FACT SHEET

U.S. ARMY PUBLIC HEALTH CENTER

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PRIVATELY-OWNED VEHICLE-RELATED INJURIES

What injuries are associated with privately-owned vehicles (POVs)?

Fatalities are often the primary focus of programs and policies to improve motor vehicle driver safety. However, motor vehicle accidents more frequently result in *non-fatal injuries.* Examples include head trauma, fractures, and contusions or lacerations to internal organs.[1]

POVs include cars, trucks, all-terrain vehicles, and motorcycles. The types of injuries, injury rates, and risk factors associated with POVs depend in part on the types of vehicles involved.

This fact sheet focuses on POVs in general. See separate factsheet that is specific to motorcycle injuries.

Image: U.S. Army Combat Readiness Center

Why are POV-related injuries a concern to the Army?

Over one-half (55%) of the 96 Army accidental ground fatalities reported in 2020 were due to POV accidents.[2] Several hundreds of other POV accidents resulted in severely injured Soldiers each year.[3] These injuries involve substantial medical care and result in either permanent or temporary disability.

On average, Soldiers hospitalized for POV-related injuries spent almost 9 days in the hospital, lost 11 days from work duty, and had 3 days of restricted work.[4] The average cost of a POV injury among Soldiers is $51,129 per crash, including cost of pay while away from work, medical treatment, dependent survival, unused training compensation, disability retirement, and burial (if applicable).[4] This equates to a total annual cost for non-fatal Army POV injuries of about $15-20 million.[4]

What are common characteristics of Army POV-related injuries?

Data show that most Army POV-related injuries occur off-duty and do not occur on a military installation.[4] Leading collision types among Army personnel include: running off the road, colliding with a moving vehicle, and colliding with an object other than a vehicle.[4]

POV-related injuries occur at higher rates:

- Among males
- Among those under 21 years of age[5]
- During federal holiday periods and the first 30 days after service members' return from deployment [4,6]

Injuries tend to be more serious in situations where a seat belt is not used:[1]

- Common injuries among unbelted vehicle occupants include subarachnoid (brain) hemorrhage, rib fractures, lung contusions, and spleen laceration
- Common injuries among belted vehicle occupants include sternum, rib, and clavicle fractures

How can POV-related injuries be prevented?

Military leaders can increase awareness of the risk factors among Army Soldiers, targeting high-risk drivers and times like driving after federal holidays and immediately after deployment. Programs and procedures should aim to reduce commonly identified behavioral factors:[5,7-9]

- Not wearing a seat belt
- Alcohol consumption
- Excessive speed
- Driving while drowsy
- Driving while talking on cell phone (handheld or hands-free)

Image: U.S. Army Combat Readiness Center

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How can you prevent privately-owned vehicle-related injuries?

Prevention Tactic	Supporting Information
USE SEAT BELTS: • Wear at all times	• **Seat belt use has been scientifically shown to reduce risk of moderate-to-critical injury by 50%.**[10] • Soldiers who reported seat belt use only 0-50% of the time had a 40% greater risk of hospitalization compared to those who wore a seat belt 100% of time.[5] • Enhanced enforcement of seat belt laws (i.e., use of seat belt checkpoints, increased number of officers on patrol, etc.) is associated with an increase in seat belt use and a decrease in injuries.[11]
DO NOT DRINK AND DRIVE: • Don't have even one drink if you need to drive • If you have been drinking, get a ride home • Don't let friends drive impaired – take away their keys	• **There is strong evidence that sobriety checkpoints are effective** in preventing alcohol-impaired driving and alcohol-related crashes.[12] • Alcohol is a well-established risk factor in vehicle injuries.[5,12] It is best to avoid any level of drinking and driving, and prevent others from doing so. • Army Regulations outline disciplinary actions and requirements for monitoring Soldiers involved in alcohol or drug related incidents. Actions can include a bar to reenlistment and/or administrative separation. Soldiers should be aware of these consequences and learn how to avoid situations where they might drink and drive.[13]
STAY ALERT/ AVOID DROWSY DRIVING	• **Drowsy drivers are between four and six times more likely to be involved in a crash than if they were fully alert.**[16] • Evidence has shown that reducing night-time driving will reduce risk, but regardless of time of day be aware of factors such as sleep, stress, and medications that can increase drowsiness.[9]
DON'T USE CELL PHONES WHILE DRIVING	• **Drivers who use cell phones have four times the risk of a crash.**[7] • Use of handheld cell phones while operating a motor vehicle on a DoD installation is prohibited.[13] • Though initial assessment has not shown that banning cell phone use among drivers results in a decrease in crashes, data is still being evaluated as cell phone use has been identified as a key risk factor.[7]
AVOID EXCESSIVE SPEED	• **The risk of injury or death from a crash doubles with each 3 mph increase in speed in a 37 mph speed limit area.**[14] • Speed cameras reduce injury crashes between 8% and 50%, and reduce crashes resulting in fatalities or serious injuries between 11% and 44%.[15]
TRAINING & RISK AWARENESS	• **Soldiers must complete a Travel Risk Planning System (TRiPS)** POV risk assessment while operating a motor vehicle on leave, pass, or on travel out of the immediate local area, as per AR 385-10. A TRiPS assessment evaluates factors that can increase motor vehicle-related injury: driving time, sleep, rest stops, alcohol consumption, and weather. • Though studies have not yet adequately shown that post-license driver education will reduce traffic crashes or injuries, the use of the TRiPs to identify and be aware of the risks before driving is a good practice.[17]

Information Sources

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FOR ADDITIONAL INFO/TOOLS (TRiPS, ARMY POLICY, TRAINING COURSE/BRIEFS, POSTERS, LICENSING):
https://safety.army.mil/OFF-DUTY/PMV-4.aspx