

Circumstances surrounding pedestrian fatalities, 2018 to 2020

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Most people are pedestrians at some point in the day. Unfortunately, pedestrians, like other vulnerable road users such as bicyclists and motorcyclists, have a higher risk of injury or death when involved in a transport-related collision than other road users, due to the lack of protection from a vehicle's outer shell. On average, more than 300 pedestrian fatalities occurred in Canada every year from 2018 to 2020.

Using the Canadian Coroner and Medical Examiner Database and the Canadian Vital Statistics – Death Database, this report examines the circumstances surrounding pedestrian fatalities. This analysis, which compiled and examined all reports provided by coroners and medical examiners who investigate these tragic events, can help inform the continued development of preventative measures to reduce harm to Canadians.

Pedestrian fatalities in this report include deaths resulting from transport-related collisions between a person and a moving vehicle (e.g., car, train, all-terrain vehicle, bicycle). Non-transport-related fatalities—for example, when a person slipped on ice and fell on the sidewalk—are excluded.

The rate of pedestrian fatalities is highest among men and among seniors aged 70 years and older

Pedestrian fatalities were more prevalent among males than females. From 2018 to 2020, the rate of pedestrian deaths was 1.7 times higher among males (1.01 deaths per 100,000 population) compared with females (0.61 deaths per 100,000 population).

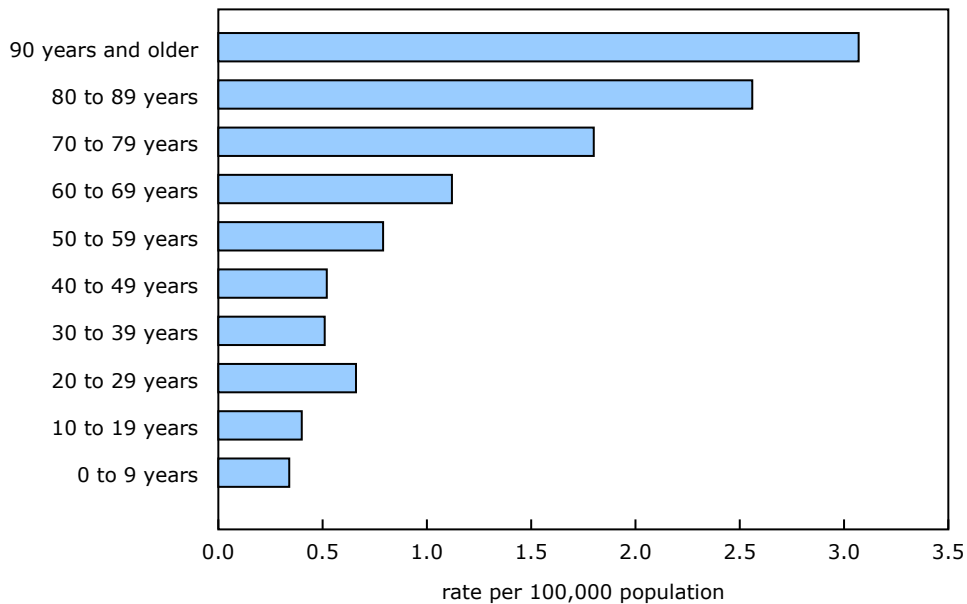
The rate of pedestrian deaths generally increased with age, and seniors aged 70 and older were the most at risk of a fatal pedestrian incident. The fatality rate was particularly high among men aged 70 years and older (2.65 deaths per 100,000 population) compared with those aged 69 years and younger (0.80 deaths per 100,000 population). In contrast, among women aged 70 and older, the fatality rate was 1.68 deaths per 100,000 population.

A higher fatality rate among seniors may be linked to a decline in muscle strength, balance, reaction time, vision, and hearing. These vulnerabilities make it more difficult to see oncoming traffic, get around on foot quickly and judge distances correctly. As well, seniors are at higher risk of severe injuries or death when a collision occurs than younger pedestrians.

The 20-to-29 age group had a slightly higher death rate (0.66 deaths per 100,000 population) compared with other age groups younger than 50 (0.45 deaths per 100,000 population).



Chart 1
Age-specific pedestrian death rates, 2018 to 2020



Note(s): Data were not available for all jurisdictions for all years (see Note to readers). Canadian Coroner and Medical Examiner Database counts referenced in this chart were rounded to a neighbouring multiple of five.

Source(s): Canadian Coroner and Medical Examiner Database, 2018 to 2020 (5125), and table 17-10-0005-01.

Intersections are the most common location for pedestrian fatalities

From 2018 to 2020, approximately 21% of pedestrian fatalities occurred at intersections, where the deceased person was crossing an intersection of at least two public roadways or in a roundabout. While pedestrians did not always follow proper traffic signals, coroners and medical examiners indicated that some fatalities occurred even when the signals were followed.

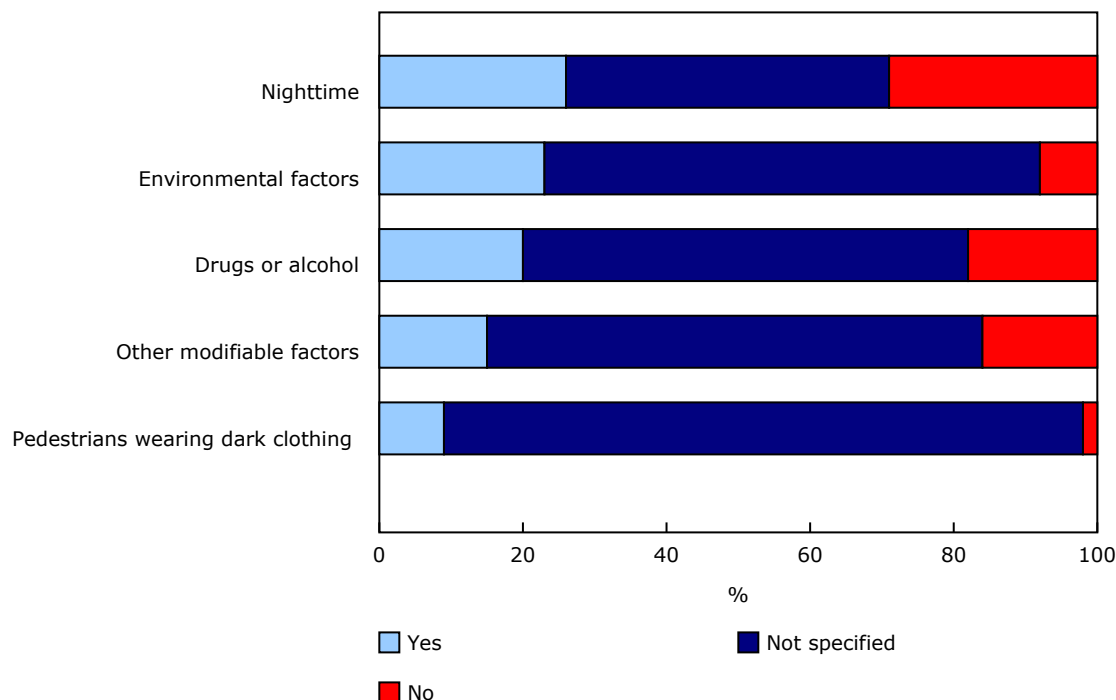
Other more commonly reported locations where pedestrian fatalities occurred include roadways at a non-intersection road (14%), highways (13%), parking lots or private property (10%) and railways (8%). Pedestrian fatalities that occurred in parking lots or on private property (10%) were often the result of a vehicle reversing and colliding with the pedestrian.

At least one risk factor is reported in nearly two in three pedestrian fatalities

Coroner and medical examiner reports provided information on the circumstances surrounding fatal events, including pedestrian behaviours (e.g., alcohol or drug consumption) and environmental situations (e.g., challenging weather, challenging road conditions, poor visibility, infrastructure issues, time of collision). While most reports focused on the deceased individual, some also included information on the vehicle involved (e.g., type of vehicle, mechanical issues) and driver factors (e.g., driver left the scene, alcohol, or drug consumption). At least one of these reported risk factors was present in 65% of pedestrian fatalities, while 40% of fatalities had at least two risk factors reported. In 35% of pedestrian fatalities, no risk factors were specified.

A risk factor is considered "not specified" when the information for a given risk factor is missing from the coroner or medical examiner report. However, the absence of a risk factor can be considered only when the coroner or medical examiner has indicated that a given factor was not present.

Chart 2
Select factors most commonly reported by the coroner or medical examiner investigating pedestrian fatalities, 2018 to 2020



Note(s): "Nighttime" was indicated when the coroner or medical examiner (C/ME) reported that the fatality occurred between 6:00 p.m. and 5:59 a.m. "Environmental factors" was indicated when the C/ME reported challenging weather, poor road conditions, decreased visibility or infrastructure issues. "Drugs or alcohol" was indicated when the C/ME reported that the pedestrian or the driver involved in the fatality had consumed alcohol, cannabis or drugs prior to the event. "Other modifiable factors" was indicated when the C/ME reported on driver or pedestrian distractions, vehicle speed, vehicle mechanical issues, or improper lane change or turn. "Pedestrians wearing dark clothing" was indicated when the C/ME reported that the pedestrian involved in the fatality was wearing dark clothing at the time of the incident. Data were not available for all jurisdictions for all years (see Note to readers). Counts referenced in this chart were rounded to a neighbouring multiple of five.

Source(s): Canadian Coroner and Medical Examiner Database, 2018 to 2020 (5125).

Environmental factors are reported in more than one in five pedestrian fatalities

Poor visibility, challenging weather or road conditions, and infrastructure issues were environmental factors reportedly involved in more than one in five pedestrian fatalities from 2018 to 2020. In some cases, challenging weather (8%), such as heavy rain or snow, blinding sun, fog, or hail, or challenging road conditions (4%), such as wet, icy, or snow-covered roadways, were reported. These unfavourable conditions may affect both the pedestrian's and the driver's ability to manoeuvre safely on roadways.

In other cases, visibility issues not related to weather (17%), such as a pedestrian wearing dark clothing at night or a large object blocking the driver's ability to see the pedestrian, were reported. For increased safety, pedestrians travelling at night are advised to avoid wearing dark clothing in order to remain visible to vehicles on the road. In this report, 21% of pedestrian fatalities occurring at night involved the pedestrian wearing dark clothing.

Infrastructure issues, such as damaged sidewalks or the absence of sidewalks, the absence of mid-block crosswalks, or faulty or limited lighting by streetlights, were reported in 8% of pedestrian fatalities.

Alcohol, cannabis, or other drug consumption is reported in one in five pedestrian fatalities

Alcohol, cannabis or other drug consumption has been associated with several transport-related preventable deaths in Canada, such as [cycling fatalities](#), [snowmobile fatalities](#), [all-terrain vehicle fatalities](#), [passenger vehicle fatalities](#) and [motorcycle fatalities](#). While impaired driving is a major public health issue and the leading criminal cause of death and injury in Canada, walking on roads while impaired can also be risky. In 20% of pedestrian fatalities from 2018 to 2020, either the pedestrian or the driver had consumed alcohol, cannabis, or other drugs. Alcohol (76%) was the most commonly reported substance in pedestrian fatalities where substances were reported, followed by the presence of other drugs (43%) and cannabis (24%).

The rate of pedestrian fatalities involving alcohol, cannabis or other drug consumption by the pedestrian was 2.4 times higher among male pedestrians (0.22 deaths per 100,000 population) than among female pedestrians (0.09 deaths per 100,000 population). This may in part help explain why the rate of pedestrian deaths was higher among males than among females. In addition, the rate of pedestrian fatalities involving alcohol, cannabis or other drug consumption by the pedestrian was 2.0 times higher among pedestrians aged 20 to 59 years (0.22 deaths per 100,000 population) than among those aged 60 years and older (0.11 deaths per 100,000 population).

While the time of day of the collision was not always reported, alcohol, cannabis or other drug consumption by the pedestrian or the driver was more often reported among pedestrian fatalities occurring at night, from 6:00 p.m. to 5:59 a.m. (38%), compared with those occurring during the day, from 6:00 a.m. to 5:59 p.m. (11%), or when the time of day was not specified (16%).

Around 1 in 12 pedestrian fatalities involves a hit and run

Hit and runs occur when a driver fails to stop and remain at the scene of a collision. Despite this being a criminal offence, some drivers still leave the scene. Coroners and medical examiners reported that the driver involved in the collision left the scene in around 8% of pedestrian fatalities. While nearly half of these drivers were in passenger vehicles (47%), about 13% were in commercial or heavy vehicles such as dump trucks or snowplows. In some cases, the driver of the commercial or heavy vehicle was not aware they had struck someone and continued to drive. The type of vehicle involved in a hit and run was not specified in about 33% of fatalities.

Pedestrian safety recommendations

Safety recommendations for both pedestrians and vehicle drivers are available to ensure pedestrians are protected on the roads. For pedestrians, these include using sidewalks; walking facing the oncoming traffic if there is no sidewalk available; crossing the street at a designated crosswalk; looking left, right, and left again before crossing a street; making eye contact with drivers of oncoming vehicles to make sure you are seen; avoiding alcohol and drug impairment when walking; wearing bright and reflective clothing; and using a flashlight at night. Additionally, drivers should refrain from driving under the influence of alcohol or drugs, yield to pedestrians in a crosswalk, always watch for pedestrians and be cautious when backing up.

Note to readers

The Canadian Coroner and Medical Examiner Database (CCMED) was developed at Statistics Canada in collaboration with the 13 provincial and territorial Chief Coroners and Chief Medical Examiners and the Public Health Agency of Canada. Currently, it combines data from all provincial and territorial databases, except for Manitoba. Data for Prince Edward Island are available only up to 2019. The Canadian Vital Statistics – Death Database (CVSD) includes death information reported to Statistics Canada by the provincial and territorial vital statistics offices. Data for Yukon have not been received since 2017.

All data are considered preliminary and include only closed cases. Closed cases refer to those whose investigation or inquest is complete and whose cause and manner of death are final. Data for this report were extracted in March 2023.

The number of deaths reported is lower than expected because only closed cases are published. Moreover, since the source of completeness of the available information varies between jurisdictions, users are advised to exercise caution when comparing data between years and across provinces and territories.

Coroners and medical examiners may include additional circumstance information in the reports submitted to the CCMED, but the level of detail provided in the report varies by death investigator and by jurisdiction.

The CCMED is a deceased person-based database. As such, the focus of this report was primarily on the pedestrians involved in the fatalities and not on the drivers of the involved vehicles.

Pedestrian fatalities in this report include deaths resulting from transport-related events (i.e., moving vehicles). It includes cases where the victim was struck by a vehicle while on foot, including where the victim was struck by a vehicle while tending to a mechanical issue on the side of the road. In addition, users of a pedestrian conveyance, such as a baby carriage, ice skates, a pushcart, a pushchair, roller skates, a scooter, a skateboard, skis, a sled or a wheelchair, are also considered in this analysis. However, people on bicycles or motorcycles are not considered to be pedestrians. Pedestrian fatalities can occur on roadways, on private properties (e.g., driveway or garage), on railways or in rural areas (e.g., trails or open fields).

This report excludes non-transport-related fatalities (i.e., where the victim tripped and fell). Cases where the victim fell because of a collision with another pedestrian (i.e., they struck or bumped into another person), as well as where the victim was injured while getting in or out of a vehicle (e.g., disembarking from a bus), were also not considered in this analysis.

At the time this report was written, about 4,425 transport-related fatalities were documented in the CCMED linked to the CVSD from 2018 to 2020. Of these fatalities, 910 were classified as unintentional or undetermined pedestrian fatalities for which the investigation was complete (closed cases). Unintentional or undetermined fatalities include deaths where the coroner or medical examiner determines the manner of death to be accidental or undetermined. This value was used for the reporting on the circumstances surrounding pedestrian fatalities. CCMED data coverage varies from one variable to another.

Information on increased risk for senior pedestrians comes from the following article: Wilmut, K., & Purcell, C. (2022). [Why Are Older Adults More at Risk as Pedestrians? A Systematic Review](#). *Human Factors*, 64(8), 1269–1291.

Information on impaired driving comes from [Impaired driving in Canada, 2019](#).

Information on recommendations for pedestrian safety on the roads comes from [Transport Canada](#) and the [National Safety Council](#).

Counts referenced in this report were rounded to a neighbouring multiple of five.

Definitions, data sources and methods: survey number 5125.

The infographic "[Pedestrian Fatalities in Canada, 2018 to 2020](#)" is also now available as part of the series [Statistics Canada — Infographics \(11-627-M\)](#).

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; infostats@statcan.gc.ca) or Media Relations (statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca).