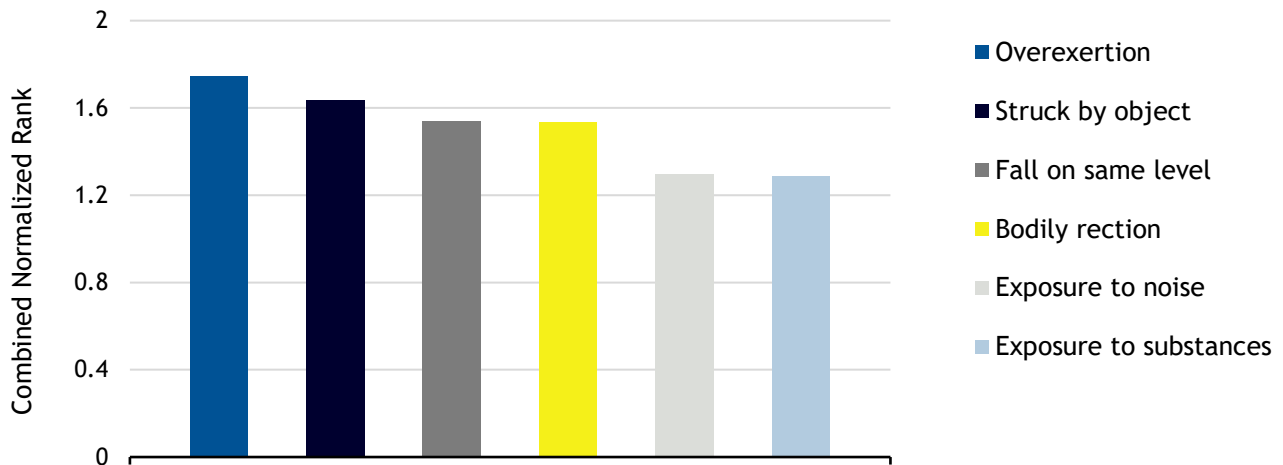


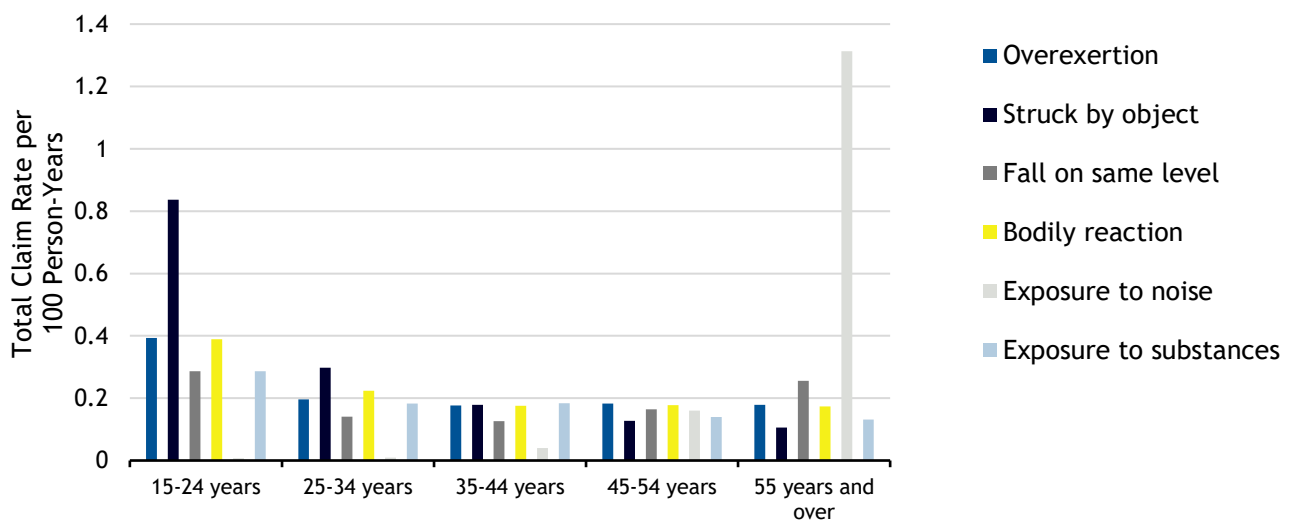
# Top Target Injuries or Illnesses for the Oil and Gas Industry in Alberta (2016-2022)

Data Source: Alberta Workers' Compensation Board (WCB), as of 2022 Q4

**FIG 1: TOP INJURIES OR ILLNESSES IN THE OIL AND GAS INDUSTRY, ALBERTA (2016-2022) BY CLAIM FREQUENCY AND SEVERITY**



**FIG 2: TOP INJURIES OR ILLNESSES IN THE OIL AND GAS INDUSTRY, ALBERTA (2016-2022) BY WORKER AGE GROUP**



**TABLE 1: TOP 10 INJURY OR ILLNESS BY FREQUENCY**

#	Top Injury or Illness - Type of Accident	Total claim count (2016-2022)	% of total count
1	Exposure to noise	2754	13%
2	Struck by object	2335	11%
3	Bodily reaction	2106	10%
4	Overexertion	2050	10%
5	Exposure to substances	1800	9%
6	Fall on same level	1766	9%
7	Caught in/compressed by object	1400	7%
8	Highway accident	797	4%
9	Struck against object	660	3%
10	Fall to lower level	620	3%
<b>Total</b>		<b>16,288</b>	<b>79%</b>

**TABLE 2: TOP 10 INJURY OR ILLNESS BY SEVERITY**

#	Top Injury or Illness - Type of Accident	Total claim cost (2016-2022)	% of total cost
1	Overexertion	\$30,870 K	12%
2	Fall on same level	\$27,696 K	11%
3	Struck by object	\$24,325 K	9%
4	Highway accident	\$24,100 K	9%
5	Bodily reaction	\$23,791 K	9%
6	Exposure to substances	\$19,589 K	8%
7	Caught in/compressed by object	\$15,442 K	6%
8	Fall to lower level	\$15,158 K	6%
9	Exposure to noise	\$9,090 K	4%
10	Repetitive motion	\$8,549 K	3%
<b>Total</b>		<b>\$198,610 K</b>	<b>77%</b>

## DEFINITIONS

**Target Injuries or Illnesses:** Claims grouped by type of accident (event or exposure) over a given period.

**Age Groups:** Age groups are based on the worker's age when injury was incurred.

**Claim Severity:** Based on the assumption that claims involving higher costs are more severe in nature.

**Claim Frequency:** Higher claim frequency implies higher claim count for a specific injury type over a period of time.

**Claim Cost:** The cost covered by the Alberta WCB for all claims. This includes medical costs, rehabilitation costs, compensation costs and pension costs.

**Claim Rate:** The number of work-related injury claims per 100 person-years worked. The claim rate for age groups is calculated using Statistics Canada data.

**Person-Years:** Estimated number of full-time equivalent workers (2,000 work hours). It is derived from the employer's reported insurable earnings (assessable payroll) and the industry's average wage.

**Normalized Ranking:** For both claim severity and frequency, each of the target issues was given a normalized ranking using a method called feature scaling. This method scales the observed values to a range between 0 and 1, using this formula:  $x' = (x - \min(x)) / (\max(x) - \min(x))$ , where  $x$  is an original value, and  $x'$  is the normalized value. Ranks from both variables (frequency and severity) are then combined to give the final ranking.

**Oil and Gas Industry in Alberta:** Includes 21 Rate Codes that fund Energy Safety Canada:

[https://admin.energysafetycanada.com/getmedia/d16c7e8e-2f1a-486b-aefc-ea95b6a670cc/EnergySafetyCanada\\_WCB\\_Codes.pdf](https://admin.energysafetycanada.com/getmedia/d16c7e8e-2f1a-486b-aefc-ea95b6a670cc/EnergySafetyCanada_WCB_Codes.pdf)

**Type of Accident:** Manner in which injury or disease was produced or inflicted by identified source (e.g., Struck by object). The following definitions of top target injuries are sourced from *CSA standard Z795-Coding of Work Injury or Disease Information*.

**Bodily Reaction:** Codes in this group apply to injuries or illnesses resulting from a single incident of free bodily motion which imposed stress or strain on some part of the body. Generally, codes in this group apply to the occurrence of strains, sprains, ruptures, nerve damage, or other internal injuries or illnesses resulting from the assumption of an unnatural position or from voluntary or involuntary motions induced by sudden noise, fright, or efforts to recover from slips or loss of balance (not resulting in falls).

**Caught In or Compressed by Equipment or Object:** This group includes cases in which the injury was produced when a person or part of a person was injured by being squeezed, crushed, pinched, or compressed between two or more objects, or between parts of an object. Codes in this major group apply when a person, or part of a person's body, was squeezed, pinched, compressed, or crushed in operating equipment, between other meshing objects, between a moving and stationary object, or between two or more moving objects.

**Exposure to Substances:** Exposure to caustic, noxious (harmful), or allergenic substances applies to cases in which the injury or illness results from the inhalation, absorption (skin contact), injection (needle sticks, venomous bites, stings), or ingestion (swallowing) of harmful substances. This group is used for instances of poisoning, allergic reactions, contagious diseases, reactions to insect and animal bites and stings, etc.

**Fall on Same Level:** Fall on same level applies to instances in which the injury was produced by impact between the injured person and the source of injury, the motion producing the contact being that of the person, under the following circumstances: (a) the motion of the person was generated by gravity following the person's loss of equilibrium; and (b) the point of contact with the source of injury was at the same level or above the surface supporting the person at the inception of the fall.

**Fall to Lower Level:** Fall to lower level applies to instances in which the injury was produced by impact between the injured person and the source of injury, the motion producing the contact being that of the person, under the following circumstances: (a) the motion of the person and the force of impact were generated by gravity; and (b) the point of contact with the source of injury was lower than the surface supporting the person at the inception of the fall. This excludes injuries sustained as a result of the worker jumping from an elevation.

**Highway Accident:** Highway accidents include accidents to vehicle occupants occurring on that part of the public highway, street, or road normally used for travel, as well as the shoulder and surrounding areas, telephone poles, bridge abutments, trees aligning roadway, etc.

**Overexertion:** Overexertion applies to cases, usually non-impact, in which the injury or illness resulted from excessive physical effort directed at an outside source of injury. The physical effort may involve lifting, pulling, pushing, turning, wielding, holding, carrying, or throwing the source of injury.

**Struck by Object:** The "struck by" codes apply to injuries produced by forcible contact or impact between the injured person and the source of injury when the motion producing the contact is primarily that of the source of injury rather than the person.

*Data Disclaimer: While every reasonable effort has been made to ensure the accuracy of the data used in this report, data should be read as indicative of scope rather than exact figures. The variable nature of WCB claims management may be reflected in the data shown. To report feedback or make an inquiry, email [PMetrics@EnergySafetyCanada.com](mailto:PMetrics@EnergySafetyCanada.com)*