OSHA® Occupational Safety and Health Administration

# 2022 & 2023

# SUMMARY OF SEVERE INJURY REPORTS

**A summary of employer-reported work-related inpatient hospitalizations, amputations, and eye losses**

www.osha.gov/severeinjury

**Every year, thousands of workers in the United States are injured on the job, sometimes with permanent injuries or disabilities. OSHA's regulation at 29 CFR 1904.39 requires establishments to report to OSHA any work-related fatality and severe injury or illness that results in inpatient hospitalization, amputation, or eye loss. Reported fatalities are tracked in a separate database and not included in this report.**

**OSHA's Severe Injury Report (SIR) dataset includes all severe injury and illness reports made by establishments subject to federal enforcement authority. OSHA estimates that this covers approximately half of U.S. workers. This report spotlights SIRs involving forklifts and food processing machinery, workplace violence incidents, and heat illnesses requiring hospitalization. Real narrative examples directly from the SIR dataset have been included throughout the report and are presented in italics. The entire SIR dataset is available to the public for download at www.osha.gov/severeinjury.**

**OSHA has resources to help employers and workers prevent injuries and illnesses on the job. Learn about the most commonly reported SIRs in your industry and how you can prevent them from happening at your workplace by identifying and controlling hazards.**

**27**

**Severe injuries and illnesses reported to federal OSHA per day on average, 2022-2023**

**19,690**

**Inpatient hospitalizations and amputations at establishments under federal OSHA in 2022 and 2023**

# Inpatient Hospitalizations and Amputations by Sector

Table 1 displays the number of inpatient hospitalizations and amputations reported to OSHA in 2022 and 2023 by sector and compares those totals to the sector's annual average reported from 2015 through 2021. Notably, the construction and manufacturing sectors, which had the highest number of inpatient hospitalizations and amputations, reported fewer incidents in 2022 and 2023 compared to the seven-year average.
Some SIRs may involve both an inpatient hospitalization and an amputation. No eye losses were reported in 2022 or 2023.

**Table 1. Inpatient Hospitalizations and Amputations Reported by Sector, 2022 and 2023**

| | Hospitalizations | | | Amputations | | |
|---|---|---|---|---|---|---|
| **Industry Sector** | **2015-2021*** | **2022** | **2023** | **2015-2021*** | **2022** | **2023** |
| 11 - Agriculture, Forestry, Fishing and Hunting | 151 | 149 | 113 | 49 | 43 | 42 |
| 21 - Mining, Quarrying, and Oil and Gas Extraction | 233 | 181 | 171 | 85 | 67 | 69 |
| 22 - Utilities | 116 | 107 | 126 | 21 | 20 | 17 |
| 23 - Construction | 1,634 | 1,393 | 1,469 | 279 | 215 | 265 |
| 31-33 - Manufacturing | 2,228 | 2,042 | 1,965 | 1,464 | 1,332 | 1,349 |
| 42 - Wholesale Trade | 458 | 493 | 429 | 152 | 150 | 128 |
| 44-45 - Retail Trade | 653 | 645 | 634 | 138 | 120 | 110 |
| 48-49 - Transportation and Warehousing | 796 | 757 | 735 | 126 | 161 | 137 |
| 51 - Information | 88 | 75 | 70 | 12 | 10 | 8 |
| 52 - Finance and Insurance | 31 | 17 | 18 | 2 | 4 | 3 |
| 53 - Real Estate and Rental and Leasing | 92 | 96 | 104 | 18 | 15 | 23 |
| 54 - Professional, Scientific, and Technical Services | 145 | 144 | 135 | 28 | 30 | 23 |
| 55 - Management of Companies and Enterprises | 4 | 5 | 2 | 2 | 1 | 0 |
| 56 - Administrative and Support and Waste Management | 484 | 442 | 419 | 107 | 98 | 93 |
| 61 - Educational Services | 44 | 44 | 45 | 6 | 8 | 6 |
| 62 - Health Care and Social Assistance | 447 | 419 | 375 | 34 | 23 | 38 |
| 71 - Arts, Entertainment, and Recreation | 121 | 111 | 115 | 18 | 14 | 17 |
| 72 - Accommodation and Food Services | 173 | 185 | 158 | 39 | 36 | 35 |
| 81 - Other Services (except Public Administration) | 155 | 162 | 134 | 45 | 29 | 37 |
| 92 - Public Administration | 111 | 69 | 117 | 25 | 18 | 24 |
| 99 - Nonclassifiable Establishments | 3 | 0 | 2 | 2 | 0 | 0 |
| **Total** | **8,166** | **7,536** | **7,336** | **2,652** | **2,394** | **2,424** |

***Indicates annual average calculated from SIRs reported from 2015 through 2021.**

# Rate of Reported SIRs by Sector

From 2022 to 2023, an average of 27 severe injuries and illnesses were reported per day, which is consistent with the average during the first data collection period in 2015, and lower than the peak of 31 SIRs per day reported in 2018. Table 2 shows the rate of employer-reported severe injuries and illnesses across sector (see page 11 for details on NAICS used). While the manufacturing and construction sectors reported the highest proportion overall (more than half), the mining, quarrying, and oil and gas exploration sector had the highest rate of severe injuries per 100,000 full-time equivalent (FTE) workers.** The construction and transportation and warehousing sectors experienced decreased SIR rates in 2023 that are respectively 17% and 22% lower than the corresponding average rates reported during 2015 to 2021.

**Table 2. Total Number and Rate of Severe Injuries Incidents per 100,000 FTE Workers by Industry Sector and Year**

| | 2015-2021^ | | 2022 | | 2023 | |
|---|---|---|---|---|---|---|
| **Industry Sector** | **Number*** | **Rate**** | **Number*** | **Rate**** | **Number*** | **Rate**** |
| 11 Agriculture, Forestry, Fishing and Hunting | 200 | 14 | 192 | 14 | 155 | 11 |
| 21 Mining, Quarrying, and Oil and Gas Extraction^^ | 318 | 51 | 248 | 45 | 240 | 43 |
| 22 Utilities | 138 | 25 | 127 | 23 | 143 | 26 |
| 23 Construction | 1,913 | 26 | 1,608 | 20 | 1,734 | 22 |
| 31-33 Manufacturing | 3,693 | 30 | 3,376 | 26 | 3,314 | 26 |
| 42 Wholesale Trade | 610 | 10 | 643 | 11 | 557 | 9 |
| 44-45 Retail Trade | 791 | 5 | 765 | 5 | 744 | 5 |
| 48-49 Transportation and Warehousing | 922 | 17 | 918 | 14 | 872 | 13 |
| 51 Information | 100 | 4 | 85 | 3 | 78 | 3 |
| 52 Finance and Insurance | 34 | 1 | 21 | 0 | 21 | 0 |
| 53 Real Estate and Rental and Leasing | 110 | 5 | 111 | 5 | 127 | 5 |
| 54 Professional, Scientific, and Technical Services | 173 | 2 | 174 | 2 | 158 | 1 |
| 55 Management of Companies and Enterprises | 5 | 0 | 6 | 0 | 2 | 0 |
| 56 Administrative and Waste Management Services | 591 | 7 | 540 | 6 | 512 | 5 |
| 61 Educational Services | 49 | 1 | 52 | 1 | 51 | 1 |
| 62 Health Care and Social Assistance | 481 | 2 | 442 | 2 | 413 | 2 |
| 71 Arts, Entertainment, and Recreation | 138 | 6 | 125 | 5 | 132 | 6 |
| 72 Accommodation and Food Services | 212 | 2 | 221 | 2 | 193 | 1 |
| 81 Other Services (except Public Administration) | 200 | 3 | 191 | 3 | 171 | 2 |
| 92 Public Administration | 136 | 1 | 87 | 0 | 141 | 1 |
| 99 Nonclassifiable Establishments | 5 | 0 | 0 | 0 | 2 | 0 |

**^Annual average calculated from severe injury reports from 2015 through 2021.**
***The total number of reported inpatient hospitalizations and amputations.**
****Denominators for these rates were calculated using data from the U.S. Bureau of Economic Analysis, "Table 6.4D. Full-Time and Part-Time Employees by Industry" (accessed October 23, 2024).**
**^^ Mining and quarrying operations are subject to reporting requirements of the Mine Safety and Health Administration (MSHA), not OSHA.**
**See page 11 - Methodology - for a description of how these data were calculated.**

# Causes & Sources of Severe Injury

The majority of reported SIRs are injuries. The top three types of events or exposure and sources of injury are described below, with example narratives included in italicized text. The complete SIR dataset provides these categories for easy analysis (see page 13 - Summary Report Case Definitions - for more information about how you can recreate these results for your select industry).

## Top 3 Types of Events or Exposure reported, 2022 and 2023

**1** **Caught in or compressed by equipment or objects**

**4,158 - 23%**

*An employee was sitting in a cafeteria chair. As the employee attempted to move the chair, their right middle finger was caught between the seat and the chair's steel frame. The finger was amputated.*

**2** **Falls to lower level**

**3,110 - 17%**

*An employee was climbing a ladder when it slid out. The employee fell and suffered a broken femur.*

**3** **Struck by object or equipment**

**3,046 - 17%**

*An employee was struck by sheet metal that slid off a forklift. The employee suffered a broken hip and jaw.*

## Top 3 Sources of Severe Injury, 2022 and 2023

*An employee was helping to grease the gears on a machine. The conveyor belt pinched the employee's index finger, degloving it.*

**Machinery** **1**

**4,548 - 25%**

*An employee was repairing an egg collector when the platform collapsed and he fell 10 feet to the concrete floor. The employee sustained a fractured left leg.*

**Structures and Surfaces** **2**

**3,908 - 22%**

*An employee fell from the running board of a moving vehicle. His head struck the concrete resulting in a laceration and concussion.*

**Vehicles** **3**

**2,853 - 16%**

**Severe injuries can happen in an instant. Know the most common types of injuries in your industry and take action to prevent them.**

# Heat-Related Illnesses

Millions of workers are exposed to indoor and outdoor heat on the job. Although heat-related injuries and illnesses are preventable, thousands become sick every year from occupational heat exposure, and some lose their lives.

*An employee was taking a work capacity test for firefighting. While walking with a pack, he developed dizziness and breathing difficulty and began going into shock. He was hospitalized, suffering from heat-related illness.*

*An employee was working at the beach renting chairs when they began to experience severe muscle cramps due to the heat. The employee was hospitalized for heat exhaustion.*

*An employee developed a heat-related illness while delivering mail on a 90-plus-degree day. The employee was hospitalized.*

*An employee had been working behind the sales counter and became confused and disorientated. It was 103-degrees that day.*

**451** **Heat-related inpatient hospitalizations reported in 2022 and 2023**

In 2024, OSHA proposed a rule to prevent heat-related injuries and illnesses in the workplace for indoor and outdoor workers. The rule would require employers to implement heat injury and illness prevention plans, identify and monitor heat hazards, and provide additional protective measures when the heat index is 80°F or above. Read about the proposed rule at www.osha.gov/heat-exposure/rulemaking.

Additionally, you can visit OSHA's Heat Illness Prevention webpage for more information on how to identify and prevent heat illness at www.osha.gov/heat.

# Severe Injury Spotlight:

# Forklift Injuries

**1,190** forklift-related severe injuries reported to OSHA in 2022 and 2023

The top three industry sectors with forklift-related SIRs were the **manufacturing** (360, 33%), **transportation and warehousing** (285, 26%), and the **wholesale trade** (153, 14%) sectors.

**994**
hospitalizations

**196**
amputations

*A valve stem had been stood up against the blades of a forklift so an employee could take a measurement. It slid down the forklift fork, striking the employee's left hand and partially amputating the index fingertip.*

*An employee was operating a forklift, reloading empty containers on a dock. The trailer was pulled off the dock, causing the forklift to fall out of the trailer. The employee suffered fractured vertebrae.*

*An employee was operating a forklift on a rail track platform when their left arm was caught between the forklift and the side of a rail car. They sustained a left arm fracture.*

*An employee was operating a forklift when his left leg was caught between the forklift and a bollard resulting in a broken leg.*

**Visit OSHA's Powered Industrial Trucks Safety and Health Topics Page**

**Read this Fatal Fact describing a warehouse worker's fall from a pallet elevated by a forklift**

# Severe Injury Spotlight:
# Workplace Violence

Workplace violence is any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site. It ranges from threats and verbal abuse to physical assaults and even homicide. It can affect and involve employees, clients, customers, and visitors.

**Top Three Workplace Violence SIRs in 2022 and 2023**

| 119 | 77 | 36 |
|---|---|---|
| Hitting, kicking, beating, shoving | Intentional shooting by another person | Stabbing, cutting, slashing, piercing |

**In 2022 and 2023, a total of 325 SIRs involved workplace violence. The top 3 industries with workplace violence-related SIRs were: retail trade (86, 26%), health care and social assistance (81, 25%), and manufacturing (28, 9%).**

*Two employees were in a parking lot when a customer shot them both, one in the abdomen and one in the arm. Both were hospitalized.*

*An employee was stabbed in the neck with a knife by a shoplifter.*

*An employee was put in a choke hold by a client.*

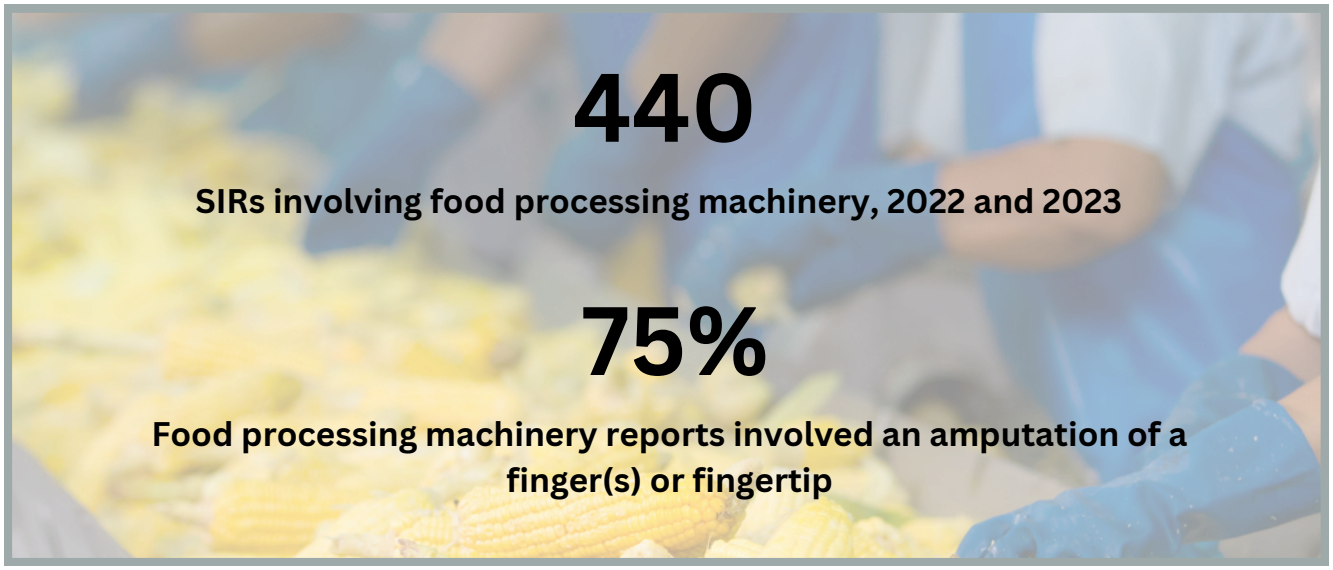
*An employee was de-escalating a behavioral incident involving a patient. The patient became aggressive and began pulling the employee to the ground by their hair. The patient kicked the employee in her chest and stomach. The employee became dizzy and fainted. The employee was hospitalized for blunt trauma.*

**Visit OSHA's Workplace Violence Safety and Health Topics page for more information on who is most at risk for workplace violence and how to reduce workplace violence hazards.**

## Severe Injury Spotlight:

# Food Processing Machinery

In 2024, OSHA released a **Hazard Alert on Severe Injuries in the Food Processing Industry**, highlighting common hazards with this type of equipment. The food processing industry has a range of hazards that workers face during all stages of food processing operations, described in the above Hazard Alert. There are multiple corrective measures employers can take eliminate potential severe injuries during food processing, including ensuring the machines are guarded, using safeguarding devices, and establishing control procedures, among others.




*An employee was attempting to unjam a cocoa shell process machine when their left hand got caught in the machine, resulting in partial amputations of the middle and ring fingers.*

*An employee was straddling a blender to clean it using a scrubber. The employee lost balance, fell into the blender and was caught by the augers. The injured employee suffered fractures to the skull, arms, and legs, lacerations to the head, neck, and body, and a dislocated shoulder. The right leg was surgically amputated.*

*An employee was cleaning the beef blender/mixer machine when his hand became caught inside, resulting in a right hand amputation.*

*An employee was removing dough from a machine. The machine discharged the dough and amputated the employee's fingertip.*

# Methodology

29 CFR 1904.39 requires all employers covered by the OSH Act to report any work-related incident that results in a fatality, inpatient hospitalization, amputation, or loss of an eye. Depending on the type and circumstances of the injury or illness reported, OSHA will either request that employers conduct their own incident investigations and report back on their proposed remedies, or we will open an on-site inspection. The agency representative will then enter data about the injury or illness into the OSHA Information System (OIS), an internal database that tracks all inspections, violations, and incident reports. Fatalities are also recorded in OIS but are not included in the SIR dataset or in this report. The OIS data may include personally identifiable information on injured or ill workers including name, age, and gender that is removed prior to publication to protect worker privacy.

The SIR data available on OSHA's website has a six-month lag that allows our regional staff to complete investigations. Then, our statisticians post data to the SIR dashboard. The collected data is coded in the public data into Occupational Injury and Illness Classification System codes, and establishments are coded into North American Industry Classification System (NAICS) codes. The first two-digits of each NAICS code identifies the sector (as used on pages 4 and 5 in this report).

SIR case reports are removed from OSHA's SIR dataset if the case was not reportable. Examples include: incidents that occur on public highways; or on mass transportation; or if the employee injury did not result in an amputation, inpatient hospitalization, or loss of an eye. Although severe injuries and illnesses are reported to OSHA from state plans, non-federal-related cases are not in the public dataset as those states administer their own safety and health programs. Therefore, the data here does not reflect SIRs from OSHA-approved State Plans.

A SIR may include hospitalizations and/or amputations involving multiple workers. No eye losses have been reported to OSHA from 2016 through 2023. Rates in this report were calculated using the U.S. Bureau of Economic Analysis, which provides annual data of full-time workers by industry sector. Other factors, such as underreporting by employers, may also impact the representativeness of the statistics presented in this report. See the next page for a detailed description of the limitations of these data.

# Data Limitations

OSHA's SIR dataset and dashboard can provide much insight into the most common causes of reported severe injuries and illnesses and the industry and sectors with the most reported severe injuries. However, this data is subject to several limitations, which may prevent further analysis that cross-reference or combines with other other health data sources, such as workers' compensation. Some limitations to this data have been listed below.

- This report and the SIR dataset and dashboard do not include most SIRs reported from employers in states covered by state plans, although it does include data from employers located in states with state plans, but that are covered by federal OSHA (e.g., USPS).

- OSHA removes any personally identifying information included in SIRs before posting the SIR data publicly (e.g., worker names, social security numbers, date of birth) that could be used to link to other datasets. Additionally, OSHA does not consistently collect information about injured or ill employees' age, sex, race/ethnicity, which limit demographic analyses.

- The dataset may include some hospitalizations that did not actually meet the threshold for being reportable. For example, there may be some hospitalizations where there was not enough information to confirm that the worker was actually admitted as an inpatient for treatment, rather than observation, within 24-hours, or in cases where the worker may only have been seen in the Emergency Department as an outpatient.

- OSHA does not collect data related to the degree or severity of injury or illness (e.g., number of days hospitalized).

- No eye loss cases have been reported from 2015 through 2023. Instead, eye injuries are mostly reported under this category. However, eye injuries that do not require inpatient hospitalization are reportable only if the eye is lost (e.g., enucleation).

- Other factors, such as underreporting by employers, may also impact the accuracy of the statistics presented in this report.

The data collected for this report should not be considered statistically representative of the population of U.S. workers due to these limitations. Users of these data should take caution when making conclusions about the results.

# Summary Report Case Definitions

Interested in seeing more? The complete SIR dataset can be downloaded from OSHA's website at www.osha.gov/severeinjury. The dataset has been coded according to the Occupational Injury and Illness Classification System (OIICS).

For this report, OSHA used v2.01 OIICS codes in severe injury report data for 2022 and 2023. The timeline for the seven-year average rates included all severe injuries where the event date year occurred between January 1, 2015 and December 31, 2021. The case definitions below specify which OIICS codes were included from each page in this report.

## Top 3 Causes and Sources of Injury

Three most reported as determined by the frequency of event/exposure and source codes on SIRs

Event/Exposure

- 64* - Caught in or compressed by equipment or objects
- 43* - Falls to lower level
- 62* - Struck by object or equipment

Source

- 3* - Machinery
- 6* - Structures and surfaces
- 8* - Vehicles

## Heat Illness

Sum of hospitalizations with event/exposure

- 531 - Exposure to environmental heat

## Forklifts

Sum of injuries where the source or secondary source includes:

- 8621 - Forklift, order picker, platform truck - powered

## Workplace Violence

All reports where the event/exposure includes:

- 11* - Intentional injury by person
- 12* - Injury by person - unintentional or intent unknown

## Food Processors

All reports where the source or secondary source includes:

- 371* - Food and beverage processing machinery - specialized

*Indicates all OIICS sub-codes were included in the definition. See the complete OIICS code tree.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