	1,939	664	34	4,783	1,793	37
1996	24,534	8,175	33	21,631	7,336	34	384	20	5	1,881	683	36	4,670	1,804	39
1997	24,667	7,843	32	21,702	7,062	33	427	13	3	1,878	622	33	4,621	1,638	35
1998	24,743	7,834	32	21,627	6,944	32	441	20	4	2,026	716	35	4,597	1,678	37
1999	25,257	7,918	31	21,899	6,994	32	471	14	3	2,223	736	33	4,325	1,646	38
2000	25,567	8,166	32	21,819	7,127	33	457	14	3	2,591	847	33	4,192	1,534	37
2001	25,869	8,252	32	21,862	7,205	33	414	12	3	2,886	853	30	4,368	1,558	36
2002	26,659	8,515	32	22,537	7,381	33	409	25	6	2,952	940	32	4,367	1,584	36
2003	26,779	8,354	31	22,200	7,120	32	435	17	4	3,358	1,010	30	4,298	1,560	36
2004	26,756	8,256	31	21,838	7,037	32	436	13	3	3,577	998	28	4,202	1,529	36

- The percentage of fatally injured drivers with BACs of 0.15 percent or higher has declined 37 percent since 1982. The proportion of driver deaths involving BACs at or above 0.15 percent in 2004 was 24 percent for passenger vehicles and 17 percent for motorcycles. A higher percentage of pedestrians (28 percent) had BACs at or above 0.15 percent than any group of drivers.

Estimated number and percent of fatally injured people with BACs≥0.15 percent, 1982-2004

Year	All drivers			Passenger vehicle drivers			Tractor-trailer drivers			Motorcycle drivers			Pedestrians (age≥16)		
	Deaths	Estimated deaths with BACs≥0.15		Deaths	Estimated deaths with BACs≥0.15		Deaths	Estimated deaths with BACs≥0.15		Deaths	Estimated deaths with BACs≥0.15		Deaths	Estimated deaths with BACs≥0.15	
	Num	Num	%	Num	Num	%	Num	Num	%	Num	Num	%	Num	Num	%
1982	24,690	8,660	35	19,663	7,328	37	600	59	10	3,723	1,136	30	5,993	2,077	35
1983	24,138	8,240	34	19,337	6,969	36	615	57	9	3,592	1,115	31	5,582	1,945	35
1984	25,589	8,203	32	20,298	6,864	34	720	59	8	3,896	1,136	29	5,755	1,886	33
1985	25,337	7,521	30	20,057	6,269	31	632	44	7	3,896	1,085	28	5,539	1,732	31
1986	26,630	8,077	30	21,503	6,783	32	589	26	4	3,790	1,144	30	5,547	1,730	31
1987	26,833	7,968	30	22,157	6,854	31	559	23	4	3,409	966	28	5,597	1,735	31
1988	27,253	8,114	30	22,884	7,126	31	614	32	5	3,139	862	27	5,701	1,688	30
1989	26,389	7,774	29	22,554	6,847	30	546	39	7	2,682	791	29	5,557	1,706	31
1990	25,750	7,631	30	21,953	6,670	30	436	24	6	2,790	824	30	5,488	1,697	31
1991	23,930	7,014	29	20,551	6,192	30	407	20	5	2,404	697	29	4,880	1,512	31
1992	22,584	6,258	28	19,573	5,569	28	369	12	3	2,079	590	28	4,734	1,474	31
1993	23,142	6,104	26	20,036	5,494	27	383	10	2	2,120	505	24	4,740	1,499	32
1994	23,691	5,849	25	20,644	5,326	26	388	17	4	1,995	411	21	4,637	1,355	29
1995	24,390	6,018	25	21,456	5,495	26	400	11	3	1,939	415	21	4,783	1,394	29
1996	24,534	5,925	24	21,631	5,383	25	384	14	4	1,881	440	23	4,670	1,433	31
1997	24,667	5,668	23	21,702	5,158	24	427	11	2	1,878	400	21	4,621	1,329	29
1998	24,743	5,692	23	21,627	5,127	24	441	15	3	2,026	449	22	4,597	1,332	29
1999	25,257	5,678	22	21,899	5,108	23	471	10	2	2,223	440	20	4,325	1,292	30
2000	25,567	5,801	23	21,819	5,138	24	457	4	1	2,591	539	21	4,192	1,204	29
2001	25,869	5,976	23	21,862	5,328	24	414	10	2	2,886	522	18	4,368	1,232	28
2002	26,659	6,146	23	22,537	5,463	24	409	15	4	2,952	564	19	4,367	1,267	29
2003	26,779	6,010	22	22,200	5,258	24	435	11	3	3,358	609	18	4,298	1,254	29
2004	26,756	5,892	22	21,838	5,143	24	436	7	2	3,577	607	17	4,202	1,186	28

AGE AND GENDER

- Among fatally injured passenger vehicle drivers in 2004, 38 percent of males and 18 percent of females had BACs at or above 0.08 percent. The percentage was highest among males ages 21-40.

Estimated number and percent of fatally injured passenger vehicle drivers with BACs≥0.08 percent by driver age and gender, 2004

Age	Male			Female			All*		
	Drivers killed	Estimated drivers killed with BACs≥0.08		Drivers killed	Estimated drivers killed with BACs≥0.08		Drivers killed	Estimated drivers killed with BACs≥0.08	
	Num	Num	%	Num	Num	%	Num	Num	%
0-15	67	11	16	34	7	21	101	18	18
16-20	2,178	677	31	981	139	14	3,159	816	26
21-30	3,729	2,069	55	1,219	339	28	4,948	2,408	49
31-40	2,349	1,160	49	962	271	28	3,311	1,432	43
41-50	2,406	1,033	43	1,014	252	25	3,420	1,285	38
51-60	1,712	551	32	778	111	14	2,490	662	27
61-70	1,085	216	20	581	32	6	1,666	248	15
>70	1,781	134	8	946	29	3	2,727	163	6
All*	15,319	5,856	38	6,519	1,181	18	21,838	7,037	32

*Total includes other and/or unknowns

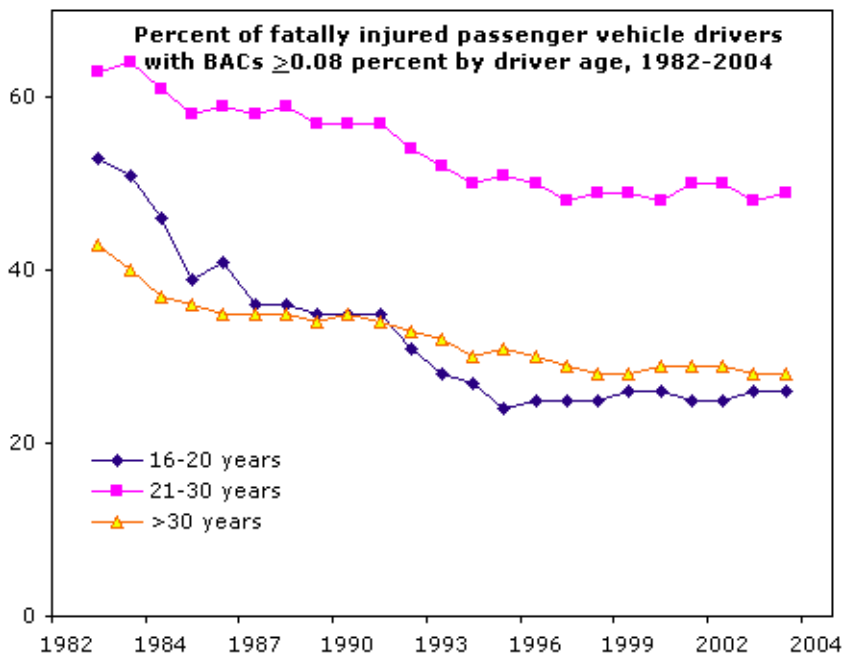
- Among fatally injured passenger vehicle drivers in 2004, 28 percent of males and 13 percent of females had BACs at or above 0.15 percent.

Estimated number and percent of fatally injured passenger vehicle drivers with BACs ≥ 0.15 percent by driver age and gender, 2004

Age	Male			Female			All*		
	Drivers killed	Estimated drivers killed with BACs ≥ 0.15		Drivers killed	Estimated drivers killed with BACs ≥ 0.15		Drivers killed	Estimated drivers killed with BACs ≥ 0.15	
	Num	Num	%	Num	Num	%	Num	Num	%
0-15	67	4	6	34	3	8	101	7	7
16-20	2,178	415	19	981	71	7	3,159	485	15
21-30	3,729	1,516	41	1,219	251	21	4,948	1,767	36
31-40	2,349	900	38	962	212	22	3,311	1,112	34
41-50	2,406	802	33	1,014	193	19	3,420	995	29
51-60	1,712	428	25	778	80	10	2,490	508	20
61-70	1,085	150	14	581	18	3	1,666	167	10
>70	1,781	82	5	946	15	2	2,727	97	4
All*	15,319	4,301	28	6,519	842	13	21,838	5,143	24

*Total includes other and/or unknowns

- Since the 1980s the proportion of fatally injured passenger vehicle drivers with BACs at or above 0.08 percent declined more among 16-20 year-olds than among older drivers, but these declines ended in 1995.



Estimated number and percent of fatally injured passenger vehicle drivers with BACs≥0.08 percent by driver age, 1982-2004									
Year	16-20			21-30			>30		
	Drivers killed	Estimated drivers killed with BACs≥0.08		Drivers killed	Estimated drivers killed with BACs≥0.08		Drivers killed	Estimated drivers killed with BACs≥0.08	
	Num	Num	%	Num	Num	%	Num	Num	%
1982	3,456	1,826	53	6,243	3,948	63	9,861	4,208	43
1983	3,326	1,681	51	6,053	3,859	64	9,844	3,943	40
1984	3,441	1,595	46	6,411	3,885	61	10,337	3,860	37
1985	3,227	1,260	39	6,262	3,659	58	10,441	3,713	36
1986	3,636	1,495	41	6,695	3,974	59	11,042	3,887	35
1987	3,630	1,315	36	6,802	3,975	58	11,579	4,016	35
1988	3,788	1,358	36	6,819	3,991	59	12,145	4,203	35
1989	3,536	1,225	35	6,475	3,675	57	12,401	4,272	34
1990	3,397	1,198	35	6,152	3,510	57	12,274	4,238	35
1991	3,021	1,044	35	5,623	3,183	57	11,801	3,993	34
1992	2,697	829	31	5,122	2,759	54	11,639	3,823	33
1993	2,805	795	28	5,065	2,658	52	12,038	3,851	32
1994	2,990	800	27	4,975	2,484	50	12,522	3,771	30
1995	2,983	725	24	5,081	2,585	51	13,246	4,155	31
1996	3,026	769	25	4,989	2,475	50	13,478	4,070	30
1997	3,034	773	25	4,772	2,272	48	13,773	4,001	29
1998	3,094	767	25	4,577	2,222	49	13,839	3,930	28
1999	3,261	849	26	4,653	2,260	49	13,870	3,866	28
2000	3,250	844	26	4,706	2,268	48	13,743	3,997	29
2001	3,247	823	25	4,735	2,358	50	13,790	4,005	29
2002	3,452	873	25	4,938	2,462	50	14,006	4,020	29
2003	3,260	858	26	4,852	2,308	48	13,957	3,930	28
2004	3,159	816	26	4,948	2,408	49	13,614	3,790	28

WHEN ALCOHOL-IMPAIRED CRASHES OCCUR

- Alcohol involvement in crashes peaks at night. Fifty-nine percent of passenger vehicle drivers fatally injured between 9 pm and 6 am in 2004 had BACs at or above 0.08 percent, compared with 18 percent during other hours.

Estimated number and percent of fatally injured passenger vehicle drivers with high BACs by nighttime vs. other times, 2004					
Time of day	Drivers killed	Estimated drivers killed with BACs≥0.08		Estimated drivers killed with BACs≥0.15	
	Num	Num	%	Num	%
9pm-6am	7,511	4,405	59	3,253	43
Other hours	14,327	2,632	18	1,890	13

Estimated number and percent of fatally injured passenger vehicle drivers with high BACs by time of day, 2004					
Time of day	Drivers killed	Estimated drivers killed with BACs≥0.08		Estimated drivers killed with BACs≥0.15	
	Num	Num	%	Num	%
Midnight-3 am	2,858	1,958	69	1,468	51
3 am-6 am	1,953	1,075	55	755	39
6 am-9 am	2,494	339	14	237	10
9 am-Noon	2,355	224	10	149	6
Noon-pm	3,004	336	11	245	8
3 pm-6 pm	3,456	624	18	445	13
6 pm-9 pm	2,787	970	35	711	26
9 pm-Midnight	2,700	1,372	51	1,030	38

- Forty-four percent of passenger vehicle drivers fatally injured on weekends (6 pm Friday to 6 am Monday) in 2004 had BACs at or above 0.08 percent, compared with 25 percent at other times.

Estimated number and percent of fatally injured passenger vehicles drivers with high BACs by weekend vs. other times, 2004					
	Drivers killed	Estimated drivers killed with BACs≥0.08		Estimated drivers killed with BACs≥0.15	
	Num	Num	%	Num	%
Weekend	8,789	3,827	44	2,814	32
Other times	13,049	3,210	25	2,329	18

- Alcohol involvement is highest in nighttime (9 pm to 6 am) single-vehicle crashes, in which 68 percent of fatally injured passenger vehicle drivers in 2004 had BACs at or above 0.08 percent. Only 27 percent of the fatally injured passenger vehicle drivers involved in nighttime single-vehicle crashes had no alcohol in their blood. Changes in nighttime single-vehicle crashes often are used to measure the changing role of alcohol in highway crashes and crash deaths.

Estimated number and percent of fatally injured passenger vehicle drivers by BAC, time, and crash type, 2004										
		Drivers killed	Estimated drivers killed with BACs=0		Estimated drivers killed with 0.01≤BACs≤0.07		Estimated drivers killed with BACs≥0.08		Estimated drivers killed with BACs≥0.15	
		Num	Num	%	Num	%	Num	%	Num	%
Single vehicle	Night	4,979	1,339	27	268	5	3,372	68	2,509	50
	Day	5,468	3,642	67	228	4	1,598	29	1,188	22
Multiple vehicle	Night	2,532	1,355	54	144	6	1,033	41	744	29
	Day	8,628	7,481	87	252	3	895	10	598	7

REFERENCES

¹Zador, P.L.; Krawchuck, S.; and Voas, R.B. 2000. Alcohol-related relative risk of driver fatalities and driver involvement in fatal crashes in relation to driver age and gender. *Journal of Studies on Alcohol* 61:387-96.

²Subramanian, R. 2002. Transitioning to multiple imputation — a new method to impute missing blood alcohol concentration (BAC) values in FARS. Report no. DOT HS-809-403. Washington, DC: U.S. Department of Transportation.