

**Census of**  
**Fatal Occupational Injuries**  
**Illinois, 1995**

**Editors**

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A Publication of the  
Illinois Department of Public Health  
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Springfield, IL 62761

November 1996

This project was supported by cooperative agreement number W9J48C4171 from the  
U.S. Department of Labor, Bureau of Labor Statistics

## **Acknowledgments**

These data would not be possible without the cooperation of all local, state, and federal agencies that provide source documents used to identify fatal work injuries. Among these agencies are the county coroners and Cook County Medical Examiner's office, local police departments and sheriff's offices, Chicagoland Construction Safety Council, Illinois State Police, Illinois Cooperative Extension Service, Illinois Department of Public Health's Division of Vital Records, Illinois Department of Labor's Division of Safety Inspection and Education, Illinois Industrial Commission, and the federal Occupational Safety and Health Administration, National Transportation Safety Board, and Mine Safety and Health Administration. We thank each one of them for its efforts in helping us collect and publish data on fatal work injuries.

### **Suggested Citation**

Bostwick J, Maxfield R, Howe HL. Census of Fatal Occupational Injuries, Illinois, 1995. Epidemiologic Report Series 97:1. Springfield, IL: Illinois Department of Public Health, November 1996.

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## **EXECUTIVE SUMMARY**

The Census of Fatal Occupational Injuries (CFOI) was implemented in 1991 by the U.S. Department of Labor's Bureau of Labor Statistics (BLS) as a cooperative venture between 32 states, New York City and the federal government. In 1992, the census covered all 50 states and the District of Columbia. The Illinois Department of Public Health, Division of Epidemiologic Studies, initiated the CFOI program in Illinois on July 1, 1993. The census monitors, with verification, all fatal work injuries, collecting information on the circumstances of the injury and characteristics of the decedent.

### **Highlights for Illinois**

In 1995 in Illinois, 249 occupational fatalities occurred. In the U.S. in 1995, 6,210 workers lost their lives due to injuries on the job, an average of 17 workplace deaths per day. Other major findings from the 1995 Census of Fatal Occupational Injuries in Illinois are—

- Men composed 96 percent of all occupational fatalities; workers 35 to 44 years of age accounted for 28 percent. Industries with the greatest proportion of fatalities were construction, 25 percent; transportation and public utilities, 15 percent; and manufacturing, 14 percent. All these industries had a higher risk of workplace fatalities relative to their share of the workforce (see Figure 1).
- The self-employed and those working in family businesses accounted for 22 percent of occupational fatalities, a higher proportion than their 7 percent share of the workforce.
- Foreign-born workers accounted for 14 percent of all occupational fatalities, a higher proportion than their 8 percent share of the Illinois population.

- In Illinois, transportation incidents were the leading fatal event for men (31 percent). Women experienced a 47 percent decrease in occupational fatalities; however, the leading fatal event for women continued to be assaults and violent acts (56 percent) (see Figure 2).
- Overall, assaults and violent acts decreased 14 percent from 1994 to 1995.
- Workers in agriculture industries experienced a 30 percent decrease in occupational fatalities from 1994 to 1995.
- Occupational fatalities were evenly distributed throughout the state with the counties having the highest number of fatalities being the most heavily populated (see Figure 3).
- Illinois has met the *Healthy People 2000* objectives for fatalities among workers in mining and work-related homicides. It has not met the objectives for workers in construction, agriculture, and transportation industries.

### **Chicago Metropolitan Area Highlights**

The Census of Fatal Occupational Injuries recorded 132 fatal workplace injuries in the Chicago metropolitan area counties of Cook, DuPage, Kane, Lake, McHenry, and Will. Of these, 29, or about 22 percent, were the result of homicides. Other major findings include—

- In the Chicago area, men composed 99 percent of all occupational fatalities. Industries with the greatest proportion of fatalities included construction, 29 percent; wholesale and retail trade, 17 percent; and transportation and public utilities, 17 percent.
- The self-employed and those working in family businesses accounted for 17 percent of all Chicago-area occupational fatalities.

- The leading fatal event for men in the Chicago area was transportation incidents. Twenty-five percent of all occupational fatalities were the result of transportation incidents.

## **BACKGROUND**

Fatality estimates vary widely, from 3,000 to 11,000 deaths per year nationally.<sup>1</sup> Differences in coverage, in definitions of a work fatality, and in estimation methodologies contribute to the variations in these estimates.

The National Academy of Sciences and the Keystone Dialogue Group<sup>a</sup> evaluated work injury and illness statistics in the United States in 1987. The National Academy of Sciences panel recommended that BLS work with state agencies to compile complete rosters of occupational fatalities from administrative sources such as death certificates and workers' compensation reports.<sup>2</sup> This census would include work-related deaths of the self-employed, workers younger than 16 years of age, workers on small farms, and other worker groups not commonly reported in current statistical systems. In response to this and other recommendations, BLS designed the Census of Fatal Occupational Injuries as part of a broad redesign of its safety and health statistics program.<sup>3</sup>

## **METHODS**

CFOI uses multiple data sources, such as death certificates, workers' compensation reports and claims, medical examiner reports, and other available federal and state administrative records, to compile a complete and verified count of fatal workplace injuries. It reports all

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<sup>a</sup> Keystone Dialogue Group is a non-profit organization that facilitates consensus-building dialogues among business, labor, and government on public policy issues.

traumatic occupational fatalities, including those injuries to the self-employed, laborers on small farms, government workers, and other workers difficult to identify from a single data source on workplace fatalities. Table 2 shows the number and percentage of documents used as sources in Illinois. A total of 812 documents were used to identify and verify 249 occupational fatalities.

To ensure an accurate count of fatal occupational injuries, CFOI requires that the work relationship be substantiated by two or more independent source documents or a source document and a follow-up questionnaire. Source documents are matched using the decedent's name and other information to avoid duplicate counts. Non-response to the questionnaire and inconsistent data require further follow-up by telephone. At the end of the collection period, fatalities with only one source document are reviewed by BLS. The fatality is included in the database only if the state and BLS agree there is sufficient information on the source document to determine that the fatality was indeed work-related.

Not all fatal injuries in the workplace meet the BLS case definition, or are *in scope*. To be considered *in scope*, a fatality must occur in an employee who works for pay, compensation, profit, or as a volunteer at the time of the event. The employee also must be engaged in a work activity or present at the site of the incident as a requirement of the job. A work relationship exists if an event or exposure results in fatal injury or illness to a person 1) on the employer's premises and the person was there to work; or 2) off the employer's premises and the person was there to work, or the event or exposure was related to the person's work or status as an employee. Work is defined as duties, activities, or tasks that produce a product or result; are done in exchange for money, goods, services, profit, or benefit; and are legal activities in the United States.

## **Occupational Illnesses**

The census also conducts surveillance of deaths related to occupational illnesses. Data can be used to investigate known workplace hazards as well as to generate new hypotheses that can be evaluated in subsequent epidemiologic studies. Surveillance of deaths related to occupational illnesses is conducted using death certificates, federal Occupational Safety and Health Administration (OSHA) reports, and workers' compensation reports. No follow-up questionnaires or secondary source documents are solicited. Because the work relationship is not verified for occupational illnesses, the data are considered experimental.

Deaths resulting from mesothelioma, silicosis, asbestosis, angiosarcoma of the liver, skin cancer of the scrotum, and coal worker's pneumoconiosis are included in the surveillance. Heart attacks that occur either on the employer's premises or while at work also are included. Additionally, several other illnesses are included when the occupation or industry is a known risk for a certain disease. For example, coal miners or glass factory workers with chronic obstructive pulmonary disease, chronic obstructive lung disease, or lung cancer are included in the census. The appendix shows the complete list of occupational risks and their respective diseases used in the death certificate review process.

## **Fatality Rates**

Fatal work injury rates measure the frequency of fatalities within various worker groups. The Bureau of Labor Statistics has developed fatality rates using annual average employment estimates from the 1995 Current Population Survey (CPS). The CPS employment data used to calculate rates are estimates based on a sample of employed persons. Therefore, the employment estimates and the fatality rates have sampling errors; that is, they may differ from figures that

would have been obtained if it had been possible to take a complete census of employed persons.<sup>4</sup>

CFOI rates were calculated for major industry divisions, selected occupations, and demographic characteristics of the employees. Rates are useful in identifying potential *high-risk* groups, such as older workers and the self-employed, for further study. However, it should be noted that these rates do not measure the independent effect of a single characteristic, such as age, sex, industry, or occupation. Many safety experts consider aggregate totals of fatalities equally important in developing intervention strategies. For example, a single fatality in a rare occupation, such as rattlesnake milking, would result in a high fatality rate for the occupation, yet would pose a minimal hazard because there are few workers employed in this occupation.

Numbers are omitted from the tables and noted as not meeting publication criteria when a category had less than three occupational fatalities.

## **RESULTS**

### **Fatality Counts and Proportions**

Besides comprehensive counts of fatal work injuries and the circumstances surrounding them, CFOI data provide information on the demographic characteristics of the workers. Table 3 presents a profile of occupational fatalities by socio-demographic characteristics for the U.S., Illinois, and the Chicago area. In Illinois, wage and salary workers represented 78 percent (n=194) of all occupational fatalities. The self-employed experienced 22 percent (n=55) of all fatalities, a higher proportion than their 7 percent share of the Illinois workforce. Workers 25 to 54 years of age composed 67 percent (n=168) of all occupational fatalities, with workers 35 to 44 years of age experiencing 41 percent (n=69) of all fatalities in this age classification.

White workers accounted for 93 percent (n=231) of all occupational fatalities, a number similar to their 85 percent share of the Illinois workforce.

Table 4 shows the number and percentage of fatal occupational injuries by occupation for the U.S., Illinois, and the Chicago area. Operators, fabricators, and laborers experienced 37 percent (n=93) of all fatalities. This occupational category includes two subcategories that experienced 86 percent (n=80) of the fatalities: transportation and material-moving operations (n=39), and handlers, equipment cleaners, helpers, and laborers (n=41). Precision production, craft and repair occupations experienced 24 percent (n=61) of all occupational fatalities.

Table 5 presents the number and percentage of fatal occupational injuries by industry, again for the U.S., Illinois, and the Chicago area. Industries with the greatest number of occupational fatalities included construction, with 25 percent (n=63) of the fatalities, and transportation and public utilities (n=38), with 15 percent. Within construction, the number was highest among special trades contractors (n=42).

Table 6 shows the number and percentage of fatal occupational injuries by event or exposure for the three geographic areas. Transportation incidents, both highway and non-highway, composed 31 percent (n=78) of all fatal occupational injuries in Illinois. Highway incidents made up 39 percent of the transportation fatalities, while non-highway incidents (farm or industrial premises) composed 18 percent and worker struck by vehicle composed 26 percent. Assaults and violent acts composed 17 percent (n=43) of all occupational fatalities, with homicides accounting for 65 percent (n=28) of all assaults and violent acts.

Table 7 shows the number and percentage of Illinois fatalities by industry and event. Workers in the retail industry experienced 30 percent of all the assaults and violent acts

committed. Transportation incidents accounted for 40 percent of all agriculture workers killed. Falls accounted for 43 percent of all construction industry fatalities.

Table 8 presents the number of occupational fatalities by county. Thirty-six counties in Illinois had no occupational fatalities; 48 counties had less than three fatalities; 17 counties had three to 15 fatalities; and Cook County had 100 occupational fatalities.

### **Occupational Illness Fatalities**

A total of 838 Illinois workers died as a result of occupational illnesses in 1995. Table 9 presents the number and percentage of fatal occupational illnesses by socio-demographic characteristics of the decedents. Wage and salary workers had the greatest number of fatal occupational illnesses, as did men, workers 75 years of age or older, white workers, and non-Hispanic workers.

Table 10 shows the number and percentage of fatal occupational illnesses by major occupation and industry. The occupation with the greatest number of fatalities was precision production, craft, and repair (n=306), while the industry with the greatest number of occupational illnesses was manufacturing (n=267).

Table 11 presents the number and percentage of fatal occupational illnesses by event or exposure. Exposure to harmful substances or environments accounted for 90 percent (n=757) of all fatal occupational illnesses.

Table 12 shows the number and percentage of fatal occupational illnesses by nature of illness and source of illness. The most prevalent illness was neoplastic tumors (n=511), while the most common source of illness was minerals (n=304).

For comparison, Table 13 shows the number and proportion of the workforce in Illinois by socio-demographic characteristics and Table 14 presents the number and proportion of the workforce according to the major occupations and industry groups.

### Fatality Rates

The *Healthy People 2000* objectives call for a national reduction in deaths from work-related injuries to no more than four per 100,000 full-time workers.<sup>5</sup> Illinois has achieved this national objective. Objectives also have been established for some specific industries. These are summarized below, along with the 1995 rates for Illinois to facilitate comparison. Illinois has met the *Healthy People 2000* objectives for workers in mining, and work-related homicides. Illinois has not met the objectives for workers in construction, agriculture, and transportation industries.

**Table 1. *Healthy People 2000* Objectives for Occupational Deaths, U.S. and Illinois Rates (per 100,000)**

	<b>Year 2000 Objective</b>	<b>U.S. Rate<sup>a</sup> 1995</b>	<b>Illinois Rate<sup>a</sup> 1995</b>
All	4	5	4
Mine workers	21	25	8
Construction workers	17	15	25
Transportation workers	10	12	12
Farm workers	9.5	23	29
Work-related homicides	0.5	0.8	0.5

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> The rate represents the number of fatal occupational injuries per 100,000 employed and was calculated as follows:  $(N/W) \times 100,000$ , where N = number of fatal work injuries and W = employment, based on the Bureau of Labor Statistics, Current Population Survey, 1995.

## **DISCUSSION**

Many safety experts regard fatal work injuries as sentinel events, an occurrence suggesting a failure in the use and application of preventive practices.<sup>6</sup> Unfortunately, the safety and health community has lacked the basic information needed to assess the full scope of these tragic events.

The information compiled by the Census of Fatal Occupational Injuries will yield vital insights that may aid in preventing fatal on-the-job injuries. The Illinois database can assist users in generating fatality profiles for specific industries and populations (for example, the self-employed or female workers) or in studying fatalities involving certain types of machinery (such as farm equipment) or events (for example, work activities at the time of contact with electric current). These studies can be used to identify existing workplace standards that require revision and highlight areas where intervention strategies need to be developed to decrease the hazards in Illinois workplaces and thus increase the occupational safety of Illinois workers.

## References

1. The BLS Survey of Occupational Injuries and Illnesses estimated that there were 2,900 work-related fatalities during 1990. For the same year, the National Safety Council estimated 10,500 work-related fatalities. The National Institute for Occupational Safety and Health's (NIOSH) National Traumatic Occupational Fatality program estimated 5,700 work-related deaths for 1989, the latest year for which data from that program are available.
2. *Counting Injuries and Illnesses in the Workplace: Proposals for a Better System*, Washington, DC: National Research Council; National Academy Press, 1987.
3. Toscano G. "The BLS Census of Fatal Occupational Injuries," *Compensation and Working Conditions*, June 1991, pp. 1-2.
4. *Geographic Profile of Employment and Unemployment, 1992*. Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics; July 1993:141; Bulletin 2428.
5. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. U.S. Department of Health and Human Services. Publication No. (PHS) 91-50212, September 1990.
6. McNabb S. Centers for Disease Control and Prevention, presentation at the CFOI national conference, Washington, DC, September 9, 1992.

**Table 2. Distribution of All Source Documents by Type  
Illinois, 1995**

<b>Source Document</b>	<b>Number</b>	<b>Percent</b>
Autopsy report	1	<1
Coroner report	41	5
Death certificate	279	34
Employer followback	59	7
Federal employees report	1	<1
Mine safety report	1	<1
Motor vehicle accident report	39	5
Medical examiner's report	17	2
National Transportation Safety Board	1	<1
Newspaper	118	15
OSHA 01 <sup>1</sup>	46	6
OSHA 36 <sup>2</sup>	80	10
OSHA 170 <sup>3</sup>	36	4
Other	31	4
State workers' compensation	62	8
<b>Total</b>	<b>812</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>1</sup> OSHA 01 is used to record data related to the inspection of a workplace. It is also used to record whether an anticipatory warrant/subpoena was served, denial of entry information, and information on cases that are terminated before becoming inspections.

<sup>2</sup> OSHA 36 is a preinspection form used to record data pertaining to a fatality/catastrophe that occurs in an establishment under OSHA's or a state OSHA's jurisdiction. It is completed at the time the event is initially reported to OSHA. Its purpose is to provide OSHA with enough information on the event to determine whether to investigate.

<sup>3</sup> OSHA 170 is used to record a summary of the results of investigations of all events involving fatalities, catastrophes, amputations, hospitalizations of two or more days, and significant publicity or property damage.

NOTE: Percents may not add to 100 due to rounding.

**Table 3. Distribution of Fatal Occupational Injuries by Selected Socio-Demographic Characteristics U.S., Illinois, and Chicago Area, 1995**

	U.S.		Illinois		Chicago Area <sup>a</sup>	
	n	%	n	%	n	%
<b>Employee Status</b>						
Wage and salary workers	5024	81	194	78	110	83
Self-employed <sup>b</sup>	1186	19	55	22	22	17
<b>Gender</b>						
Male	5676	91	240	96	131	99
Female	534	9	9	4	--	--
<b>Age</b>						
Less than 25 years	678	11	28	11	16	12
16-19	168		6		4	
20-24	484		20		10	
25 to 54 years	4192	68	168	67	92	70
25-34	1395		41		21	
35-44	1555		69		42	
45-54	1242		58		29	
55 years and older	1325	21	53	21	24	18
55-64	811		27		17	
65 years and older	514		26		7	
Unknown	15	<1	0	0	0	0
<b>Race</b>						
White	5061	82	231	93	117	89
Black	689	11	15	6	12	9
Asian or Pacific Islander	27	3	3	1	3	2
<b>Hispanic Origin</b>						
Hispanic <sup>c</sup>	610	10	20	8	18	14
Non-Hispanic	5600	90	229	92	114	86
<b>TOTAL</b>	<b>6210</b>	<b>100</b>	<b>249</b>	<b>100</b>	<b>132</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> Includes the Illinois counties of Cook, DuPage, Kane, Lake, McHenry, and Will

<sup>b</sup> Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships

<sup>c</sup> Persons identified as Hispanic may be of any race.

NOTE: Totals for major categories may include subcategories not shown separately. Percents may not add to 100 because of rounding. Dashes indicate categories that do not meet publication criteria.

**Table 4. Distribution of Fatal Occupational Injuries by Occupation<sup>a</sup>  
U.S., Illinois, and Chicago Area, 1995**

	U.S.		Illinois		Chicago Area <sup>b</sup>	
	n	%	n	%	n	%
<b>Managerial and professional specialty</b>	<b>699</b>	<b>11</b>	<b>29</b>	<b>12</b>	<b>17</b>	<b>13</b>
Executive, administrative, and managerial	467		20		14	
Professional specialty	232		9		3	
<b>Technical, sales and administrative support</b>	<b>815</b>	<b>13</b>	<b>24</b>	<b>10</b>	<b>18</b>	<b>14</b>
Technicians and related support	189		6		--	
Sales occupations	492		14		13	
Administrative support occupations, including clerical	134		4		3	
<b>Service occupations</b>	<b>533</b>	<b>9</b>	<b>14</b>	<b>6</b>	<b>10</b>	<b>8</b>
Protective service	314		8		6	
Personal service occupations	n/a		6		4	
<b>Farming, forestry, and fishing</b>	<b>864</b>	<b>14</b>	<b>28</b>	<b>11</b>	<b>5</b>	<b>4</b>
Farming occupations	332		23		--	
Other agriculture and related occupations	359		5		3	
<b>Precision production, craft, and repair</b>	<b>1041</b>	<b>17</b>	<b>61</b>	<b>24</b>	<b>38</b>	<b>29</b>
Mechanics and repairers	265		16		11	
Construction trades	607		37		23	
<b>Operators, fabricators, and laborers</b>	<b>2051</b>	<b>33</b>	<b>93</b>	<b>37</b>	<b>44</b>	<b>33</b>
Machine operators, assemblers, and inspectors	238		13		3	
Transportation and material moving operations	1148		39		20	
Motor vehicle operators	918		28		15	
Truck drivers	749		22			
Handlers, equipment cleaners, helpers, and laborers	665		41		21	
Construction laborers	309		21		12	
Military	143	2	n/a	n/a	n/a	n/a
Unknown	64	1	0	0	0	0
<b>Total</b>	<b>6210</b>	<b>100</b>	<b>249</b>	<b>100</b>	<b>132</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> Based on the 1990 Occupational Classification System developed by the Bureau of the Census

<sup>b</sup> Includes the Illinois counties of Cook, DuPage, Kane, Lake, McHenry, and Will

NOTE: Totals for major categories may include subcategories not shown separately. Percents and employment numbers may not add to totals due to rounding. Dashes indicate categories that do not meet publication criteria.

**Table 5. Distribution of Fatal Occupational Injuries by Industry<sup>a</sup>  
U.S., Illinois, and Chicago Area, 1995**

	U.S.		Illinois		Chicago Area <sup>b</sup>	
	n	%	n	%	n	%
<b>Agriculture</b>	<b>793</b>	<b>13</b>	<b>30</b>	<b>12</b>	<b>6</b>	<b>5</b>
Agricultural production - crops	362		6			
Agricultural production - livestock	161		--			
Agricultural services	155		7		6	
<b>Mining</b>	<b>156</b>	<b>3</b>	<b>--</b>	<b>--</b>	<b>0</b>	<b>0</b>
Coal mining	43		--		0	
<b>Construction</b>	<b>1048</b>	<b>17</b>	<b>63</b>	<b>25</b>	<b>38</b>	<b>29</b>
Heavy construction	245		6		4	
Special trades contractors	613		42		27	
Electrical work	91		3		--	
Masonry, stonework, tile setting, and plastering	66		5		5	
Plumbing, heating, and air-conditioning	62		7		3	
Roofing, siding, and sheet metal work	95		10		8	
Miscellaneous special trade contractors	173		10		4	
<b>Manufacturing</b>	<b>702</b>	<b>11</b>	<b>35</b>	<b>14</b>	<b>18</b>	<b>14</b>
Fabricated metal products	47		7		6	
<b>Transportation and public utilities</b>	<b>880</b>	<b>14</b>	<b>38</b>	<b>15</b>	<b>22</b>	<b>17</b>
Trucking and warehousing	462		19		10	
<b>Wholesale and retail trade</b>	<b>929</b>	<b>15</b>	<b>32</b>	<b>13</b>	<b>23</b>	<b>17</b>
Retail trade	675		21		17	
<b>Finance, insurance, and real estate</b>	<b>124</b>	<b>2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Services</b>	<b>737</b>	<b>12</b>	<b>28</b>	<b>11</b>	<b>14</b>	<b>11</b>
<b>Other or nonclassifiable</b>	<b>69</b>	<b>1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Government<sup>c</sup></b>	<b>772</b>	<b>12</b>	<b>19</b>	<b>8</b>	<b>9</b>	<b>7</b>
<b>Private Industry</b>	<b>5438</b>	<b>88</b>	<b>230</b>	<b>92</b>	<b>123</b>	<b>93</b>
<b>Total</b>	<b>6210</b>	<b>100</b>	<b>249</b>	<b>100</b>	<b>132</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> *Standard Industrial Classification Manual*, 1987 edition

<sup>b</sup> Includes the Illinois counties of Cook, DuPage, Kane, Lake, McHenry, and Will

<sup>c</sup> Includes fatalities to workers employed by governmental organizations regardless of industry

NOTE: Totals for major categories may include subcategories not shown separately. Percents and employment numbers may not add to totals due to rounding. Dashes indicate categories that do not meet publication criteria.

**Table 6. Distribution of Fatal Occupational Injuries by Event or Exposure<sup>a</sup>  
U.S., Illinois, and Chicago Area, 1995**

	U.S.		Illinois		Chicago Area <sup>b</sup>	
	n	%	n	%	n	%
<b>Transportation incidents</b>	<b>2560</b>	<b>41</b>	<b>78</b>	<b>31</b>	<b>33</b>	<b>25</b>
Highway	1329		30		12	
Collision between vehicles, mobile equipment	634		17		6	
Non-highway (farm, industrial premises)	388		14		3	
Worker struck by vehicle	385		20		14	
Railway	82		7		0	
Aircraft	278		5		3	
<b>Assaults and violent acts</b>	<b>1262</b>	<b>20</b>	<b>43</b>	<b>17</b>	<b>29</b>	<b>22</b>
Homicides	1024		28		23	
Shooting	754		26		22	
Self-inflicted injury	215		15		6	
<b>Contact with objects and equipment</b>	<b>915</b>	<b>15</b>	<b>38</b>	<b>15</b>	<b>19</b>	<b>14</b>
Struck by object	546		18		10	
Struck by falling object	340		8		5	
Caught in or compressed by equipment or objects	255		11		6	
Caught in or crushed in collapsing materials	99		9		3	
<b>Falls</b>	<b>643</b>	<b>10</b>	<b>44</b>	<b>18</b>	<b>26</b>	<b>20</b>
Fall to lower level	573		43		24	
<b>Exposure to harmful substances or environments</b>	<b>598</b>	<b>10</b>	<b>33</b>	<b>13</b>	<b>17</b>	<b>13</b>
Contact with electric current	347		17		6	
Exposure to caustic, noxious, or allergenic substances	101		6		4	
Oxygen deficiency	94		6		5	
<b>Fires and explosions</b>	<b>208</b>	<b>3</b>	<b>12</b>	<b>5</b>	<b>7</b>	<b>5</b>
<b>Other events or exposures<sup>c</sup></b>	<b>24</b>	<b>&lt;1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Total</b>	<b>6210</b>	<b>100</b>	<b>249</b>	<b>100</b>	<b>132</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> Based on the 1992 BLS Occupational Injury and Illness Classification Structures

<sup>b</sup> Includes the Illinois counties of Cook, DuPage, Kane, Lake, McHenry, and Will

<sup>c</sup> Includes the category "Bodily reaction and exertion"

NOTE: Totals for major categories may include subcategories not shown separately. Percents may not add to 100 due to rounding.

**Table 7. Number and Percentage of Occupational Fatalities by Industry and Event  
Illinois, 1995**

Industry <sup>a</sup>	Event															
	Total		Assaults		Contact		Exposure		Falls		Fires		Transport		Unknown	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Agriculture	30	12	4	2	8	3	--	--	3	1	--	--	12	5	0	0
Construction	65	26	--	--	14	6	11	4	28	11	--	--	8	3	--	--
Finance	--	--	--	--	0	0	--	--	0	0	0	0	0	0	0	0
Manufacturing	35	14	--	--	9	4	5	2	6	2	7	3	6	2	0	0
Mining	--	--	0	0	0	0	0	0	--	--	0	0	0	0	0	0
Public Admin.	8	3	3	1	0	0	--	--	0	0	0	0	3	1	0	0
Retail	21	8	13	5	--	--	--	--	0	0	--	--	4	2	0	0
Transportation	44	18	3	1	3	1	6	2	3	1	0	0	29	12	0	0
Services	31	12	10	4	--	--	4	2	--	--	--	--	12	5	0	0
Wholesale	11	4	4	2	--	--	0	0	--	--	--	--	4	2	0	0
Unknown	--	--	--	--	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>249</b>	<b>100</b>	<b>43</b>	<b>17</b>	<b>38</b>	<b>15</b>	<b>33</b>	<b>13</b>	<b>44</b>	<b>18</b>	<b>12</b>	<b>5</b>	<b>78</b>	<b>31</b>	<b>--</b>	<b>--</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> *Standard Industrial Classification Manual*, 1987 edition

NOTE: Percents and numbers may not add to totals due to rounding. Dashes indicate categories that do not meet publication criteria.

**Table 8. Number of Fatal Occupational Injuries by County  
Illinois, 1995**

<b>County</b>	<b>n</b>	<b>County</b>	<b>n</b>	<b>County</b>	<b>n</b>
Adams	--	Hardin	0	Morgan	0
Alexander	0	Henderson	0	Moultrie	0
Bond	--	Henry	5	Ogle	0
Boone	0	Iroquois	0	Peoria	4
Brown	--	Jackson	--	Perry	3
Bureau	--	Jasper	0	Piatt	0
Calhoun	0	Jefferson	--	Pike	--
Carroll	--	Jersey	--	Pope	0
Cass	--	Jo Daviess	0	Pulaski	--
Champaign	4	Johnson	0	Putnam	0
Christian	--	Kane	3	Randolph	--
Clark	--	Kankakee	--	Richland	4
Clay	--	Kendall	0	Rock Island	--
Clinton	--	Knox	--	St. Clair	5
Coles	--	Lake	8	Saline	--
Cook	100	LaSalle	--	Sangamon	6
Crawford	--	Lawrence	--	Schuyler	--
Cumberland	0	Lee	--	Scott	0
DeKalb	3	Livingston	--	Shelby	--
DeWitt	0	Logan	0	Stark	0
Douglas	0	McDonough	0	Stephenson	--
DuPage	13	McHenry	4	Tazewell	0
Edgar	0	McLean	--	Union	0
Edwards	--	Macon	6	Vermilion	--
Effingham	4	Macoupin	--	Wabash	--
Fayette	--	Madison	7	Warren	0
Ford	0	Marion	--	Washington	--
Franklin	3	Marshall	--	Wayne	0
Fulton	0	Mason	0	White	--
Gallatin	0	Massac	--	Whiteside	--
Greene	--	Menard	0	Will	4
Grundy	0	Mercer	--	Williamson	--
Hamilton	0	Monroe	--	Winnebago	--
Hancock	0	Montgomery	--	Woodford	--

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

NOTE: Dashes indicate that data do not meet publication criteria.

**Table 9. Distribution of Fatal Occupational Illnesses by Selected Characteristics, Illinois, 1995**

	Number	Percent
<b>Employee Status</b>		
Wage and salary workers	650	78
Self-employed <sup>a</sup>	188	22
<b>Sex</b>		
Men	796	95
Women	42	5
<b>Age</b>		
<25 years	0	0
25 to 54 years	75	9
55 - 74 years	344	41
75+	419	50
<b>Race</b>		
White	784	94
Black	51	6
Other or Unknown	3	<1
<b>Hispanic Origin</b>		
Hispanic <sup>b</sup>	7	1
Non-Hispanic	831	99
<b>Total</b>	<b>838</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships

<sup>b</sup> Persons identified as Hispanic may be of any race.

NOTE: Percents and employment numbers may not add to totals due to rounding. Dashes indicate major categories that do not meet publication criteria.

**Table 10. Distribution of Fatal Occupational Illnesses  
Major Occupations and Industries  
Illinois, 1995**

	<b>Number</b>	<b>Percent</b>
<b>Occupation<sup>a</sup></b>		
Managerial and professional specialty	52	6
Technical, sales and administrative support	33	4
Service occupations	39	5
Farming, forestry, and fishing	171	20
Precision production, craft and repair	306	36
Operators, fabricators, and laborers	230	28
Unknown	7	1
<b>Total</b>	<b>838</b>	<b>100</b>
<b>Industry<sup>b</sup></b>		
Agriculture	170	20
Mining	131	16
Construction	90	11
Manufacturing	267	32
Transportation and public utilities	51	6
Wholesale and retail trade	29	3
Finance, insurance and real estate	4	1
Services	33	4
Government	46	6
Unknown	17	2
<b>Total</b>	<b>838</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> Based on the 1990 Occupational Classification System developed by the Bureau of the Census

<sup>b</sup> *Standard Industrial Classification Manual*, 1987 edition

NOTE: Totals for major categories may include subcategories not shown separately. Percents and employment numbers may not add to totals due to rounding. Dashes indicate major categories that do not meet publication criteria.

**Table 11. Distribution of Fatal Occupational Illnesses by Event or Exposure<sup>a</sup>  
Illinois, 1995**

	Number	Percent
Exposure to harmful substances or environments	757	90
Exposure to caustic, noxious, or allergenic substance	467	
Exposure to unspecified caustic, noxious, or allergenic substance	124	
Inhalation of substance	343	
Exposure to radiation	20	
Contact with temperature extremes	--	
Other events or exposures	81	10
<b>Total</b>	<b>838</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> Based on the 1992 BLS Occupational Injury and Illness Classification Structures

NOTE: Totals for major categories may include subcategories not shown separately.

**Table 12. Distribution of Fatal Occupational Illnesses  
Nature of Illness and Source  
Illinois, 1995**

	<b>Number</b>	<b>Percent</b>
<b>Nature<sup>a</sup></b>		
Systemic diseases and disorders	327	39
Circulatory system diseases	81	
Ischemic heart disease, including heart attack	65	
Other forms of heart disease	7	
Respiratory system diseases	244	29
Chronic obstructive pulmonary disease and allied conditions	182	
Pneumoconioses	55	
Neoplasms, tumors, and cancer	511	61
<b>Total</b>	<b>838</b>	<b>100</b>
<b>Source of Illness</b>		
Chemicals and chemical products	125	15
Coal, natural gas, petroleum fuels and products	116	
Persons, plants, animals, and minerals	393	47
Non-metallic minerals, except fuel	304	
Asbestos	209	
Silica	95	
Bodily conditions of injured, ill worker	80	
Other sources	31	4
Unknown	288	35
<b>Total</b>	<b>838</b>	<b>100</b>

SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

<sup>a</sup> Based on the 1990 Occupational Classification System developed by the Bureau of the Census

NOTE: Totals for major categories may include subcategories not shown separately. Percents and employment numbers may not add to totals due to rounding. Dashes indicate major categories that do not meet publication criteria.

**Table 13. Number<sup>a</sup> (in thousands) and  
Proportion of Workforce  
Illinois, 1995**

	Illinois	
	n	%
<b>Employee Status</b>		
Wage and salary workers	5381	94
Self-employed <sup>b</sup>	389	7
<b>Sex</b>		
Men	3095	54
Women	2674	46
<b>Age</b>		
<25 years	888	15
25 to 54 years	4129	72
55 years and older	752	13
<b>Race</b>		
White	4913	85
Black	626	11
Asian or Pacific Islander	--	--
Other	--	--
<b>Hispanic Origin</b>		
Hispanic <sup>c</sup>	466	8
Non-Hispanic	5304	92
<b>Total</b>	<b>5770</b>	<b>100</b>

SOURCE: Bureau of Labor Statistics Current Population Survey, 1995

<sup>a</sup> The employment is an annual average of employed civilians 16 years of age and older, plus resident armed forces.

<sup>c</sup> Persons identified as Hispanic may be of any race.

NOTE: Percents and employment numbers may not add to totals due to rounding. Dashes indicate less than 0.5 percent or data that are not available or data that do not meet publication criteria.

**Table 14. Number (in thousands) and Proportion of Workforce  
Major Occupations and Industries  
Illinois, 1995**

	Illinois	
	n	%
<b>Occupation<sup>a</sup></b>		
Managerial and professional specialty	1655	29
Technical, sales and administrative support	1778	31
Service occupation	751	13
Farming, forestry, and fishing	103	2
Precision production, craft and repair	622	11
Operators, fabricators and laborers	861	15
<b>Total</b>	<b>5770</b>	<b>100</b>
<b>Industry<sup>b</sup></b>		
Agriculture <sup>c</sup>	105	2
Mining	12	<1
Construction	257	5
Manufacturing	1071	19
Transportation and public utilities	329	6
Wholesale and retail trade	1095	21
Finance, insurance and real estate	433	8
Services	1376	26
Government	723	13
<b>Total<sup>d</sup></b>	<b>5770</b>	<b>100</b>

SOURCE: Bureau of Labor Statistics Current Population Survey, 1995

<sup>a</sup> Based on the 1990 Occupational Classification System developed by the Bureau of the Census

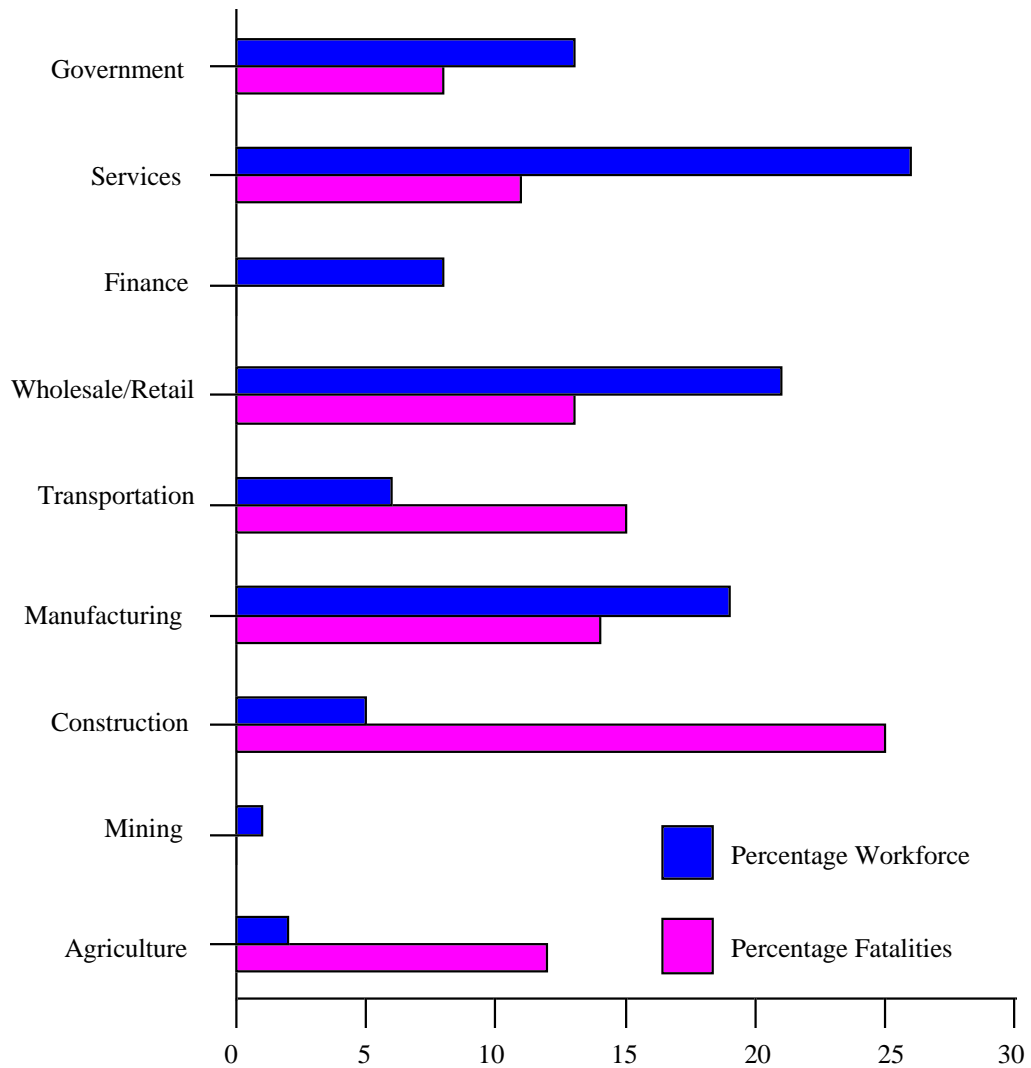
<sup>b</sup> *Standard Industrial Classification Manual*, 1987 edition

<sup>c</sup> Agriculture industry includes self-employed workers

<sup>d</sup> Self-employed, unpaid family members, and private household workers are included in total but are not included in individual industries

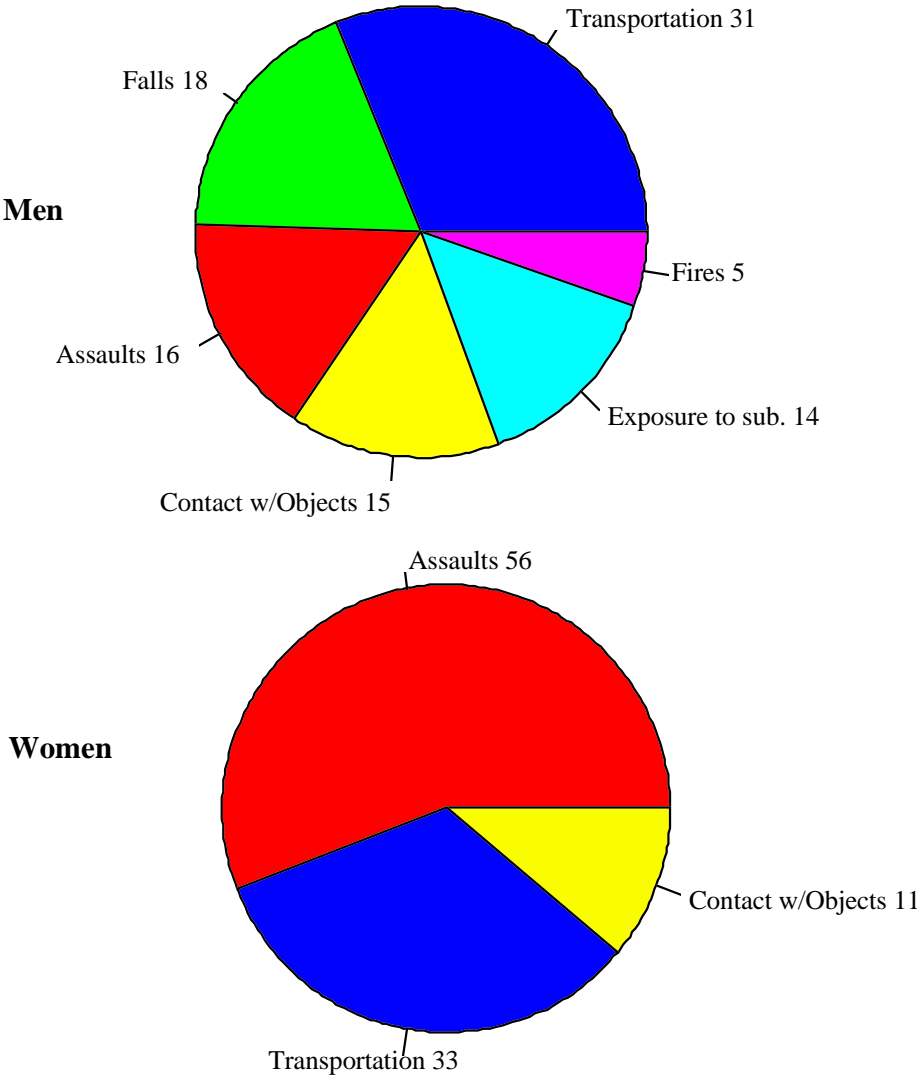
NOTE: Totals for major categories may include subcategories not shown separately. Percents and employment numbers may not add to totals due to rounding.

**Figure 1: Percentage of Fatal Occupational Injuries by Industry  
and Proportion of Workforce  
Illinois, 1995**



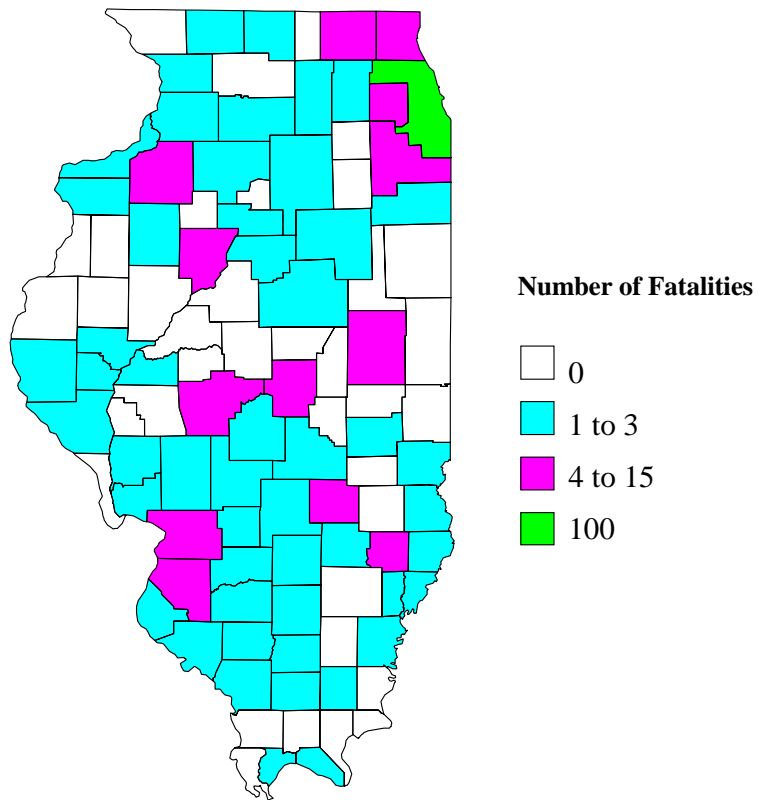
SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

**Figure 2: Percentage of Fatal Occupational Injuries by Gender and Event  
Illinois, 1995**



SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

**Figure 3: Fatal Occupational Injuries by County**  
**Illinois, 1995**



SOURCE: Illinois Department of Public Health, Division of Epidemiologic Studies, on behalf of the Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, July 1996

## Technical Note

Fatality counts from the Census of Fatal Occupational Injuries can be combined with information on employment or hours at work to produce a fatal work injury rate. Because neither hours at work nor number of persons employed are collected in the census, the fatality rates in the table were calculated using the employment estimates from the Current Population Survey (CPS), a household survey conducted for the Bureau of Labor Statistics by the Bureau of the Census. The CPS annual average employment estimates are based on the number of workers employed during the week of the 12th of each month.

The fatality rates relate the total number of workplace deaths in 1995 to the annual average number of workers facing that risk for various groups. These measurements are developmental and do not reflect the movement of persons into and out of the labor force, the length of their work week or work year, or the effect of multiple jobholders.

The rates shown in the table were calculated as follows:

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

N = the number of fatally injured workers in a particular group (for example, the construction industry)

W = the annual average number of workers employed in that group (The employment is an annual average of employed civilian workers 16 years of age and older, plus resident armed forces, from the Current Population Survey, 1995.)

The ratio N/W is multiplied by 100,000 so that the rate can be expressed as a whole number and represents the number of fatal work injuries per 100,000 workers.

Adjustments were made to "N" to maintain consistency with the CPS employment "W" because it excludes workers younger than 16 years of age.

Any adjustments of "N" are not reflected in the "Number" and "Percent" columns, which include all fatalities regardless of age.

**Appendix  
Occupational Risk Factors**

<b>Cancer</b>	<b>Substance</b>	<b>Occupation or Industry</b>	<b>Smoking Factor</b>	<b>Alcohol Factor</b>
Bladder	Aromatic amines- benzidine <sup>1</sup> and 2- naphthylamine <sup>1,2</sup>  4-aminobiphenyl <sup>2</sup>  Auramine <sup>2</sup>  Soots, tars, mineral oils <sup>2</sup>	Dyestuffs industries <sup>1,2</sup> Rubber industries <sup>1,2</sup> Leather industries <sup>1</sup> Painters <sup>1</sup> Chemical workers <sup>1,2</sup> Printers <sup>1</sup> Metal workers <sup>1</sup> Hairdressers <sup>1</sup> Textile workers <sup>1,2</sup> Machinists <sup>1,2</sup> Truck drivers <sup>1</sup> Paint manufacturing <sup>2</sup> Rubber tire manufacturing <sup>2</sup> Manufacturers of coal gas, nickel refiners, copper smelters, electrolysis workers <sup>2</sup> Construction workers <sup>2</sup> Roofers <sup>2</sup> Chimney sweeps <sup>2</sup>	Yes 2-3X	
Brain	Radiation, ionizing <sup>2</sup>  Vinyl chloride <sup>1,2</sup>	Uranium miners <sup>2</sup> Radiologists <sup>2</sup> Radiographers <sup>2</sup> Luminous dial painters <sup>2</sup> Plastics factory workers <sup>2</sup> Vinyl chloride polymerization plant workers <sup>2</sup> Oil refineries <sup>1</sup> Chemists <sup>1</sup> Pharmaceutical workers <sup>1</sup> Embalmers <sup>1</sup> Rubber manufacturing <sup>1</sup> Cattle ranchers <sup>1</sup> Sheep ranchers <sup>1</sup> Dairy farmers <sup>1</sup> Grain millers <sup>1</sup>		
Biliary tract	Chemicals used in processing rubber <sup>1</sup>	Rubber processing <sup>1</sup>		

<b>Cancer</b>	<b>Substance</b>	<b>Occupation or Industry</b>	<b>Smoking Factor</b>	<b>Alcohol Factor</b>
Kidney	Asbestos <sup>1</sup> Coke oven emissions <sup>2</sup> Thorium dioxide <sup>2</sup>	Insulation workers <sup>1</sup> Petroleum industry <sup>1</sup> Steel industry workers <sup>2</sup> Aluminum potroom workers <sup>2</sup> Foundry workers <sup>2</sup> Chemical workers <sup>2</sup> Ceramic makers <sup>2</sup> Incandescent lamp makers <sup>2</sup> Nuclear reactor workers <sup>2</sup> Gas mantle makers <sup>2</sup> Metal refiners <sup>2</sup> Vacuum tube makers <sup>2</sup>	Yes 2X	
Leukemia	Benzene and other related solvents <sup>1,2</sup> Epichlorohydrin <sup>2</sup> Ethylene oxide <sup>2</sup> Radiation, ionizing <sup>2</sup> Thorium dioxide <sup>2</sup>	Rubber tire manufacturing <sup>2</sup> Painters <sup>2</sup> Shoe manufacturing <sup>2</sup> Rubber cement workers <sup>2</sup> Glue and varnish workers <sup>2</sup> Distillers <sup>2</sup> Shoemakers <sup>2</sup> Plastics workers <sup>2</sup> Chemical workers <sup>2</sup> Hospital workers <sup>2</sup> Research lab workers <sup>2</sup> Beekeepers <sup>2</sup> Fumigators <sup>2</sup> Uranium miners <sup>2</sup> Radiologists <sup>2</sup> Radiographers <sup>2</sup> Luminous dial painters <sup>2</sup> Steelworkers <sup>2</sup> Ceramic makers <sup>2</sup> Incandescent lamp makers <sup>2</sup> Nuclear reactor workers <sup>2</sup> Gas mantle makers <sup>2</sup> Metal refiners <sup>2</sup> Vacuum tube makers <sup>2</sup>		
Angiosarcoma of the liver	Vinyl chloride <sup>1,2</sup>	Plastic production <sup>1,2</sup> Vinyl chloride polymerization plant workers <sup>2</sup>		

Cancer	Substance	Occupation or Industry	Smoking Factor	Alcohol Factor
Liver	Exposure to aflatoxins <sup>1</sup> (fungus found in animal feed and poorly stored grain) Carbon tetrachloride <sup>2</sup> Thorium dioxide <sup>2</sup>	Farmers <sup>1</sup> Grain millers <sup>1</sup> Grain elevator operators <sup>1</sup> Plastic workers <sup>2</sup> Dry cleaners <sup>2</sup> Chemical workers <sup>2</sup> Steelworkers <sup>2</sup> Ceramic makers <sup>2</sup> Incandescent lamp makers <sup>2</sup> Nuclear reactor workers <sup>2</sup> Gas mantle makers <sup>2</sup> Metal refiners <sup>2</sup> Vacuum tube makers <sup>2</sup>		Yes

Cancer	Substance	Occupation or Industry	Smoking Factor	Alcohol Factor
Lung	Asbestos <sup>1</sup> Acrylonitrile <sup>2</sup> Beryllium <sup>2</sup> Bis-chloromethyl ether <sup>2</sup> Cadmium <sup>2</sup> Coal tar pitch volatiles <sup>2</sup> Coke oven emissions <sup>2</sup> Dimethyl sulphate <sup>2</sup> Epichlorohydrin <sup>2</sup> Hematite <sup>2</sup> Radon <sup>1</sup> Mustard gas <sup>1</sup> Chloromethyl ethers <sup>1</sup> Chromium <sup>1</sup> Nickel <sup>1</sup> Inorganic arsenic <sup>1</sup> Soots, tars, mineral oils <sup>2</sup> Vinyl chloride <sup>2</sup>	Asbestos miners and millers <sup>1</sup> Textile workers <sup>1</sup> Insulation workers <sup>1</sup> Shipyard workers (military service during WWII) <sup>1</sup> Cement workers <sup>1</sup> Hardrock miners <sup>1,2</sup> Manufacturers of apparel, carpeting, blankets, draperies, synthetic furs and wigs <sup>2</sup> Workers in the metallurgical industries <sup>2</sup> Sheep-dip workers <sup>2</sup> Pesticide production workers <sup>2</sup> Copper smelter workers <sup>2</sup> Vineyard workers <sup>2</sup> Insecticide makers and sprayers <sup>2</sup> Tanners <sup>2</sup> Gold miners <sup>2</sup> Beryllium workers <sup>2</sup> Electronics workers <sup>2</sup> Missile parts producers <sup>2</sup> Workers in plants producing anion- and ion-exchange resins <sup>2</sup> Cadmium production workers <sup>2</sup> Metallurgical workers <sup>2</sup> Electroplating industry workers <sup>2</sup> Chemical workers <sup>2</sup> Jewelry workers <sup>2</sup> Nuclear workers <sup>2</sup> Pigment workers <sup>2</sup> Battery workers <sup>2</sup> Chromate-producing industry workers <sup>2</sup> Acetylene and aniline workers <sup>2</sup> Bleachers <sup>2</sup> Glass workers <sup>2</sup> Pottery workers <sup>2</sup> Linoleum workers <sup>2</sup> Steel industry workers <sup>2</sup> Aluminum potroom workers <sup>2</sup> Foundry workers <sup>2</sup> Coke plant workers <sup>2</sup> Drug makers <sup>2</sup> Dyemakers <sup>2</sup> Hematite miners <sup>2</sup> Nickel refiners <sup>2</sup> Construction workers <sup>2</sup> Roofers <sup>2</sup>	Yes  Synergistic relationship with cigarette smoking - 50X	

<b>Cancer</b>	<b>Substance</b>	<b>Occupation or Industry</b>	<b>Smoking Factor</b>	<b>Alcohol Factor</b>
Laryngeal	Asbestos <sup>1</sup> Nickel <sup>1,2</sup> Mustard gas <sup>1,2</sup> Thorium dioxide <sup>2</sup>	Nickel refiners <sup>2</sup> Chemical workers <sup>2</sup> Steelworkers <sup>2</sup> Ceramic makers <sup>2</sup> Incandescent lamp makers <sup>2</sup> Nuclear reactor workers <sup>2</sup> Gas mantle makers <sup>2</sup> Metal refiners <sup>2</sup> Vacuum tube makers <sup>2</sup>	Yes 10X	Yes  Alcohol and tobacco synergistic
Multiple myeloma	Arsenic <sup>1</sup> Asbestos <sup>1</sup> Lead <sup>1</sup> Radiation, ionizing <sup>2</sup>	Farmers <sup>1</sup> Wood workers <sup>1</sup> Leather workers <sup>1</sup> Rubber and petrochemical products manufacturing <sup>1</sup> Uranium miners <sup>2</sup> Radiologists <sup>2</sup> Radiographers <sup>2</sup> Luminous dial painters <sup>2</sup>		
Oral cavity and pharynx		Printers <sup>1</sup> Leather workers <sup>1</sup> Paper manufacturing <sup>1</sup> Electronics workers <sup>1</sup> Farmers <sup>1</sup> Sailors <sup>1</sup> Outdoor workers <sup>1</sup>	Yes - Smoking and snuff	Yes  Tobacco and alcohol synergistic - 15X
Prostate	Cadmium <sup>1,2</sup> Coke oven emissions <sup>2</sup>	Welders, electroplaters, alkaline battery production <sup>1</sup> Rubber industry <sup>1</sup> Cadmium production workers <sup>2</sup> Metallurgical workers <sup>2</sup> Chemical workers <sup>2</sup> Jewelry workers <sup>2</sup> Nuclear workers <sup>2</sup> Pigment workers <sup>2</sup> Steel industry workers <sup>2</sup> Coke plant workers <sup>2</sup> Farmers <sup>3</sup> Coal miners <sup>3</sup> Plumbers <sup>3</sup>		

Cancer	Substance	Occupation or Industry	Smoking Factor	Alcohol Factor
<p>Skin cancer nonmelanomas</p> <p>melanomas</p>	<p>Polycyclic aromatic hydrocarbons found in coal tars, pitch, asphalt, soot, creosotes, and lubricating and cutting oils<sup>1</sup></p> <p>Arsenic and certain arsenic compounds<sup>2</sup></p> <p>Radiation, ionizing<sup>2</sup></p> <p>Radiation, ultraviolet<sup>1,2</sup></p>	<p>Workers in metallurgical industries<sup>2</sup></p> <p>Sheep-dip workers<sup>2</sup></p> <p>Pesticide production workers<sup>2</sup></p> <p>Copper smelter workers<sup>2</sup></p> <p>Vineyard workers<sup>2</sup></p> <p>Insecticide makers and sprayers<sup>2</sup></p> <p>Tanners<sup>2</sup></p> <p>Gold miners<sup>2</sup></p> <p>Uranium miners<sup>2</sup></p> <p>Radiologists<sup>2</sup></p> <p>Radiographers<sup>2</sup></p> <p>Luminous dial painters<sup>2</sup></p> <p>Arc welders<sup>2</sup></p> <p>Roofers<sup>2</sup></p> <p>Chimney sweeps<sup>2</sup></p> <p>Machinists<sup>2</sup></p> <p>Workers exposed to long periods of sunlight - farmers<sup>2</sup>, sailors<sup>2</sup>, golf course workers, construction workers<sup>2</sup>, etc.</p>		

<sup>1</sup> U.S. Department of Health and Human Services. *Cancer Rates and Risks*, 3rd edition, 1985

<sup>2</sup> Office of Technology Assessment. *Preventing Illness and Injury in the Workplace*, April 1985.

<sup>3</sup> Greenwald P. Prostate. In: Schottenfeld D, Fraumeni J Jr, eds. *Cancer Epidemiology and Prevention*. Philadelphia, PA: W.B. Saunders Co; 1982: 943-944.

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Printed by Authority of State of Illinois

P.O. #547102 1/97