Injuries Resulting From Car Surfing—United States, 1990-2008

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2 figures, 1 table omitted

“CAR SURFING” IS A TERM INTRODUCED in the mid-1980s to describe a thrill-seeking activity that involves riding on the exterior of a moving motor vehicle while it is being driven by another person.1 Although reports of car-surfing injuries have been published in the United States, no study to date has analyzed these events from a national perspective.2-5 Because traditional public health datasets do not collect morbidity or mortality data on this practice, CDC searched U.S. newspaper reports to provide an initial characterization of car-surfing injuries on a national scale. That analysis identified 58 reports of car-surfing deaths and 41 reports of nonfatal injury from 1990 through August 2008. Most reports of car-surfing injuries came from newspapers in the Midwest and South (75%), and most of the injuries were among males (70%) and persons aged 15-19 years (69%). The first identified newspaper reports about car-surfing injuries were published in the early 1990s, and new reports have been published every year since then. Parents and teens should be aware of the potentially lethal consequences of car surfing, which can occur even at low vehicle speeds, sometimes resulting from unanticipated movements of the vehicle, such as swerving or braking.

National injury surveillance systems, trauma registries, and death certificates lack sufficient detail to distinguish car-surfing victims from others who have fallen from a moving motor vehicle. For example, the National Electronic Injury Surveillance System-All Injury Program, which uses data from emergency department records, does not contain sufficient detail to distinguish car-surfing cases effectively. Among factors that might account for this absence of distinguishing information are a lack of awareness of this activity among health-care professionals and the difficulty of capturing the intent of a person riding on top of a moving vehicle. Another issue is the lack of coding options to describe this particular behavior precisely. For example, although e-codes are typically used to capture cause of injury in traditional public health data sets, the closest e-code, 818.8, is too broad in definition to specifically capture car-surfing cases and does not define the intent of the person who was injured.4 Therefore, to obtain an approximate characterization of car-surfing injuries and deaths, CDC identified probable car-surfing incidents from an August 2008 LexisNexis® search of U.S. newspapers, using the terms “car surfing,” and “injury” or “death.” A case was defined as an injury of a person that resulted from the person intentionally riding on the exterior of a motor vehicle while it was being driven by another person. Resulting injury could come from falling off the moving vehicle, falling down onto the vehicle, jumping from the vehicle, or being hit by an object while on top of the moving vehicle. Persons who had placed themselves on a stationary vehicle, and did not intend to remain on the vehicle once it began to move, were excluded. Identifying information was used to avoid counting the same event more than once if it was reported in multiple newspapers or repeatedly by the same newspaper.

Several behaviors were excluded that closely resemble car surfing but did not fit the case definition. These included injuries resulting from a person leaning out of a window or the sunroof of a moving vehicle or being pulled along-side or behind a motor vehicle (typically while on a bike or skateboard). An activity known as “ghost riding,” in which the driver exits the moving motor vehicle to dance next to it while the vehicle continues to move forward, also was excluded. Three illustrative cases of deaths or serious injury from car-surfing injury are provided below.

Case 1
In May 2001, a male aged 19 years from Massachusetts fell off the back of a car driven by a friend aged 18 years. Observers told authorities that the boy was kneeling on the trunk of the vehicle in an attempt at car surfing and appeared to lose his grip before sliding off the back. The vehicle was traveling at approximately 15 mph at the time of the fall. The boy had massive head and spinal cord injuries, was hospitalized, and died 3 days later.

Case 2
In August 1996, a male aged 14 years ran and jumped onto the hood of a friend’s vehicle to car surf as it was pulling out of a residential driveway in Virginia. Witnesses stated that the vehicle was traveling at a slow speed, estimated at 5 mph, when the car hit a bump in the driveway, causing the boy to slide off of the hood. He fell on his head and had a fatal head injury.

Case 3
In 1992, a male aged 16 years from Illinois was dared by his friends to ride on the hood of their car while they drove it down a road. The friends said the car was traveling at about 35 mph when the boy lost his grip and traveled 18 feet through the air before landing on his head. He had serious head injuries and was in a coma at a local hospital at the time the newspaper report was published.

During 1990–August 2008, a total of 99 cases of car-surfing injury were identified in United States newspapers. One
case of car surfing was reported in the South in 1990 and was the only one reported that year. Reports grew in frequency after 1990, increasing to 10 reports in 1995, then averaging 6.4 reported cases per year during 1995-2007. Cases were reported from 31 U.S. states, with the largest percentages reported from the Midwest† (39%) and the South‡ (35%). Fifty-eight of the 99 car-surfing reports indicated fatal injuries, with head trauma cited as the cause of death in 45 of the 58 cases (78%). The specific injury leading to death was not reported in the remaining 13 fatal cases. The majority of persons injured while car surfing were male (70 of 99), and among the 88 reports in which age was indicated, the persons injured ranged in age from 10-37 years (mean: 17.6 years, median: 16 years). By age group, the greatest proportion of cases (69%) was among persons aged 15-19 years. Reports of car-surfing injuries appeared to be seasonal, with numbers rising in the summer months and peaking in August.

The speed of the vehicle at the time of injury was reported in 21 of 99 cases, 17 of which were fatal. Vehicle speed was less than 30 mph in 11 of the 21 cases (52%), with fatalities occurring at speeds ranging from 5 mph to 80 mph. Alcohol or drugs were mentioned as contributing factors in 11 of 99 cases overall (11%) and six of 58 fatal cases (10%). In 28 of 99 cases, a sudden maneuver or movement of the vehicle was reported, which might have contributed to the car surfer subsequently falling from the vehicle. These maneuvers included turning or swerving the vehicle (16 of 28), braking the vehicle (7 of 28), hitting a bump or dip in the road (3 of 28), and accelerating the vehicle (2 of 28).

The findings in this report are subject to at least three limitations. First, the use of newspaper reports to identify cases might be insensitive because (1) LexisNexis does not include all U.S. newspapers, (2) many cases of car-surfing injury (or characteristics of cases) likely are not reported in newspapers, and (3) some cases of car surfing might be reported in newspapers under a different activity name. Second, newspapers are not written for scientific purposes and might contain inaccuracies about the injured person or the circumstances of the injury. Finally, although 58 of 99 newspaper reports in this study described fatal incidents of car surfing, no inference can be drawn about the case fatality rate for these injuries, given that media reporting might favor the reporting of fatal over nonfatal incidents.

Car surfing is one of a range of risky behaviors that U.S. teen motorists participate in that are increasingly being videorecorded and posted on video-sharing websites. However, these videos often do not portray the associated risk for injury or death. Car surfers might underestimate the risk and might not anticipate the sudden vehicle movements that can dislodge them from the vehicle, even at very low speeds. Furthermore, they might not consider that car surfing has led to serious legal charges against the car surfer or vehicle driver.

REFERENCES


†Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, and Wisconsin.
‡Alabama, Arkansas, District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.