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WORKPLACE INJURIES AND ILLNESSES IN 1998

A total of 5.9 million injuries and illnesses were reported in private industry workplaces during 1998, resulting in a rate of 6.7 cases per 100 equivalent full-time workers, according to a survey by the Bureau of Labor Statistics, U.S. Department of Labor. Employers reported a 4 percent drop in the number of cases and a 3 percent increase in the hours worked compared with 1997, reducing the case rate from 7.1 in 1997 to 6.7 in 1998. The rate for 1998 was the lowest since the Bureau began reporting this information in the early 1970s. (See "Background of the Survey" section for a discussion of the factors that can influence rate changes from one survey to the next.)

The following tabulation on incidence rates for injuries and illnesses shows the decline in rates per 100 full-time workers since 1994:

	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>
Private industry	8.4	8.1	7.4	7.1	6.7
Goods-producing	11.9	11.2	10.2	9.9	9.3
Service-producing	6.9	6.7	6.2	5.9	5.6

Among goods-producing industries, manufacturing had the highest incidence rate in 1998 (9.7 cases per 100 full-time workers). (See chart 1 and table 1.) Within the service-producing sector, the highest incidence rate was reported for transportation and public utilities (7.3 cases per 100 full-time workers), followed by wholesale and retail trade (6.5 cases per 100 workers).

This release is the second in a series of three releases covering 1998 from the BLS safety and health statistical series. The first release, in August 1999, covered work-related fatalities from the 1998 National Census of Fatal Occupational Injuries. In April 2000, a third release will provide details on the more seriously injured and ill workers (occupation, age, gender, race, and length of service) and on the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event or exposure, and primary source producing the disability). "More seriously" is defined in this survey as involving days away from work.

Chart 1. Nonfatal workplace injury and illness incidence rates by industry division, 1994-98

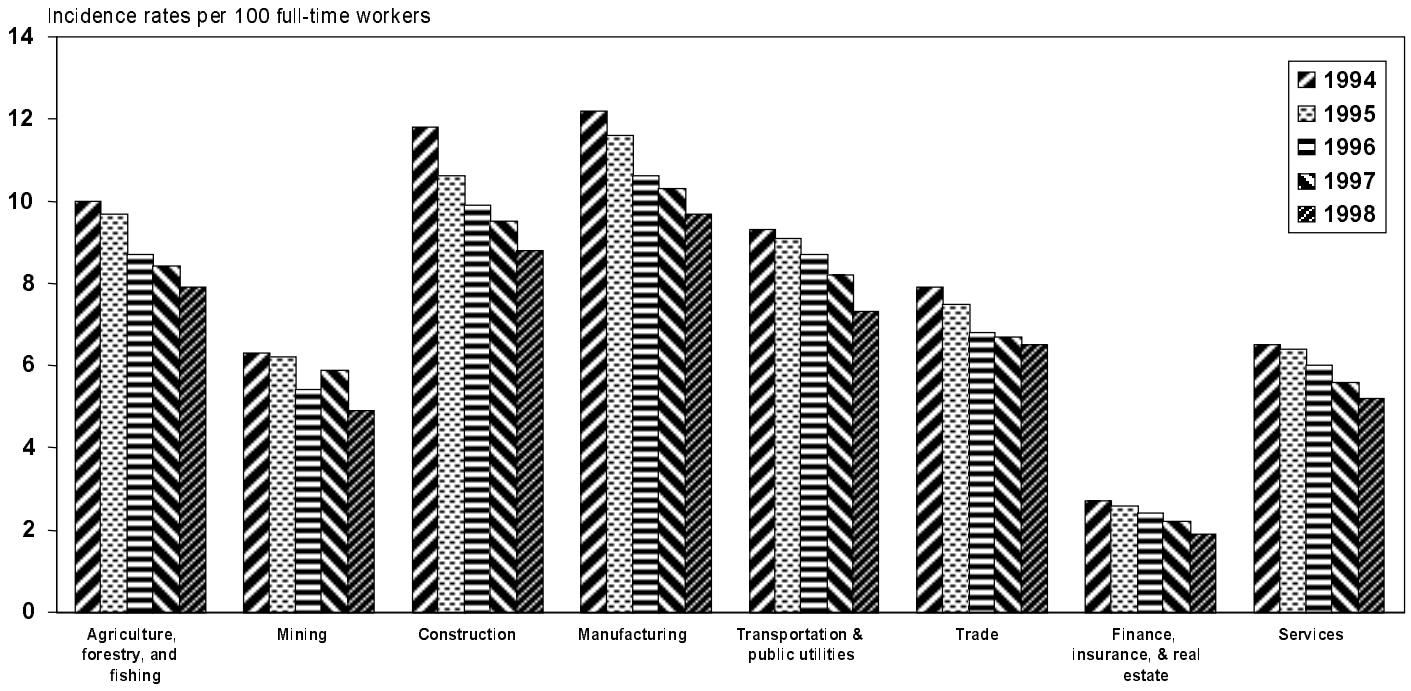
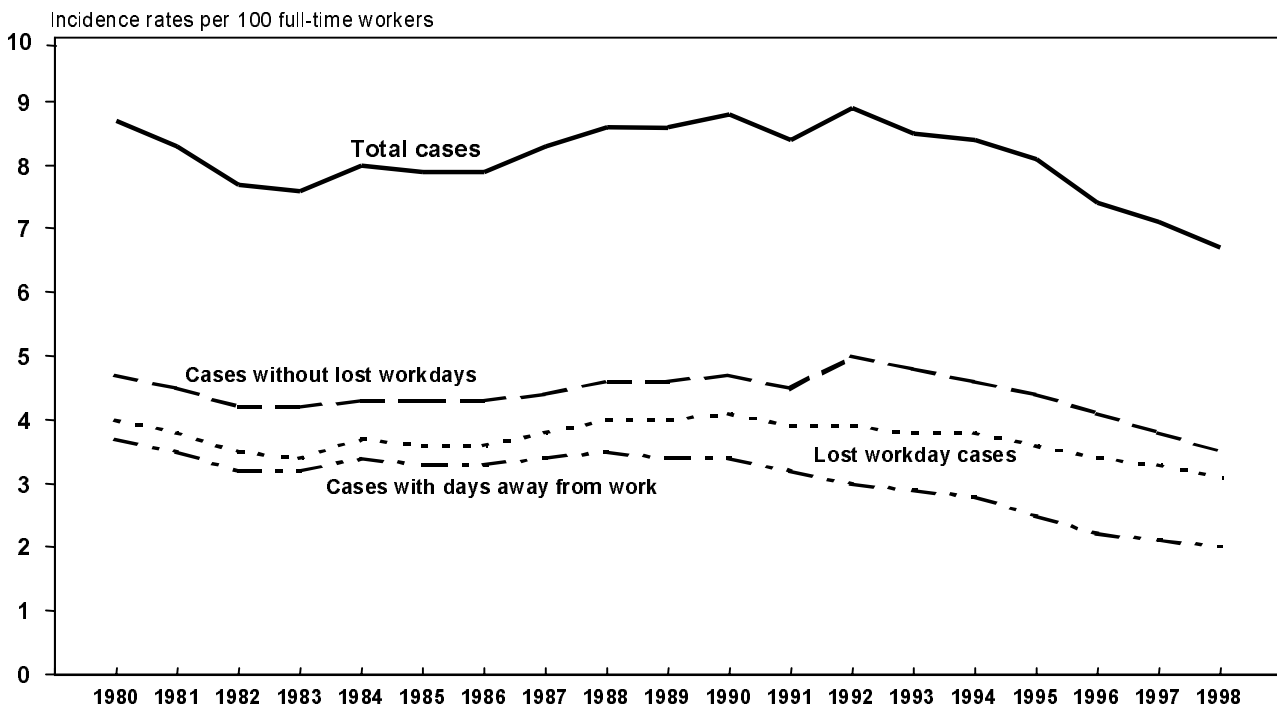


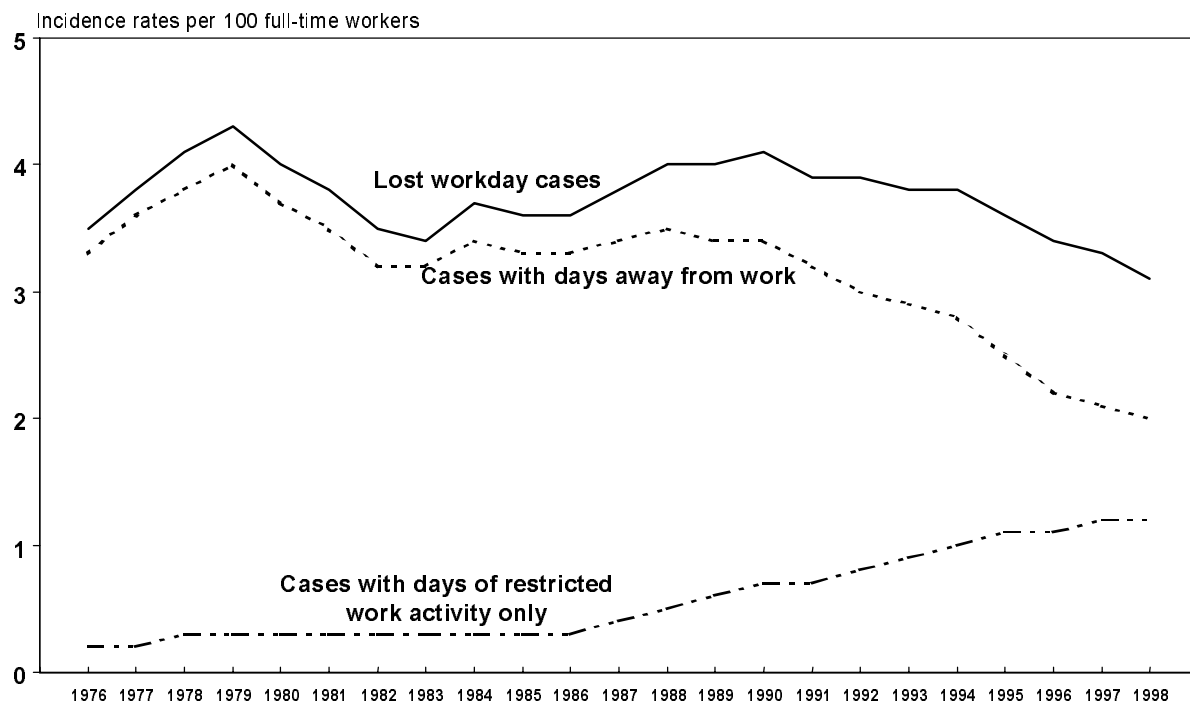
Chart 2. Workplace injury and illness incidence rates by type of case, 1980-1998



Lost workday cases

About 2.8 million injuries and illnesses in 1998 were lost workday cases, that is, they required recuperation away from work or restricted duties at work, or both. (See table 2.) The incidence rate for lost workday cases has declined steadily from 4.1 cases per 100 full-time workers in 1990 to 3.1 cases per 100 workers in 1998. (See chart 2.) The rate for cases with days away from work has declined for eight years in a row and, at 2.0 cases per 100 full-time workers in 1998, was the lowest on record. By contrast, the rate for cases involving only restricted work activity rose from 0.7 cases per 100 workers in 1990 to 1.2 cases in 1997 and remained at that level in 1998. (See chart 3.) The latter types of cases may involve shortened hours, a temporary job change, or temporary restrictions on certain duties (for example, no heavy lifting) of a worker's regular job. In 1998, the rate in manufacturing for days-away-from-work cases was lower than the rate for restricted-activity-only cases, 2.3 for days-away-from-work cases and 2.5 for restricted-activity-only cases. In all other divisions, the rate for days-away-from-work cases was higher than the rate for restricted-activity-only cases.

Chart 3. Lost workday case incidence rates, injuries and illnesses, 1976-98



Injuries and Illnesses

Injuries. Of the 5.9 million nonfatal occupational injuries and illnesses in 1998, 5.5 million were injuries. Injury rates generally are higher for mid-size establishments (those employing 50 to 249 workers) than for smaller or larger establishments, although this pattern does not hold within certain industry divisions. (See table 3.) Eight industries, each having at least 100,000 injuries, accounted for about 1.5 million injuries, or 28 percent of the 5.5 million total. (See table 4.) All but one of these industries were in the service-producing sector.

Illnesses. There were about 392,000 newly reported cases of occupational illnesses in private industry in 1998. Manufacturing accounted for three-fifths of these cases. (See table 5.) Disorders associated with repeated trauma, such as carpal tunnel syndrome and noise-induced hearing loss, accounted for 4 percent of the 5.9 million workplace injuries and illnesses. They were, however, the dominant type of illness reported, making up 65 percent of the 392,000 total illness cases. (See “Background of the Survey” section for limitations on the kinds of illnesses reported.) Seventy-one percent of the repeated trauma cases were in manufacturing industries.

Background of the Survey

The Survey of Occupational Injuries and Illnesses is a Federal/State program in which employer reports are collected from about 169,000 private industry establishments and processed by state agencies cooperating with the Bureau of Labor Statistics. Occupational injury and illness data for coal, metal, and nonmetal mining and for railroad activities were provided by the Department of Labor’s Mine Safety and Health Administration and the Department of Transportation’s Federal Railroad Administration. The survey measures nonfatal injuries and illnesses only. The survey excludes the self-employed; farms with fewer than 11 employees; private households; federal government agencies; and, for national estimates, employees in State and local government agencies.

The annual survey provides estimates of the number and frequency (incidence rates) of workplace injuries and illnesses based on logs kept by private industry employers during the year. These records reflect not only the year’s injury and illness experience, but also the employer’s understanding of which cases are work related under current recordkeeping guidelines of the U.S. Department of Labor. The number of injuries and illnesses reported in any given year also can be influenced by the level of economic activity, working conditions and work practices, worker experience and training, and the number of hours worked.

The survey measures the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions (for example, long-term latent illnesses caused by exposure to carcinogens) often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey’s illness measures. In contrast, the overwhelming majority of the reported new illnesses are those that are easier to directly relate to workplace activity (for example, contact dermatitis or carpal tunnel syndrome).

Establishments are classified in industry categories based on the 1987 Standard Industrial Classification (SIC) Manual, as defined by the Office of Management and Budget. In the

trucking and warehousing and transportation by air industries, SIC coding changes that were introduced with the 1996 BLS Covered Employment and Wages program were incorporated into the estimates for the 1996 survey. Because of these changes, 1996, 1997, and 1998 estimates for the following industries are not comparable to estimates for prior years: trucking and warehousing (SIC 42); trucking and courier services, excluding air (SIC 421); public warehousing and storage (SIC 422); trucking terminal facilities (SIC 423); transportation by air (SIC 45); air transportation, scheduled (SIC 451); air transportation, nonscheduled (SIC 452); transportation services (SIC 47); freight transportation arrangement (SIC 473); and miscellaneous transportation services (SIC 478). In addition, the 1996 and 1997 estimates for transportation and public utilities may have more variability than those for other years because the establishments for the affected industries were reclassified after the samples for these surveys were drawn.

The survey estimates of occupational injuries and illnesses are based on a scientifically selected probability sample, rather than a census of the entire population. Because the data are based on a sample survey, the injury and illness estimates probably differ from the figures that would be obtained from all units covered by the survey. To determine the precision of each estimate, a standard error was calculated. The standard error defines a range (confidence interval) around the estimate. The approximate 95-percent confidence interval is the estimate plus or minus twice the standard error. The standard error also can be expressed as a percent of the estimate, or the relative standard error. For example, the 95-percent confidence interval for an incidence rate of 6.5 per 100 full-time workers with a relative standard error of 1.0 percent would be 6.5 plus or minus 2 percent (2 times 1.0 percent) or 6.37 to 6.63. One can be 95 percent confident that the “true” incidence rate falls within the confidence interval. The 1998 incidence rate for all occupational injuries and illnesses of 6.7 per 100 full-time workers in private industry has an estimated relative standard error of about 0.9 percent. A relative standard error was calculated for each estimate from the survey and will be published in a BLS bulletin that is scheduled to be available at a later date.

The data also are subject to nonsampling error. The inability to obtain information about all cases in the sample, mistakes in recording or coding the data, and definition difficulties are examples of nonsampling error in the survey. Nonsampling errors are not measured. However, BLS has implemented quality assurance procedures to minimize nonsampling error in the survey.

The goods-producing sector consists of the following industry divisions: agriculture, forestry, and fishing; mining; construction; and manufacturing. The service-producing sector includes the following industry divisions: transportation and public utilities; trade; finance, insurance, and real estate; and services. BLS has generated estimates of injuries and illnesses combined and of injuries alone for nearly all 2-, 3-, and, for manufacturing, 4-digit private sector industries as defined in the 1987 edition of the *Standard Industrial Classification Manual*. Because of space limitations, a complete listing of these estimates is not possible in this release. The information is available from BLS staff on 202-691-6179 and from the BLS Internet site at <http://stats.bls.gov/oshhome.htm>.

TABLE 1. Incidence rates¹ of nonfatal occupational injuries and illnesses by selected industries and case types, 1998

Industry ²	SIC code ³	1998 Annual average employment ⁴ (000's)	Injuries and illnesses				Injuries			
			Total cases	Lost workday cases		Cases without lost work-days	Total cases	Lost workday cases		Cases without lost work-days
				Total ⁵	With days away from work ⁶			Total ⁵	With days away from work ⁶	
Private industry⁷		104,640.7	6.7	3.1	2.0	3.5	6.2	2.9	1.9	3.3
Agriculture, forestry, and fishing⁷		1,815.1	7.9	3.9	3.0	4.0	7.6	3.8	2.9	3.8
Agricultural production ⁷	01-02	772.6	8.4	4.1	2.8	4.3	8.0	4.0	2.7	4.0
Agricultural production—crops ⁷	01	586.2	7.7	3.6	2.4	4.1	7.3	3.5	2.4	3.8
Agricultural production—livestock ⁷	02	186.4	10.7	5.6	4.1	5.0	10.3	5.4	4.0	4.9
Agricultural services	07	1,004.9	7.6	3.9	3.1	3.8	7.4	3.8	3.0	3.6
Forestry	08	26.4	7.3	2.6	2.3	4.7	7.1	2.4	2.1	4.7
Fishing, hunting, and trapping	09	11.3	6.4	3.2	2.7	3.2	6.2	3.1	2.6	3.1
Mining⁸		588.6	4.9	2.9	2.2	2.0	4.7	2.7	2.1	1.9
Metal mining ⁸	10	48.8	5.2	2.9	1.8	2.3	4.8	2.7	1.6	2.1
Coal mining ⁸	12	92.1	8.2	6.0	5.6	2.2	7.6	5.7	5.3	1.9
Oil and gas extraction	13	337.7	4.1	2.0	1.4	2.1	4.0	1.9	1.3	2.0
Nonmetallic minerals, except fuels ⁸	14	110.1	4.6	3.0	2.2	1.6	4.5	2.9	2.1	1.6
Construction		5,949.5	8.8	4.0	3.3	4.8	8.7	4.0	3.2	4.7
General building contractors	15	1,370.6	8.4	3.9	3.1	4.6	8.3	3.8	3.1	4.5
Heavy construction, except building	16	827.9	8.2	4.1	3.2	4.1	8.1	4.0	3.2	4.0
Special trade contractors	17	3,751.0	9.1	4.1	3.3	5.0	8.9	4.0	3.3	4.9
Manufacturing		18,807.1	9.7	4.7	2.3	5.0	8.5	4.2	2.1	4.3
Durable goods		11,209.1	10.7	5.0	2.5	5.7	9.4	4.4	2.3	4.9
Lumber and wood products	24	816.0	13.2	6.8	3.8	6.4	12.6	6.5	3.7	6.1
Furniture and fixtures	25	532.2	11.4	5.7	2.7	5.7	10.3	5.1	2.4	5.2
Stone, clay, and glass products	32	562.1	11.8	6.0	3.3	5.8	11.2	5.7	3.1	5.5
Primary metal industries	33	714.2	14.0	7.0	3.5	7.0	13.0	6.6	3.4	6.4
Fabricated metal products	34	1,509.9	13.9	6.5	3.4	7.4	12.9	6.1	3.2	6.8
Industrial machinery and equipment	35	2,207.8	9.5	4.0	2.2	5.5	8.7	3.6	2.0	5.1
Electronic and other electric equipment	36	1,707.7	5.9	2.8	1.3	3.1	4.8	2.3	1.1	2.5
Transportation equipment	37	1,894.8	14.6	6.6	2.7	8.0	11.2	5.3	2.3	5.9
Instruments and related products	38	869.6	4.0	1.9	.8	2.1	3.0	1.5	.7	1.5
Miscellaneous manufacturing industries	39	394.9	8.1	3.9	2.2	4.2	7.4	3.5	2.0	3.9
Nondurable goods		7,598.0	8.2	4.3	2.0	3.9	7.1	3.7	1.8	3.4
Food and kindred products	20	1,686.7	13.6	7.5	2.9	6.0	11.0	6.1	2.7	4.9
Tobacco products	21	40.2	6.4	3.1	2.1	3.3	5.9	2.9	2.0	3.0
Textile mill products	22	596.5	6.7	3.4	1.3	3.3	6.0	3.1	1.2	2.9
Apparel and other textile products	23	762.5	6.2	2.6	1.2	3.6	4.9	2.1	1.0	2.9
Paper and allied products	26	678.6	7.1	3.7	2.0	3.3	6.6	3.5	1.9	3.1
Printing and publishing	27	1,556.4	5.4	2.8	1.7	2.6	4.9	2.5	1.6	2.4
Chemicals and allied products	28	1,039.7	4.2	2.1	1.0	2.1	3.7	1.9	1.0	1.8
Petroleum and coal products	29	138.9	3.9	1.8	1.1	2.2	3.8	1.7	1.1	2.1
Rubber and miscellaneous plastics products	30	1,013.9	11.2	5.8	2.7	5.4	10.4	5.3	2.5	5.1
Leather and leather products	31	84.6	9.8	4.5	2.2	5.2	7.0	3.2	1.6	3.8

See footnotes at end of table.

TABLE 1. Incidence rates¹ of nonfatal occupational injuries and illnesses by selected industries and case types, 1998 — Continued

Industry ²	SIC code ³	1998 Annual average employment ⁴ (000's)	Injuries and illnesses				Injuries			
			Total cases	Lost workday cases		Cases without lost work-days	Total cases	Lost workday cases		Cases without lost work-days
				Total ⁵	With days away from work ⁶			Total ⁵	With days away from work ⁶	
Transportation and public utilities⁸		6,367.4	7.3	4.3	3.2	3.0	7.0	4.2	3.1	2.8
Railroad transportation ⁸	40	—	3.4	2.5	2.1	.9	3.3	2.5	2.1	.8
Local and interurban passenger transit	41	448.5	8.8	4.4	3.5	4.4	8.5	4.3	3.4	4.1
Trucking and warehousing	42	1,739.0	8.4	4.6	3.8	3.7	8.3	4.6	3.8	3.7
Water transportation	44	184.4	7.5	3.9	3.4	3.6	7.3	3.9	3.4	3.4
Transportation by air	45	1,196.0	14.5	10.0	7.4	4.5	14.0	9.8	7.2	4.3
Pipelines, except natural gas	46	13.6	2.2	.7	.6	1.5	2.2	.7	.6	1.5
Transportation services	47	452.7	3.4	1.8	1.1	1.6	3.2	1.7	1.0	1.5
Communications	48	1,475.2	3.0	1.6	1.2	1.4	2.7	1.4	1.0	1.3
Electric, gas, and sanitary services	49	856.5	6.3	3.3	1.8	3.0	5.9	3.2	1.7	2.7
Wholesale and retail trade		29,087.1	6.5	2.8	1.8	3.6	6.3	2.8	1.8	3.6
Wholesale trade		6,816.1	6.5	3.3	2.1	3.2	6.3	3.2	2.0	3.1
Wholesale trade—durable goods	50	4,047.4	5.9	2.8	1.7	3.1	5.7	2.7	1.7	3.0
Wholesale trade—nondurable goods	51	2,768.7	7.4	4.1	2.6	3.3	7.2	4.0	2.5	3.2
Retail trade		22,271.0	6.5	2.7	1.8	3.8	6.3	2.6	1.7	3.7
Building materials and garden supplies	52	945.2	8.9	4.4	2.7	4.6	8.8	4.3	2.6	4.5
General merchandise stores	53	2,723.6	9.0	4.7	2.6	4.4	8.8	4.6	2.5	4.2
Food stores	54	3,470.6	8.4	3.6	2.4	4.8	8.1	3.5	2.3	4.6
Automotive dealers and service stations	55	2,325.5	5.8	2.2	1.7	3.6	5.7	2.2	1.7	3.6
Apparel and accessory stores	56	1,160.1	3.2	1.3	.8	1.9	3.1	1.2	.7	1.8
Furniture and homefurnishings stores	57	1,029.2	4.7	2.2	1.4	2.5	4.7	2.2	1.4	2.5
Eating and drinking places	58	7,763.5	6.3	2.1	1.5	4.3	6.2	2.0	1.5	4.2
Miscellaneous retail	59	2,853.3	3.9	1.7	1.1	2.2	3.6	1.6	1.0	2.1
Finance, insurance, and real estate		7,218.8	1.9	.7	.5	1.2	1.7	.6	.5	1.1
Depository institutions	60	2,037.8	1.5	.4	.3	1.1	1.4	.4	.3	1.0
Nondepository institutions	61	660.9	1.2	.4	.3	.8	1.0	.3	.2	.8
Security and commodity brokers	62	644.1	.6	.2	.1	.4	.6	.2	.1	.4
Insurance carriers	63	1,442.7	1.9	.6	.4	1.3	1.4	.4	.3	1.0
Insurance agents, brokers, and service	64	744.9	1.1	.4	.4	.6	.8	.3	.3	.5
Real estate	65	1,460.9	4.0	1.8	1.4	2.2	3.9	1.7	1.4	2.1
Holding and other investment offices	67	227.5	1.7	.5	.4	1.1	1.3	.4	.3	.8
Services		34,624.4	5.2	2.4	1.5	2.9	4.9	2.3	1.5	2.7
Hotels and other lodging places	70	1,776.9	7.3	3.6	2.0	3.7	7.1	3.6	2.0	3.6
Personal services	72	1,201.4	3.1	1.6	1.1	1.5	2.9	1.5	1.0	1.4
Business services	73	8,590.9	3.6	1.6	1.1	1.9	3.4	1.6	1.1	1.9
Auto repair, services, and parking	75	1,144.1	5.2	2.2	1.7	3.0	5.1	2.2	1.7	2.9
Miscellaneous repair services	76	379.2	6.4	3.3	2.5	3.2	6.3	3.2	2.5	3.1
Motion pictures	78	571.7	3.5	.9	.6	2.7	3.4	.8	.6	2.6
Amusement and recreation services	79	1,650.1	8.2	3.5	1.8	4.7	7.8	3.4	1.7	4.4
Health services	80	9,816.5	7.7	3.6	2.2	4.2	7.2	3.4	2.1	3.8
Legal services	81	973.7	.8	.4	.3	.4	.6	.3	.2	.4
Educational services	82	1,603.8	3.1	1.2	.9	1.9	3.0	1.2	.9	1.8
Social services	83	2,571.2	6.4	2.9	2.0	3.5	6.2	2.8	1.9	3.4
Museums, botanical, zoological gardens	84	93.0	8.1	4.5	2.0	3.6	7.8	4.4	2.0	3.4

See footnotes at end of table.

TABLE 1. Incidence rates¹ of nonfatal occupational injuries and illnesses by selected industries and case types, 1998 — Continued

Industry ²	SIC code ³	1998 Annual average employment ⁴ (000's)	Injuries and illnesses				Injuries			
			Total cases	Lost workday cases		Cases without lost work-days	Total cases	Lost workday cases		Cases without lost work-days
				Total ⁵	With days away from work ⁶			Total ⁵	With days away from work ⁶	
Membership organizations	86	1,030.0	2.9	1.1	0.9	1.8	2.8	1.0	0.8	1.7
Engineering and management services	87	3,170.3	2.1	.8	.5	1.3	1.9	.7	.5	1.2

¹ The incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000, where

N = number of injuries and illnesses
 EH = total hours worked by all employees during the calendar year
 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

² Totals include data for industries not shown separately.

³ *Standard Industrial Classification Manual*, 1987 Edition.

⁴ Employment is expressed as an annual average and is derived primarily from the BLS-State Covered Employment and Wages program. Employment in private households (SIC 88) is excluded.

⁵ Total lost workday cases involve days away from work, or days of

restricted work activity, or both.

⁶ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

⁷ Excludes farms with fewer than 11 employees.

⁸ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employers in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

NOTE: Because of rounding, components may not add to totals.

— Indicates data not available.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

TABLE 2. Number of nonfatal occupational injuries and illnesses by selected industries and case types, 1998

(In thousands)

Industry ¹	SIC code ²	1998 Annual average employment ³	Injuries and illnesses				Injuries			
			Total cases	Lost workday cases		Cases without lost work-days	Total cases	Lost workday cases		Cases without lost work-days
				Total ⁴	With days away from work ⁵			Total ⁴	With days away from work ⁵	
Private industry⁶		104,640.7	5,922.8	2,780.7	1,730.5	3,142.1	5,530.9	2,612.0	1,648.6	2,918.9
Agriculture, forestry, and fishing⁶		1,815.1	111.5	55.4	41.7	56.1	107.1	53.8	40.5	53.3
Agricultural production ⁶	01-02	772.6	45.8	22.4	15.5	23.4	43.7	21.7	15.0	22.0
Agricultural production—crops ⁶	01	586.2	32.2	15.2	10.2	17.0	30.5	14.8	9.9	15.8
Agricultural production—livestock ⁶	02	186.4	13.6	7.2	5.3	6.4	13.2	6.9	5.1	6.2
Agricultural services	07	1,004.9	63.4	32.1	25.5	31.3	61.3	31.3	24.8	29.9
Forestry	08	26.4	1.6	.6	.5	1.1	1.6	.5	.5	1.0
Fishing, hunting, and trapping	09	11.3	.6	.3	.3	.3	.6	.3	.2	.3
Mining⁷		588.6	30.1	17.6	13.7	12.5	28.9	16.9	13.1	12.0
Metal mining ⁷	10	48.8	2.2	1.2	.8	1.0	2.0	1.1	.7	.9
Coal mining ⁷	12	92.1	7.6	5.6	5.2	2.1	7.0	5.3	4.9	1.8
Oil and gas extraction	13	337.7	14.4	7.0	4.9	7.4	14.1	6.8	4.8	7.3
Nonmetallic minerals, except fuels ⁷	14	110.1	5.9	3.8	2.8	2.1	5.7	3.7	2.7	2.0
Construction		5,949.5	480.6	220.0	178.3	260.6	472.8	217.0	175.8	255.8
General building contractors	15	1,370.6	103.2	47.5	38.5	55.8	101.5	46.8	38.0	54.8
Heavy construction, except building	16	827.9	65.2	32.5	25.6	32.7	63.8	32.1	25.3	31.7
Special trade contractors	17	3,751.0	312.2	140.0	114.2	172.2	307.5	138.2	112.6	169.3
Manufacturing		18,807.1	1,834.9	891.2	429.6	943.7	1,598.5	782.6	391.7	815.9
Durable goods		11,209.1	1,218.2	569.4	282.3	648.9	1,065.7	504.8	257.0	561.0
Lumber and wood products	24	816.0	107.5	55.2	31.2	52.3	102.7	53.1	30.1	49.6
Furniture and fixtures	25	532.2	59.9	30.1	14.0	29.8	54.2	26.9	12.6	27.3
Stone, clay, and glass products	32	562.1	69.3	35.2	19.2	34.2	65.5	33.5	18.3	32.0
Primary metal industries	33	714.2	105.1	52.5	26.5	52.6	97.1	49.5	25.1	47.6
Fabricated metal products	34	1,509.9	213.5	99.3	51.6	114.1	197.8	92.8	48.5	104.9
Industrial machinery and equipment	35	2,207.8	214.5	89.8	49.2	124.6	196.8	82.1	45.8	114.6
Electronic and other electric equipment	36	1,707.7	100.5	47.6	22.4	52.9	81.4	38.7	19.0	42.7
Transportation equipment	37	1,894.8	282.1	128.0	52.6	154.1	215.7	101.8	44.3	113.9
Instruments and related products	38	869.6	34.7	16.8	7.2	18.0	26.3	12.8	5.8	13.4
Miscellaneous manufacturing industries	39	394.9	31.1	14.9	8.3	16.2	28.4	13.5	7.6	14.8
Nondurable goods		7,598.0	616.6	321.8	147.3	294.8	532.8	277.8	134.6	255.0
Food and kindred products	20	1,686.7	231.5	128.6	50.0	102.9	187.3	103.5	45.6	83.9
Tobacco products	21	40.2	2.3	1.1	.8	1.2	2.2	1.1	.7	1.1
Textile mill products	22	596.5	40.2	20.4	7.9	19.8	36.0	18.8	7.3	17.2
Apparel and other textile products	23	762.5	44.4	18.8	8.8	25.5	35.1	14.8	7.1	20.4
Paper and allied products	26	678.6	50.1	26.4	14.2	23.7	46.7	24.9	13.2	21.8
Printing and publishing	27	1,556.4	76.5	39.6	23.9	37.0	70.5	36.3	22.3	34.2
Chemicals and allied products	28	1,039.7	44.6	22.2	11.0	22.4	38.9	19.9	10.1	19.1
Petroleum and coal products	29	138.9	5.7	2.5	1.6	3.1	5.5	2.5	1.6	3.0
Rubber and miscellaneous plastics products	30	1,013.9	113.5	58.5	27.3	55.0	105.0	53.6	25.3	51.3
Leather and leather products	31	84.6	7.8	3.6	1.8	4.2	5.6	2.6	1.3	3.0

See footnotes at end of table.

TABLE 2. Number of nonfatal occupational injuries and illnesses by selected industries and case types, 1998 — Continued

(In thousands)

Industry ¹	SIC code ²	1998 Annual average employment ³	Injuries and illnesses				Injuries			
			Total cases	Lost workday cases		Cases without lost work-days	Total cases	Lost workday cases		Cases without lost work-days
				Total ⁴	With days away from work ⁵			Total ⁴	With days away from work ⁵	
Transportation and public utilities⁷		6,367.4	455.7	268.8	200.4	186.8	439.0	261.3	194.3	177.7
Railroad transportation ⁷	40	—	8.7	6.5	5.4	2.2	8.6	6.4	5.4	2.2
Local and interurban passenger transit	41	448.5	31.1	15.6	12.4	15.5	30.0	15.3	12.1	14.7
Trucking and warehousing	42	1,739.0	145.7	80.8	66.0	64.9	144.2	80.2	65.4	64.0
Water transportation	44	184.4	12.5	6.5	5.7	5.9	12.2	6.5	5.7	5.7
Transportation by air	45	1,196.0	145.9	100.8	74.1	45.1	141.0	98.1	71.9	42.9
Pipelines, except natural gas	46	13.6	.3	.1	.1	.2	.3	.1	.1	.2
Transportation services	47	452.7	14.3	7.7	4.6	6.6	13.6	7.3	4.4	6.3
Communications	48	1,475.2	43.5	22.9	16.6	20.6	38.9	20.5	14.6	18.5
Electric, gas, and sanitary services	49	856.5	53.6	28.0	15.5	25.7	50.3	27.0	14.8	23.3
Wholesale and retail trade		29,087.1	1,511.9	662.7	429.6	849.2	1,473.0	645.8	418.1	827.2
Wholesale trade		6,816.1	426.6	216.9	135.2	209.7	414.9	211.1	131.6	203.8
Wholesale trade—durable goods	50	4,047.4	231.6	108.8	68.0	122.8	226.0	106.2	66.1	119.8
Wholesale trade—nondurable goods	51	2,768.7	194.9	108.1	67.2	86.8	188.9	104.9	65.5	84.0
Retail trade		22,271.0	1,085.3	445.8	294.4	639.5	1,058.2	434.7	286.4	623.5
Building materials and garden supplies	52	945.2	75.8	37.0	22.7	38.8	75.0	36.6	22.3	38.5
General merchandise stores	53	2,723.6	182.7	94.6	52.8	88.1	178.3	92.4	51.3	85.9
Food stores	54	3,470.6	214.6	91.6	60.6	123.0	207.3	89.0	58.7	118.3
Automotive dealers and service stations	55	2,325.5	125.1	47.1	36.4	78.1	123.0	46.2	35.6	76.8
Apparel and accessory stores	56	1,160.1	25.8	10.5	6.3	15.3	25.0	10.1	6.1	15.0
Furniture and homefurnishings stores	57	1,029.2	42.2	19.8	12.6	22.4	41.6	19.5	12.4	22.1
Eating and drinking places	58	7,763.5	334.7	109.1	79.1	225.7	328.6	106.6	77.3	222.0
Miscellaneous retail	59	2,853.3	84.4	36.2	23.9	48.2	79.3	34.3	22.7	44.9
Finance, insurance, and real estate		7,218.8	124.8	45.3	35.9	79.5	109.7	39.6	31.6	70.0
Depository institutions	60	2,037.8	28.6	8.1	6.4	20.5	25.2	6.7	5.5	18.5
Nondepository institutions	61	660.9	7.6	2.3	1.7	5.3	6.5	1.7	1.2	4.7
Security and commodity brokers	62	644.1	3.9	1.2	.9	2.7	3.5	1.1	.8	2.5
Insurance carriers	63	1,442.7	25.2	7.8	6.1	17.4	19.0	5.7	4.7	13.2
Insurance agents, brokers, and service	64	744.9	7.2	2.9	2.4	4.3	5.6	2.2	1.8	3.4
Real estate	65	1,460.9	48.9	21.9	17.6	27.0	47.3	21.3	17.1	26.0
Holding and other investment offices	67	227.5	3.4	1.1	.8	2.3	2.6	.9	.6	1.7
Services		34,624.4	1,373.4	619.8	401.1	753.7	1,301.8	594.9	383.5	706.9
Hotels and other lodging places	70	1,776.9	104.8	52.0	28.7	52.8	102.3	51.1	28.1	51.2
Personal services	72	1,201.4	28.9	14.8	9.8	14.1	27.1	13.9	9.1	13.2
Business services	73	8,590.9	191.2	87.5	59.9	103.7	182.5	83.3	57.3	99.1
Auto repair, services, and parking	75	1,144.1	54.2	23.1	18.1	31.1	53.5	22.7	17.9	30.8
Miscellaneous repair services	76	379.2	23.0	11.6	9.0	11.4	22.5	11.3	8.8	11.2
Motion pictures	78	571.7	13.4	3.2	2.4	10.1	12.8	3.1	2.3	9.7
Amusement and recreation services	79	1,650.1	88.7	38.2	19.2	50.6	84.4	36.5	18.7	48.0
Health services	80	9,816.5	606.6	279.7	176.1	326.9	566.2	268.4	167.9	297.8
Legal services	81	973.7	6.9	3.2	2.6	3.7	5.5	2.3	1.9	3.2
Educational services	82	1,603.8	37.4	14.4	11.2	22.9	35.6	13.9	10.8	21.7
Social services	83	2,571.2	130.8	58.8	40.6	72.0	127.7	57.2	39.1	70.6
Museums, botanical, zoological gardens	84	93.0	5.6	3.1	1.4	2.5	5.4	3.0	1.4	2.3

See footnotes at end of table.

TABLE 2. Number of nonfatal occupational injuries and illnesses by selected industries and case types, 1998 — Continued

(In thousands)

Industry ¹	SIC code ²	1998 Annual average employment ³	Injuries and illnesses				Injuries			
			Total cases	Lost workday cases		Cases without lost work-days	Total cases	Lost workday cases		Cases without lost work-days
				Total ⁴	With days away from work ⁵			Total ⁴	With days away from work ⁵	
Membership organizations	86	1,030.0	20.3	7.7	6.0	12.7	19.3	7.1	5.5	12.2
Engineering and management services	87	3,170.3	61.0	22.4	15.8	38.6	56.3	20.9	14.9	35.3

¹ Totals include data for industries not shown separately.
² *Standard Industrial Classification Manual*, 1987 Edition.
³ Employment is expressed as an annual average and is derived primarily from the BLS-State Covered Employment and Wages program. Employment in private households (SIC 88) is excluded.
⁴ Total lost workday cases involve days away from work, or days of restricted work activity, or both.
⁵ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.
⁶ Excludes farms with fewer than 11 employees.

⁷ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employers in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

NOTE: Because of rounding, components may not add to totals.
 - Indicates data not available.
 SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

TABLE 3. Incidence rates¹ of nonfatal occupational injuries by industry division and employment size, 1998

Industry division	All establishments	Establishment employment size (workers)				
		1 to 10	11 to 49	50 to 249	250 to 999	1,000 or more
Private industry ²	6.2	2.2	5.4	8.1	7.1	6.4
Agriculture, forestry, and fishing ²	7.6	5.1	7.6	9.3	7.3	6.6
Mining ³	4.7	3.3	5.4	5.9	3.7	2.9
Construction	8.7	5.1	10.1	9.8	8.5	4.4
Manufacturing	8.5	3.7	8.6	10.3	7.9	7.3
Durable goods	9.4	4.6	10.3	11.7	8.5	7.8
Nondurable goods	7.1	2.4	5.8	8.4	7.1	6.2
Transportation and public utilities ³	7.0	2.3	6.4	8.3	6.4	8.3
Wholesale and retail trade	6.3	2.2	5.4	8.5	9.1	7.7
Wholesale trade	6.3	2.2	6.0	8.5	8.2	5.9
Retail trade	6.3	2.2	5.2	8.5	9.5	8.1
Finance, insurance, and real estate ...	1.7	1.0	1.9	2.1	1.9	1.2
Services	4.9	1.3	3.1	6.9	6.3	6.4

¹ The incidence rates represent the number of injuries per 100 full-time workers and were calculated as: (N/EH) x 200,000, where

N = number of injuries
 EH = total hours worked by all employees during the calendar year
 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

² Excludes farms with fewer than 11 employees.

³ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employers in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

TABLE 4. Number of cases and incidence rates¹ of nonfatal occupational injuries for private industries with 100,000 or more cases, 1998

Industry ²	SIC code ³	Total cases (In thousands)	Incidence rate
Eating and drinking places	581	328.6	6.2
Hospitals	806	261.2	8.4
Nursing and personal care facilities	805	197.9	13.8
Grocery stores	541	196.2	8.7
Department stores	531	160.7	9.0
Motor vehicles and equipment	371	133.5	13.1
Trucking and courier services, except air	421	130.1	8.3
Air transportation, scheduled	451	128.5	15.3

¹ The incidence rates represent the number of injuries per 100 full-time workers and were calculated as: (N/EH) x 200,000, where

N = number of injuries
 EH = total hours worked by all employees during the calendar year
 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

² Industries with 100,000 or more cases were determined by analysis of the number of cases at the 3-digit SIC code level.

³ Standard Industrial Classification Manual, 1987 Edition.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

TABLE 5. Number of nonfatal occupational illnesses by industry division and selected case types, 1998

(In thousands)

Industry division	Total cases	Lost workday cases		Cases without lost workdays	Total cases of disorders associated with repeated trauma
		Total ¹	With days away from work ²		
Private industry ³	391.9	168.7	81.9	223.2	253.3
Agriculture, forestry, and fishing ³	4.3	1.5	1.2	2.8	.6
Mining ⁴	1.3	.7	.6	.6	.8
Construction	7.7	3.0	2.5	4.8	2.0
Manufacturing	236.3	108.5	38.0	127.8	180.9
Durable goods	152.5	64.6	25.3	87.9	113.1
Nondurable goods	83.8	44.0	12.7	39.8	67.7
Transportation and public utilities ⁴	16.6	7.5	6.1	9.1	9.2
Wholesale and retail trade	38.8	16.9	11.5	21.9	20.9
Wholesale trade	11.7	5.8	3.6	5.9	7.6
Retail trade	27.1	11.1	8.0	16.0	13.3
Finance, insurance, and real estate	15.2	5.6	4.3	9.5	12.0
Services	71.7	24.9	17.6	46.8	27.0

¹ Total lost workday cases involve days away from work, or days of restricted work activity, or both.

² Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

³ Excludes farms with fewer than 11 employees.

⁴ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employers in railroad transportation are

provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

NOTE: Because of rounding, components may not add to totals.
SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

TABLE 6. Incidence rates¹ of occupational injuries and illnesses for private industry by selected case types, 1973-98

Year ²	Injuries and illnesses				Injuries			
	Total cases	Lost workday cases		Cases without lost workdays	Total cases	Lost workday cases		Cases without lost workdays
		Total ³	With days away from work ⁴			Total ³	With days away from work ⁴	
1973	11.0	3.4	—	7.5	10.6	3.3	—	7.3
1974	10.4	3.5	—	6.9	10.0	3.4	—	6.6
1975	9.1	3.3	3.2	5.8	8.8	3.2	3.1	5.6
1976	9.2	3.5	3.3	5.7	8.9	3.4	3.2	5.5
1977	9.3	3.8	3.6	5.5	9.0	3.7	3.5	5.3
1978 ⁵	9.4	4.1	3.8	5.3	9.2	4.0	3.7	5.2
1979 ⁵	9.5	4.3	4.0	5.2	9.2	4.2	3.9	5.0
1980	8.7	4.0	3.7	4.7	8.5	3.9	3.6	4.6
1981	8.3	3.8	3.5	4.5	8.1	3.7	3.4	4.4
1982	7.7	3.5	3.2	4.2	7.6	3.4	3.2	4.1
1983 ⁵	7.6	3.4	3.2	4.2	7.5	3.4	3.1	4.1
1984 ⁵	8.0	3.7	3.4	4.3	7.8	3.6	3.3	4.2
1985	7.9	3.6	3.3	4.3	7.7	3.6	3.3	4.2
1986	7.9	3.6	3.3	4.3	7.7	3.6	3.3	4.2
1987	8.3	3.8	3.4	4.4	8.0	3.7	3.3	4.3
1988	8.6	4.0	3.5	4.6	8.3	3.8	3.4	4.4
1989	8.6	4.0	3.4	4.6	8.2	3.9	3.3	4.4
1990	8.8	4.1	3.4	4.7	8.3	3.9	3.3	4.5
1991	8.4	3.9	3.2	4.5	7.9	3.7	3.1	4.2
1992 ⁶	8.9	3.9	3.0	5.0	8.3	3.6	2.9	4.7
1993 ⁶	8.5	3.8	2.9	4.8	7.9	3.5	2.7	4.4
1994 ⁶	8.4	3.8	2.8	4.6	7.7	3.5	2.6	4.2
1995 ⁶	8.1	3.6	2.5	4.4	7.5	3.4	2.4	4.1
1996 ⁶	7.4	3.4	2.2	4.1	6.9	3.1	2.1	3.8
1997 ⁶	7.1	3.3	2.1	3.8	6.6	3.1	2.0	3.5
1998 ⁶	6.7	3.1	2.0	3.5	6.2	2.9	1.9	3.3

¹ The incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000, where

N = number of injuries and illnesses
 EH = total hours worked by all employees during the calendar year
 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

² Data for 1973-75 are based on the *Standard Industrial Classification Manual*, 1967 Edition; data for 1976-87 are based on the *Standard Industrial Classification Manual*, 1972 Edition; and data for 1988-98 are based on the *Standard Industrial Classification Manual*, 1987 Edition. The recordkeeping guidelines for occupational injuries and illnesses were revised in 1986, and the

Survey of Occupational Injuries and Illnesses was redesigned in 1992.

³ Total lost workday cases involve days away from work, or days of restricted work activity, or both.

⁴ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

⁵ To maintain historical comparability with the rest of the series, data for small nonfarm employers in low-risk industries who were not surveyed were imputed and included in the survey estimates.

⁶ Data exclude fatal work-related injuries and illnesses.

NOTE: Because of rounding, components may not add to the totals. Data for 1976-98 exclude farms with fewer than 11 employees.

— Indicates data not available.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

TABLE 7. Incidence rates¹ of nonfatal occupational injuries and illnesses by industry division and selected case types, 1995-98

Industry division	Total cases					Lost workday cases											
						Total ²				With days away from work ³				Cases without lost workdays			
	1995	1996	1997	1998	1995	1996	1997	1998	1995	1996	1997	1998	1995	1996	1997	1998	
Private industry ⁴	8.1	7.4	7.1	6.7	3.6	3.4	3.3	3.1	2.5	2.2	2.1	2.0	4.4	4.1	3.8	3.5	
Agriculture, forestry, and fishing ⁴	9.7	8.7	8.4	7.9	4.3	3.9	4.1	3.9	3.4	3.0	3.0	3.0	5.4	4.8	4.2	4.0	
Mining ⁵	6.2	5.4	5.9	4.9	3.9	3.2	3.7	2.9	3.3	2.5	2.9	2.2	2.4	2.2	2.1	2.0	
Construction	10.6	9.9	9.5	8.8	4.9	4.5	4.4	4.0	4.2	3.7	3.6	3.3	5.8	5.4	5.0	4.8	
Manufacturing	11.6	10.6	10.3	9.7	5.3	4.9	4.8	4.7	2.9	2.5	2.4	2.3	6.3	5.7	5.4	5.0	
Durable goods	12.8	11.6	11.3	10.7	5.6	5.1	5.1	5.0	3.1	2.7	2.6	2.5	7.2	6.5	6.2	5.7	
Nondurable goods	9.9	9.2	8.8	8.2	4.9	4.6	4.4	4.3	2.5	2.3	2.0	2.0	4.9	4.6	4.3	3.9	
Transportation and public utilities ^{5,6}	9.1	8.7	8.2	7.3	5.2	5.1	4.8	4.3	3.9	3.8	3.7	3.2	3.9	3.6	3.4	3.0	
Wholesale and retail trade	7.5	6.8	6.7	6.5	3.2	2.9	3.0	2.8	2.4	2.1	2.0	1.8	4.3	3.9	3.7	3.6	
Wholesale trade	7.5	6.6	6.5	6.5	3.6	3.4	3.2	3.3	2.6	2.3	2.1	2.1	3.9	3.3	3.3	3.2	
Retail trade	7.5	6.9	6.8	6.5	3.0	2.8	2.9	2.7	2.3	2.0	1.9	1.8	4.5	4.1	3.9	3.8	
Finance, insurance, and real estate	2.6	2.4	2.2	1.9	1.0	.9	.9	.7	.8	.7	.7	.5	1.6	1.4	1.4	1.2	
Services	6.4	6.0	5.6	5.2	2.8	2.6	2.5	2.4	2.0	1.8	1.7	1.5	3.6	3.4	3.1	2.9	

¹ The incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000, where

N = number of injuries and illnesses
 EH = total hours worked by all employees during the calendar year
 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

² Total lost workday cases involve days away from work, or days of restricted work activity, or both.

³ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

⁴ Excludes farms with fewer than 11 employees.

⁵ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employers in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

⁶ In 1996, air courier operations previously classified in Industry Groups 421, 422, 423, 452, 473, and 478 were reclassified to Industry Group 451. As a result, the 1996, 1997, and 1998 estimates for these SIC's and Major Industry Groups 42, 45, and 47 are not comparable to those for prior years. In addition, the 1996 and 1997 estimates for transportation and public utilities may have more variability than those for other years.

NOTE: Because of rounding, components may not add to totals.
 SOURCE: Bureau of Labor Statistics, U.S. Department of Labor