Table 1. Number, percent, and rate of fatal occupational injuries by selected worker characteristics, 1995. The rates are experimental measures using CPS employment.

Characteristic	Fatalities		Employed[1] (in thousands)	Fatalities per 100,000 employed[2]
	Number	Percent		
Total	6,210	100.0	126,248	5
Employee status				
Wage and salary	5,024	80.9	115,610	4
Self-employed[3]	1,186	19.1	10,638	11
Gender				
Men	5,676	91.4	68,556	8
Women	534	8.6	57,692	1
Age				
Under 16 years	26	.4	--	--
16 to 17 years	40	.6	2,574	2
18 to 19 years	128	2.1	3,934	3
20 to 24 years	484	7.8	12,868	4
25 to 34 years	1,395	22.5	32,880	4
35 to 44 years	1,555	25.0	34,474	5
45 to 54 years	1,242	20.0	24,213	5
55 to 64 years	811	13.1	11,436	7
65 years and over	514	8.3	3,666	14
Unspecified	15	.2	--	--
Race				
White	5,061	81.5	107,533	5
Black	689	11.1	13,537	5
Asian or Pacific Islander	161	2.6	--	--
American Indian, Aleut, Eskimo	27	.4	--	--
Other or unspecified	272	4.4	--	--
Hispanic origin				
Hispanic[4]	610	9.8	11,208	5

[1] The employment figures are annual average estimates of employed civilians 16 years of age and older, from the Current Population Survey (CPS), 1995. Resident military figures, derived from resident and civilian population data from the Bureau of the Census, were added to most of the CPS employment figures.

[2] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers, as described in the previous footnote. There were 26 fatally injured workers under the age of 16 years that were not included in the rate calculations to maintain consistency with the CPS employment.

[3] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.

[4] Persons identified as Hispanic may be of any race.

NOTE: Totals for major categories may include subcategories not shown separately. Figures may not add to totals because of rounding. Dashes indicate data that are not available.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1995.

Table 2. Fatal occupational injuries by selected[1] occupation, with employment, rate, and relative standard error, 1995. The rates are experimental measures using CPS employment.

Occupation[2]	Fatalities		Employed[3]	Fatalities per	Relative standard error[5]
	Number	Percent	(in thousands)	100,000 employed[4]	(percent)
Total	6,210	100.0	126,248	5	.1
Managerial and professional specialty	699	11.3	35,318	2	.5
Executive, administrative, and managerial	467	7.5	17,186	3	.8
Managers, food serving and lodging places	58	.9	1,276	5	2.9
Professional specialty	232	3.7	18,132	1	.7
Technical, sales, and administrative support	815	13.1	37,417	2	.5
Technicians and related support occupations	189	3.0	3,909	5	1.7
Airplane pilots and navigators	111	1.8	114	97	9.8
Sales occupations	492	7.9	15,119	3	.8
Supervisors and proprietors	212	3.4	4,480	5	1.5
Cashiers	116	1.9	2,727	4	2.0
News vendors	21	.3	119	16	9.6
Administrative support jobs, including clerical	134	2.2	18,389	1	.7
Service occupations	533	8.6	16,930	3	.8
Protective service occupations	314	5.1	2,237	14	2.2
Fire fighting and prevention jobs, including supervisors	39	.6	287	13	6.2
Police and detectives, including supervisors	174	2.8	1,051	17	3.2
Guards, including supervisors	101	1.6	899	11	3.5
Farming, forestry, and fishing	864	13.9	3,642	23	1.7
Farm operators and managers	332	5.3	1,446	23	2.7
Other agricultural and related occupations	359	5.8	2,010	17	2.3
Farm workers, including supervisors	262	4.2	836	30	3.6
Groundskeepers and gardeners, except farm	77	1.2	832	9	3.6
Forestry and logging occupations	116	1.9	129	90	9.2
Timber cutting and logging occupations	98	1.6	97	101	10.6
Fishers, hunters, and trappers	57	.9	58	97	13.8
Fishers	48	.8	45	104	15.6
Precision production, craft, and repair	1,041	16.8	13,524	8	.9
Mechanics and repairers	265	4.3	4,423	6	1.6
Automobile mechanics	47	.8	819	6	3.7
Heavy equipment mechanics	24	.4	155	15	8.4
Construction trades	607	9.8	5,098	12	1.4
Carpenters	96	1.5	1,255	8	2.9
Electricians	117	1.9	736	16	3.9
Electrical power installers and repairers	35	.6	126	28	9.3
Painters, construction and maintenance	45	.7	509	9	4.6
Plumbers, pipefitters, and steamfitters	33	.5	502	7	4.7
Roofers	60	1.0	205	29	7.3
Structural metal workers	38	.6	59	64	13.6
Extractive occupations	67	1.1	136	49	9.0
Mining machine operators	28	.5	36	78	17.5
Operators, fabricators, and laborers	2,051	33.0	18,068	11	.7
Machine operators, assemblers, and inspectors	238	3.8	7,907	3	1.2
Welders and cutters	72	1.2	604	12	4.3
Transportation and material moving occupations	1,148	18.5	5,171	22	1.4
Motor vehicle operators	918	14.8	3,904	24	1.7
Truck drivers	749	12.1	2,861	26	1.9
Drivers--sales workers	33	.5	158	21	8.3
Taxicab drivers and chauffeurs	99	1.6	213	46	7.2
Water transportation occupations	38	.6	65	58	13.0
Sailors and deckhands	30	.5	26	115	20.6
Material moving equipment operators	167	2.7	1,098	15	3.2
Operating engineers	44	.7	246	18	6.7
Grader, dozer, and scraper operators	23	.4	74	31	12.2
Industrial truck and tractor equipment operators	33	.5	500	7	4.7
Handlers, equipment cleaners, helpers, and laborers	665	10.7	4,990	13	1.5
Construction laborers	309	5.0	780	39	3.7
Garbage collectors	29	.5	48	60	15.1
Garage and service station related occupations	28	.5	178	16	7.9
Laborers, except construction	212	3.4	1,337	16	2.9
Military	143	2.3	1,348	11	--[6]

[1] Selected occupations had more than 20 reported work injury fatalities in 1995.

[2] Based on the 1990 population census occupational classification system developed by the Bureau of the Census.

[3] The employment figures, except for military, are annual average estimates of employed civilians 16 years of age and older, from the Current Population Survey (CPS), 1995. The resident military figure, derived from resident and civilian population data from the Bureau of the Census, was added to the CPS employment total.

[4] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers, as described in the previous footnote. There were 26 fatally injured workers under the age of 16 years that were not included in the rate calculations to maintain consistency with the CPS employment.

[5] The relative standard errors of the CPS employment estimates can be used to approximate confidence ranges for the fatality rates. For example, a confidence range for the roofers rate can be approximated as follows: 29 x .073 x 1.6 = 3, where 29 = the rate, .073 = the relative standard error (7.3 percent), and 1.6 = the factor for a 90 percent confidence level. The confidence range for this rate is 26 to 32 (29 plus or minus 3).

[6] A standard error was not available for the military employment figure used in the rate calculation for this category.

NOTE: Totals for major categories may include subcategories not shown separately. Figures may not add to totals because of rounding. There were 64 fatalities for which there was insufficient information to determine an occupation classification.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1995.

Table 2. Number, percent, and rate of fatal occupational injuries by selected[1] occupation, 1995. The rates are experimental measures using CPS employment.

Occupation[2]	Fatalities		Employed[3] (in thousands)	Fatalities per 100,000 employed[4]
	Number	Percent		
Total	6,210	100.0	126,248	5
Managerial and professional specialty	699	11.3	35,318	2
Executive, administrative, and managerial	467	7.5	17,186	3
Managers, food serving and lodging places	58	.9	1,276	5
Professional specialty	232	3.7	18,132	1
Technical, sales, and administrative support	815	13.1	37,417	2
Technicians and related support occupations	189	3.0	3,909	5
Airplane pilots and navigators	111	1.8	114	97
Sales occupations	492	7.9	15,119	3
Supervisors and proprietors	212	3.4	4,480	5
Sales counter clerks	10	.2	210	5
Cashiers	116	1.9	2,727	4
News vendors	21	.3	119	16
Administrative support jobs, including clerical	134	2.2	18,389	1
Messengers	8	.1	156	5
Service occupations	533	8.6	16,930	3
Protective service occupations	314	5.1	2,237	14
Fire fighting and prevention jobs, including supervisors	39	.6	287	13
Police and detectives, including supervisors	174	2.8	1,051	17
Guards, including supervisors	101	1.6	899	11
Farming, forestry, and fishing	864	13.9	3,642	23
Farm operators and managers	332	5.3	1,446	23
Other agricultural and related occupations	359	5.8	2,010	17
Farm workers, including supervisors	262	4.2	836	30
Groundskeepers and gardeners, except farm	77	1.2	832	9
Forestry and logging occupations	116	1.9	129	90
Timber cutting and logging occupations	98	1.6	97	101
Fishers, hunters, and trappers	57	.9	58	97
Fishers	48	.8	45	104
Precision production, craft, and repair	1,041	16.8	13,524	8
Mechanics and repairers	265	4.3	4,423	6
Automobile mechanics	47	.8	819	6
Heavy equipment mechanics	24	.4	155	15
Construction trades	607	9.8	5,098	12
Carpenters	96	1.5	1,255	8
Electricians	117	1.9	736	16
Electrical power installers and repairers	35	.6	126	28
Painters, construction and maintenance	45	.7	509	9
Plumbers, pipefitters, and steamfitters	33	.5	502	7
Roofers	60	1.0	205	29
Structural metal workers	38	.6	59	64
Extractive occupations	67	1.1	136	49
Drillers, oil wells	17	.3	24	71
Mining machine operators	28	.5	36	78
Operators, fabricators, and laborers	2,051	33.0	18,068	11
Machine operators, assemblers, and inspectors	238	3.8	7,907	3
Welders and cutters	72	1.2	604	12
Transportation and material moving occupations	1,148	18.5	5,171	22
Motor vehicle operators	918	14.8	3,904	24
Truck drivers	749	12.1	2,861	26
Drivers--sales workers	33	.5	158	21
Taxicab drivers and chauffeurs	99	1.6	213	46
Water transportation occupations	38	.6	65	58
Sailors and deckhands	30	.5	26	115
Material moving equipment operators	167	2.7	1,098	15
Operating engineers	44	.7	246	18
Excavating and loading machine operators	16	.3	96	17
Grader, dozer, and scraper operators	23	.4	74	31
Industrial truck and tractor equipment operators	33	.5	500	7
Handlers, equipment cleaners, helpers, and laborers	665	10.7	4,990	13
Construction laborers	309	5.0	780	39
Garbage collectors	29	.5	48	60
Garage and service station related occupations	28	.5	178	16
Laborers, except construction	212	3.4	1,337	16
Military	143	2.3	1,348	11

[1] Selected occupations had more than 20 reported work injury fatalities in 1995.

[2] Based on the 1990 population census occupation classification system developed by the Bureau of the Census.

[3] The employment figures, except for military, are annual average estimates of employed civilians 16 years of age and older, from the Current Population Survey (CPS), 1995. The resident military figure, derived from resident and civilian population data from the Bureau of the Census, was added to the CPS employment total.

[4] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers, as described in the previous footnote. There were 26 fatally injured workers under the age of 16 years that were not included in the rate calculations to maintain consistency with the CPS employment.

NOTE: Totals for major categories may include subcategories not shown separately. Figures may not add to totals because of rounding. There were 64 fatalities for which there was insufficient information to determine an occupation classification.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1995.

Table 3. Number, percent, and rate of fatal occupational injuries by industry, 1995. The rates are experimental measures using CPS employment.

Industry[1]	Fatalities		Employed[2] (in thousands)	Fatalities per 100,000 employed[3]
	Number	Percent		
Total	6,210	100.0	126,248	5
Private industry	5,483	87.6	106,522	5
Agriculture, forestry, and fishing	793	12.8	3,515	22
Agricultural production, crops	362	5.8	1,042	34
Agricultural production, livestock	161	2.6	1,301	12
Agricultural services	155	2.5	1,082	14
Mining	156	2.5	625	25
Coal mining	43	.7	114	38
Oil and gas extraction	77	1.2	336	23
Construction	1,048	16.9	7,153	15
Manufacturing	702	11.3	20,389	3
Food and kindred products	74	1.2	1,700	4
Lumber and wood products	182	2.9	815	22
Transportation and public utilities	880	14.2	7,138	12
Local and interurban passenger transportation	116	1.9	523	22
Trucking and warehousing	462	7.4	2,323	20
Air transportation	75	1.2	792	9
Electric, gas, and sanitary services	91	1.5	1,094	8
Wholesale trade	254	4.1	4,973	5
Retail trade	675	10.9	20,999	3
Food stores	188	3.0	3,428	5
Automotive dealers and service stations	122	2.0	2,087	6
Eating and drinking places	164	2.6	6,266	3
Finance, insurance, and real estate	124	2.0	7,761	2
Services	737	11.9	33,970	2
Business services	211	3.4	5,282	4
Automotive repair, services, and parking	114	1.8	1,454	8
Government	772	12.4	19,726	4
Federal	299	4.8	4,790	6
State	124	2.0	5,185	2
Local	338	5.4	9,751	3

[1] Based on the *Standard Industrial Classification Manual*, 1987 Edition.

[2] The employment figures are annual average estimates of employed civilians 16 years of age and older, from the Current Population Survey (CPS), 1995. A resident military figure, derived from resident and civilian population data from the Bureau of the Census, was added to the CPS employment total and figures for government and federal government.

[3] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers, as described in the previous footnote. There were 26 fatally injured workers under the age of 16 years that were not included in the rate calculations to maintain consistency with the CPS employment.

NOTE: Totals for major categories may include subcategories not shown separately. Figures may not add to totals because of rounding. There were 69 fatalities for which there was insufficient information to determine an industry classification.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1995.

1995 CENSUS OF FATAL OCCUPATIONAL INJURIES

Experimental Fatality Rates

Both absolute numbers (or frequencies) and rates are useful when examining fatal work injuries for research or prevention efforts. A frequency shows “how many” fatal work injuries occurred. A rate indicates the relative danger.

The relative danger of an occupation or industry group can be indicated by combining frequency data with either employment or hours data to calculate a rate. An hours-based rate indicates the relative danger using time of exposure. An employment-based rate indicates the relative danger using the number of employed workers.

Each type of rate has a different purpose. An employment-based fatality rate measures the incidence of fatal injury for all workers in the group regardless of exposure time. It does not account for the fact that part-time workers may have fewer fatal work injuries because they spend less time in the work environment. An hours-based fatality rate accounts for different time of exposure levels among workers. Hours-based measurements are especially useful for industry and occupation comparisons, when the number of workers can vary greatly among industry or occupation groups for a given period.

Work fatality counts from the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI) can be combined with employment or hours at work data to produce a fatal work injury rate. Since hours at work and employment data are not collected by CFOI, experimental fatality rates were calculated using estimates of employed[1] civilian workers (age 16 and older) from the Current Population Survey (CPS).[2] In addition, resident military figures, derived from resident and civilian population data from the Bureau of the Census, were added to the CPS employment figures to maintain consistency with the CFOI fatality data.

The fatality rates were calculated as follows.

$$(N / W) \times 100{,}000$$

N = the number of fatally injured workers
W = the number of employed workers

The ratio N/W is multiplied by 100,000 so that worker groups with widely varying employment levels can be expressed in common terms (i.e., per 100,000 workers) for comparisons.

Example. There were 6,210 total work fatalities in 1995. There were 126,248,000 employed workers (124,900,000 employed civilian workers age 16 and older, and 1,348,000 resident military personnel).

"N" must be adjusted to maintain consistency with "W," so the 26 fatally injured workers under age 16 are not included in the rate calculation. (Adjustments of "N" are not reflected in the "Number" and "Percent" columns of the tables, which include all fatalities regardless of age.)

$$N = 6{,}210 - 26 = 6{,}184$$

$$W = 126{,}248{,}000$$

$$(6{,}184 / 126{,}248{,}000) \times 100{,}000 = 5$$

5 fatalities per 100,000 workers

[1] The rates do not reflect the movement of persons in and out of the labor force, the length of their work week or work year, or the effect of multiple jobholders. BLS will continue its research on fatality rates using employment and exposure hours.

[2] See “Explanatory Notes and Estimates of Error” in the January 1996 *Employment and Earnings* for an explanation of CPS sampling and estimation methodology, and standard error computations. The relative standard errors of the CPS employment estimates can be used to approximate confidence ranges for the fatality rates.