

Alaska Occupational Injury and Illness in 1993

Chris Miller is a labor economist with the Research & Analysis Section, Administrative Services Division, Alaska Department of Labor. He is located in Juneau.

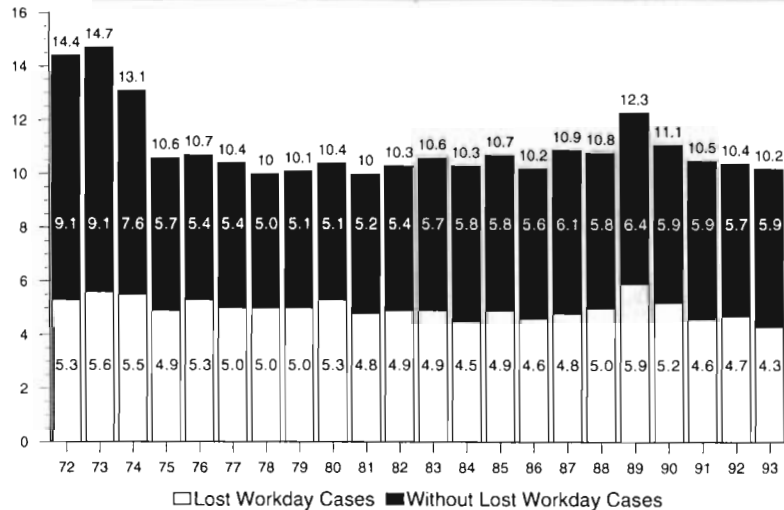
by Chris Miller

Figure • 1

A major focus of the U.S. and Alaska Departments of Labor is the promotion of safety in the workplace. The Alaska Department of Labor's Research and Analysis Section, in cooperation with the U.S. Bureau of Labor Statistics, annually conducts a survey of Alaska employers to develop an estimate of the number of work-related injuries and illnesses. In 1993 there were an estimated 15,137 work-related injuries and illnesses in Alaska. (See Table 1.) Incidence rates are computed as the number of injuries and/or illnesses, or lost workdays, per 100 full-time workers.

At 10.2 for 1993, Alaska's total private sector incidence rate did not experience a statistically significant change from 1992.¹ (See Figure 1.) Except for the cleanup of the Exxon

Alaska's Private Sector Occupational Injury/Illness Rate 1972-1993



¹All tests of statistical significance reported in this article are at a 95% confidence interval.

Source: Alaska Department of Labor, Research & Analysis Section.

Table • 1

Number of Nonfatal Occupational Injuries & Illnesses
Select Industries, 1992 - 1993

Industry	1992			1993		
	Total	LWD	W/O LWD	Total	LWD	W/O LWD
Private Sector	15,455	6,972	8,482	15,137	6,363	8,774
Mining	504	221	283	552	202	350
Construction	1,269	545	724	1,592	614	978
Manufacturing	4,178	2,060	2,118	3,569	1,771	1,797
Food & Kindred Products	3,255	1,539	1,716	2,527	1,240	1,286
Lumber & Wood Products	581	391	190	721	404	317
Transportation & Public Utilities	2,196	1,202	993	2,397	1,039	1,358
Trucking & Warehousing	438	224	214	432	207	225
Water Transportation	207	74	133	205	84	121
Air Transportation	961	617	343	994	465	530
Communications	179	86	93	195	58	137
Wholesale & Retail Trade	3,891	1,526	2,365	3,370	1,337	2,032
Wholesale Trade	556	281	275	568	257	310
Retail Trade	3,335	1,245	2,090	2,802	1,080	1,722
General Merchandise Store	327	146	181	293	117	176
Food Stores	1,049	283	766	642	259	383
Apparel & Accessory Stores	*	*	*	28	13	15
Eating & Drinking Places	1,147	448	698	873	344	529
Finance, Insurance, & Real Estate Services	196	81	115	496	193	304
Hotels & Other Lodging Places	3,133	1,300	1,833	3,000	1,141	1,859
Health Services	371	166	206	421	171	250
	1,105	498	606	893	282	611

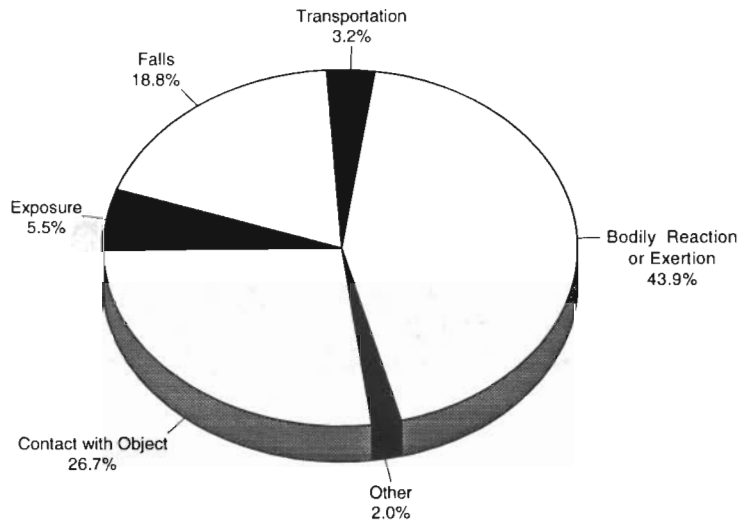
* = Not Publishable.

Note: Because of rounding and exclusions of unpublshable data, components may not add to totals.

Source: Alaska Department of Labor, Research & Analysis Section.

Figure • 2

**Days Away from Work Cases
by Event—1993**



Note: Because of rounding, percentages may not add to 100.
Source: Alaska Department of Labor, Research & Analysis Section.

Valdez oil spill in 1989, the private sector total injury rate has remained relatively constant since 1975 at about 10 cases per 100. This is a marked improvement from the early 1970s. In 1973, the first full year after passage of the Occupational Safety and Health Act (OSHA) of 1972, the total private sector injury and illness rate was 14.7 workers per 100.

The total injury/illness rate can be broken down into two general categories. One category includes those cases with severe injuries/illnesses that require days away from work or “lost workday” (LWD) injuries/illnesses. Alaska had 6,363 LWD cases in 1993. The second category includes only minor injuries/illnesses not requiring days away from work or “without lost workday” (W/O LWD) injuries/illnesses. There were 8,744 W/O LWD cases in 1993. This article will focus on the more serious LWD injuries/illnesses occurring in Alaska.

Table • 2

**Nonfatal Occupational Injury & Illness Incidence Rates
Select Industries, 1992-1993**

Industry	1992			1993		
	Total	LWD	W/O LWD	Total	LWD	W/O LWD
Private Sector	10.4	4.7	5.7	10.2	4.3	5.9
Mining	5.4	2.4	3.1	5.1	1.9	3.2
Construction	13.3	5.7	7.6	14.6	5.6	9.0
Manufacturing	19.7	9.7	10.0	19.9	9.9	10.0
Food & Kindred Products	22.7	10.7	12.0	21.0	10.3	10.7
Lumber & Wood Products	20.2	13.6	6.6	29.1	16.3	12.8
Transportation & Public Utilities	10.7	5.8	4.8	11.8	5.1	6.7
Trucking & Warehousing	15.8	8.1	7.7	17.1	8.2	8.9
Water Transportation	14.6	5.2	9.4	16.4	6.7	9.7
Air Transportation	14.6	9.4	5.2	14.7	6.9	7.8
Communications	5.6	2.7	2.9	7.0	2.1	4.9
Trade	10.3	4.0	6.3	9.1	3.6	5.5
Wholesale Trade	7.3	3.7	3.6	7.6	3.4	4.2
Retail Trade	11.1	4.1	6.9	9.5	3.7	5.8
General Merchandise Stores	10.1	4.5	5.6	9.4	3.8	5.6
Food Stores	18.6	5.0	13.6	13.3	5.4	7.9
Apparel & Accessory Stores	*	*	*	3.0	1.4	*
Eating & Drinking Places	12.6	4.9	7.7	8.7	3.4	5.3
Finance, Insurance, & Real Estate	2.4	1.0	1.4	5.8	2.3	3.6
Services	7.6	3.2	4.5	7.1	2.7	4.4
Hotels & Other Lodging Places	9.0	4.0	5.0	9.7	3.9	5.8
Health Services	11.8	5.3	6.5	9.8	3.1	6.7

* = Not Publishable.

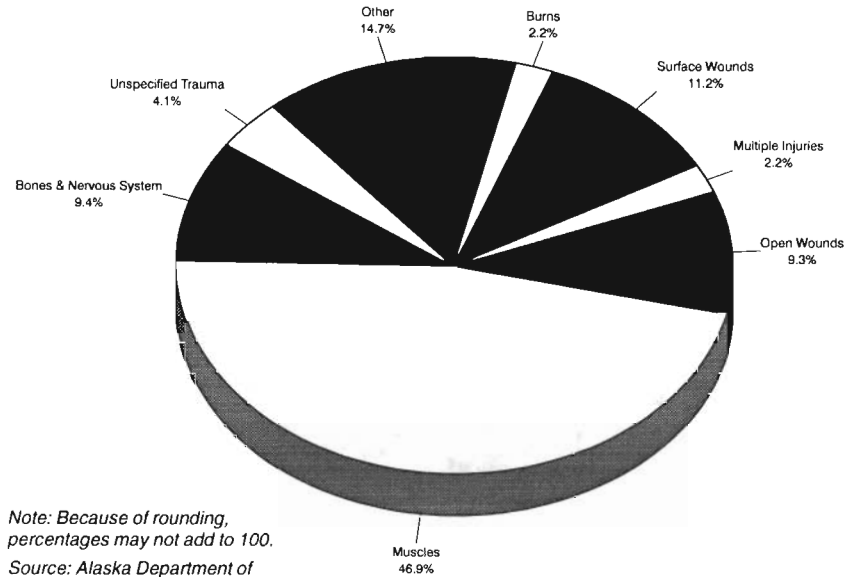
Note: Because of rounding and exclusions of unpublshable data, components may not add to totals.
Source: Alaska Department of Labor, Research & Analysis Section.

In contrast to the total private sector incidence rate, the private sector LWD rate has shown a gradual decline. In 1993 the private sector LWD rate reached 4.3, an all-time low. However, not all industries saw improvements between 1992 and 1993. (See Table 2.) The only industries with statistically significant drops in their LWD rates for 1993 were mining and transportation. Most industries had essentially no change in their LWD rate. Only finance, insurance, and real estate (FIRE) experienced a statistically significant increase in its LWD rate.

The LWD rate in the mining industry dropped from 2.4 in 1992 to 1.9 in 1993. This was the lowest LWD rate of any major industry in Alaska. The comparable national rate for this industry was 3.9. (See Table 3.)

In the transportation and public utilities industry, the LWD rate dropped from 5.8 in 1992 to 5.1 in 1993. This improvement was

Days Away from Work Cases by Nature of Trauma—1993



Note: Because of rounding, percentages may not add to 100.
Source: Alaska Department of Labor, Research & Analysis Section.

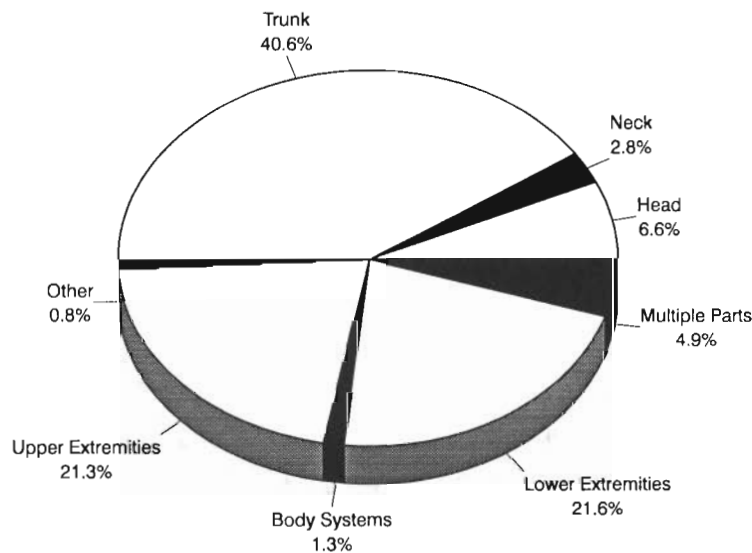
U.S. Occupational Injury & Illness Incidence Rates Selected industries, 1992-1993

Industry	1992			1993		
	Total	LWD	W/O LWD	Total	LWD	W/O LWD
Private Sector	8.9	3.9	5.0	8.5	3.8	4.8
Mining	7.3	4.1	3.3	6.8	3.9	2.9
Construction	13.1	5.8	7.3	12.2	5.5	6.7
Manufacturing	12.5	5.4	7.1	12.1	5.3	6.8
Food & Kindred Products	18.8	9.5	9.3	17.6	8.9	8.8
Lumber & Wood Products	16.3	7.6	8.7	15.9	7.6	8.3
Transportation & Public Utilities	9.1	5.1	4.0	9.5	5.4	4.1
Trucking & Warehousing	13.4	7.9	5.5	13.8	8.3	5.5
Water Transportation	11.5	5.5	6.0	10.4	5.6	4.8
Air Transportation	13.8	7.6	6.3	15.1	8.4	6.7
Communications	3.4	1.8	1.5	3.9	2.1	1.8
Wholesale & Retail Trade	8.4	3.5	4.9	8.1	3.4	4.7
Wholesale Trade	7.6	3.6	3.9	7.8	3.7	4.1
Retail Trade	8.7	3.4	5.3	8.2	3.3	4.9
General Merchandise Stores	10.4	4.8	5.6	10.5	5.0	5.5
Food Stores	11.9	4.8	7.2	10.6	4.4	6.2
Apparel & Accessory Stores	4.3	1.6	2.7	4.1	1.7	2.4
Eating & Drinking Places	9.1	3.1	6.0	8.5	3.0	5.5
Finance, Insurance, & Real Estate Services	2.9	1.2	1.7	2.9	1.2	1.7
Hotels & Other Lodging Places	7.1	3.0	4.2	6.7	2.8	3.9
Health Services	11.2	4.9	6.3	10.7	4.8	5.9
	10.2	4.1	6.1	9.6	3.9	5.7

Note: Because of rounding and exclusions of unpublished data, components may not add to totals.
Source: Alaska Department of Labor, Research & Analysis Section.

Figure • 4

Days Away from Work Cases by Part of Body Injured—1993



Note: Because of rounding, percentages may not add to 100.
Source: Alaska Department of Labor, Research & Analysis Section.

centered in the air transportation and communications segments of the industry. The 1993 LWD rate for air transportation was 6.9, down from 9.4 in 1992, primarily due to improvements among scheduled airlines. The LWD rate in communications dropped from 2.7 to 2.1, chiefly because of improvements in the telephone industry.

The LWD rate for FIRE increased from 1.0 in 1992 to 2.3 in 1993. This was well above the corresponding national rate of 1.2. Behind this increase was a dramatic rise in the LWD rate for holding companies. The LWD rate for holding companies has typically been around 1.0, but in 1993 it jumped to 6.7. This change was due to some Alaska Native corporations, which are classified as holding companies, moving from holding stock to actively managing subsidiary companies under one corporate umbrella.

Although LWD injuries and illness may be painful and unfortunate to those involved, an analysis of the characteristics of these injuries shows many are mundane in nature and possibly preventable. In 1993 almost

Table • 4

Number of Days Away from Work Cases by Event - 1993

Event	Cases by Number of Days Away from Work								
	Total Cases	1 day	2 days	3-5 days	6-10 days	11-20 days	21-30 days	30 + days	Median days
Private Sector	5,745	869	723	1,400	797	686	339	883	5
Contact with Objects	1,535	266	218	415	198	170	88	180	4
Falls	1,077	155	121	240	135	128	90	208	6
Bodily Reaction or Exertion	2,522	341	319	613	400	329	132	389	5
Exposure to Harmful Substances	315	58	70	65	37	29	18	39	3
Transportation Accidents	182	37	30	42	10	17	3	43	4
Fires & Explosions	23	4	0	7	0	6	2	3	14
Assaults & Violent Acts	36	9	3	11	7	1	0	5	4
Other	57	1	13	7	10	6	6	15	10

Note: Because of rounding and exclusions of unpublshable data, components may not add to totals.
Source: Alaska Department of Labor, Research & Analysis Section.

half (43.9%) of all cases resulting in days away from work were caused by some form of bodily reaction or exertion. (See Figure 2.) A median of five days away from work resulted from this type of injury. (See Table 4.) These injuries involved such actions as slipping, bending, lifting, pushing, or repetitive motion. This was further reflected in the nature of the injuries that occurred. Trauma to the muscles and their connective tissue accounted for 46.9% of all injuries involving days away from work in 1993. (See Figure 3.)

The second most frequent event leading to injury in 1993 was coming in contact with some object (26.7%). These events can range from striking or being struck by an object, to being caught in equipment or collapsing material.

Statistics on the part of the body injured are consistent with the finding that overexertion is the most frequent cause of injuries requiring days away from work. Nearly 41 percent of all LWD injuries requiring days away from work are in the trunk area of the body. (See Figure 4.) Over 60 percent of these trunk injuries involve muscles in the back.

The second and third most frequently injured parts of the body while at work are the upper and lower extremities. Injuries to arms, wrists, and hands account for 21.6% of total injuries while injuries to legs, ankles, and feet make up 21.3%. Striking or being struck by an object was the most frequent event leading to injury of these body parts, followed by bodily reaction/overexertion. The upper extremities were more likely to be injured by repetitive motion. The most common event leading to injury of the lower extremities was overexertion.

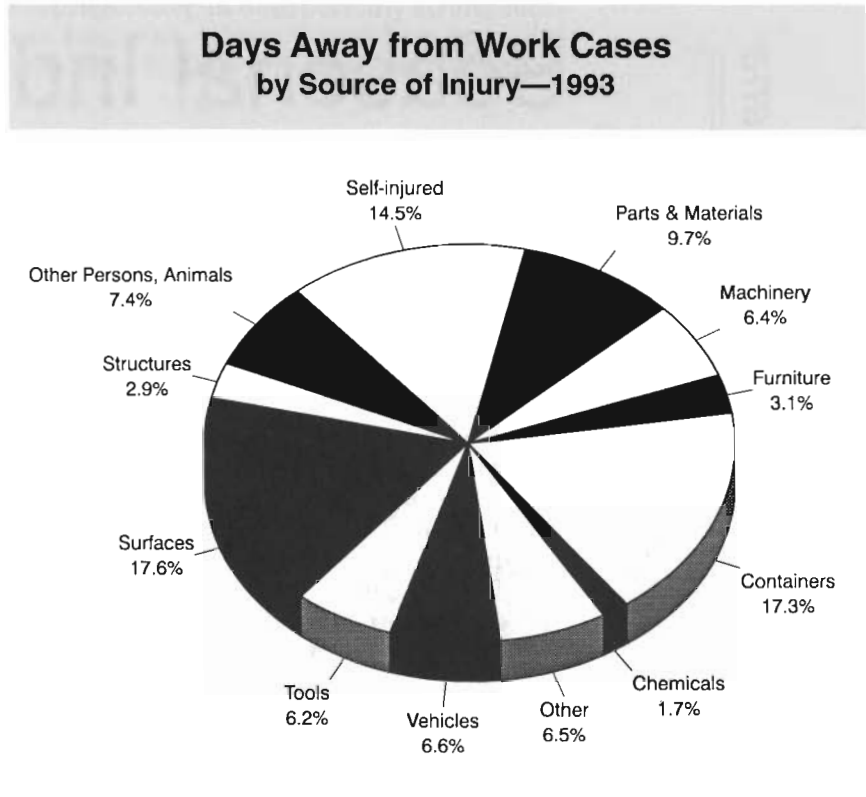
The Bureau of Labor Statistics refers to the source of an injury or illness as the person or thing directly contributing to the injury. For example, when a worker falls off a roof, the worker is not injured by falling through the air but when the worker hits the ground or some other object. The most frequent source of injury to workers was surfaces (17.6%), which include the ground, floors, steps, and streets. (See Figure 5.) Falls either from a higher level or the same level were involved in over 75 percent of all injuries caused by surfaces.

Containers were the second most common source of injury to workers in 1993 (17.3%). When a container was involved in an injury, almost 75 percent of the time the workers were overexerting themselves. Most of the remaining container-related injuries were caused by being struck by the container in some way.

In some instances, the injured worker was the source of the injury (14.5%). In over 70 percent of these cases, the worker was involved in a single bodily motion (i.e., reaching, twisting, walking, slipping) which resulted in injury. The remainder of the self-injury cases involved repetitive motion. Carpal tunnel syndrome is an example of this type of injury. In the case of carpal tunnel syndrome injuries, a median of 17 days away from work resulted per injury.

In 1993 approximately 42.2% of all injuries and illnesses requiring days away from work occurred to operators and laborers. (See Figure 6.) Almost half (43.2%) of these operator

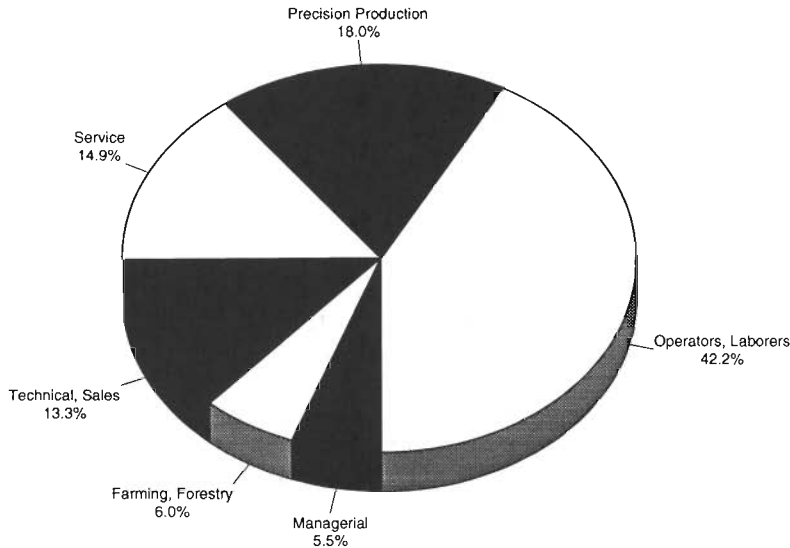
Figure 5



Note: Because of rounding, percentages may not add to 100.
Source: Alaska Department of Labor, Research & Analysis Section.

Figure • 6

Days Away from Work Cases by Occupation of Injured—1993



Note: Because of rounding, percentages may not add to 100.
Source: Alaska Department of Labor, Research & Analysis Section.

injuries were the result of bodily motion or overexertion. Another 26.3% were due to contact with an object. Except for production workers, the other occupational groups had similar patterns of events leading to injury. Production workers had an almost equal number of injuries caused by bodily motion (37.9%) or contact with objects (34.6%), followed by falls (19.1%).

For readers interested in further information about the incidence rate and characteristics of injuries and illnesses in their specific industry or occupation, additional detail can be provided upon request.