

# California Motorcycle Safety Facts

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## INTRODUCTION

California has long been a center of motorcycling and is home to much of the motorcycle industry. In fact, California has more motorcyclists than any other state. There are more than 800,000 registered motorcycles in the state, followed by 550,000 in Florida and 445,000 in Texas.<sup>1</sup> As a consequence, California is also a leader in motorcycle collision-related deaths each year. Between 2011 and 2015, 2,299 riders of motorcycles were fatally injured during traffic collisions in the state.<sup>2</sup> In addition, 59,745 riders were injured during the same time period.<sup>3</sup>

## METHODS

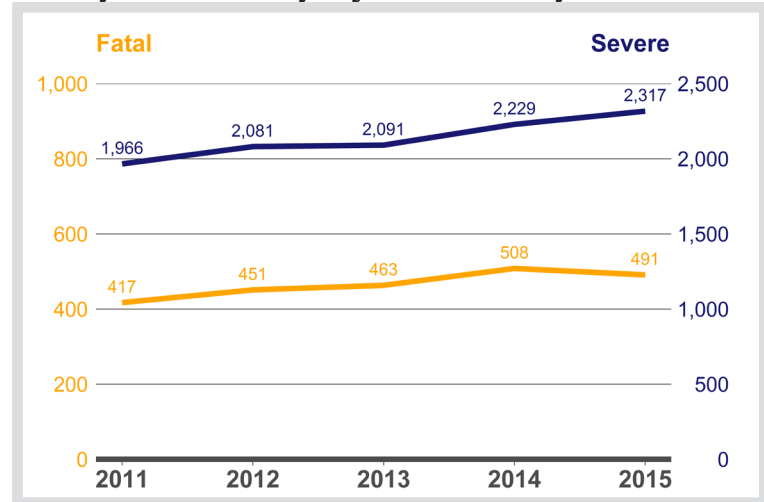
Collision data for years 2011-2015 were obtained from the California Statewide Integrated Traffic Records System (SWITRS), an electronic database of police-reported traffic collisions operated by the California Highway Patrol (CHP). Traffic collision reports from all law enforcement agencies in the state are required by law to be forwarded to CHP for inclusion in the system if any personal injury resulted. SafeTREC queried the publicly available SWITRS files for collisions that involved a motorcycle and resulted in injury to the motorcycle operator or passenger, and obtained data from the collision, party, and victim data files.

## FINDINGS

- There were 12,844 motorcycle riders injured in traffic collisions in 2015, a 2% increase over the 12,608 injured in 2014 and a 14% increase over the 11,300 injured in 2011.
- Of the 12,844 riders, 491 (4%) were fatally injured. Both fatal injuries and severe injuries have increased markedly over the past several years. Both fatal injuries and severe injuries increased 18% between 2011 and 2015 (Figure 2).

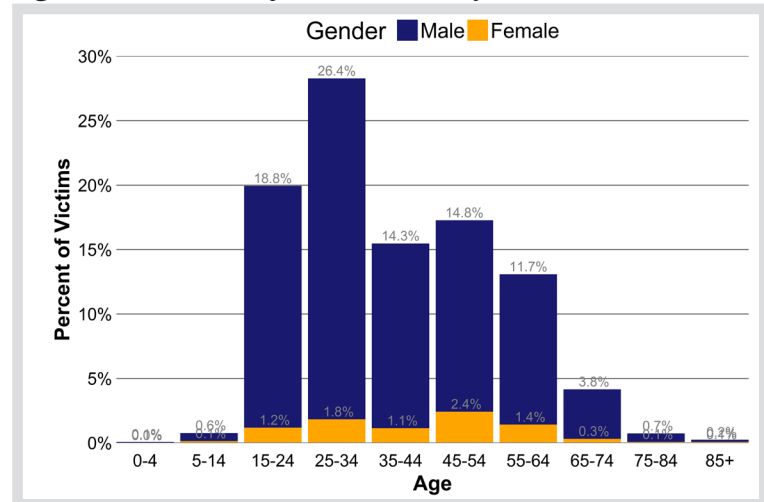
- The injured motorcyclists were predominantly young and middle-aged males. Overall, 11% of riders were female. The age distribution (Figure 2) shows a wide range of ages. Male riders aged 15-34 were the largest groups, comprising 45% of all riders. Significant numbers of riders were in the 35-64 year age group, and a slightly larger share of those groups were female.

Figure 1  
**Fatally and Severely Injured Motorcycle Riders**



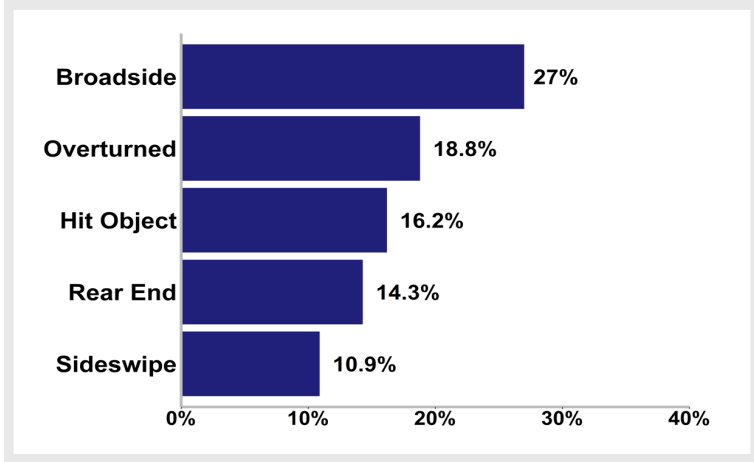
Source: SWITRS 2011-2015\*

Figure 2  
**Age and Sex of Injured Motorcycle Riders**



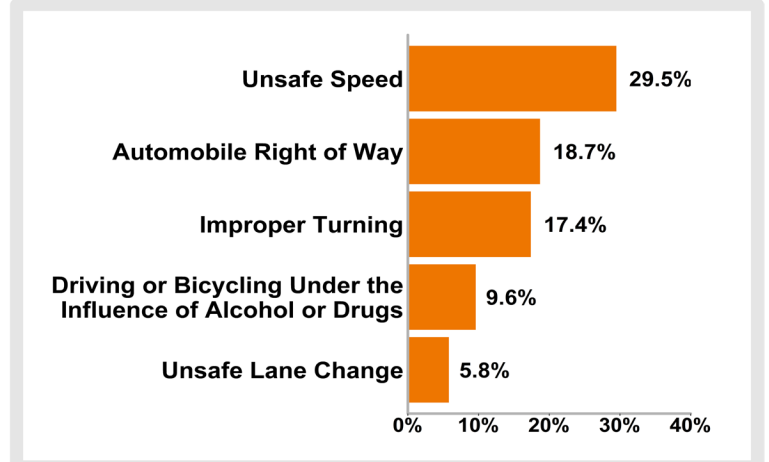
Source: SWITRS 2015\*

Figure 3  
**Motorcycle Safety: Top 5 Crash Types**



Source: SWITRS 2015\*

Figure 4  
**Top Causes of Motorcycle Collisions**

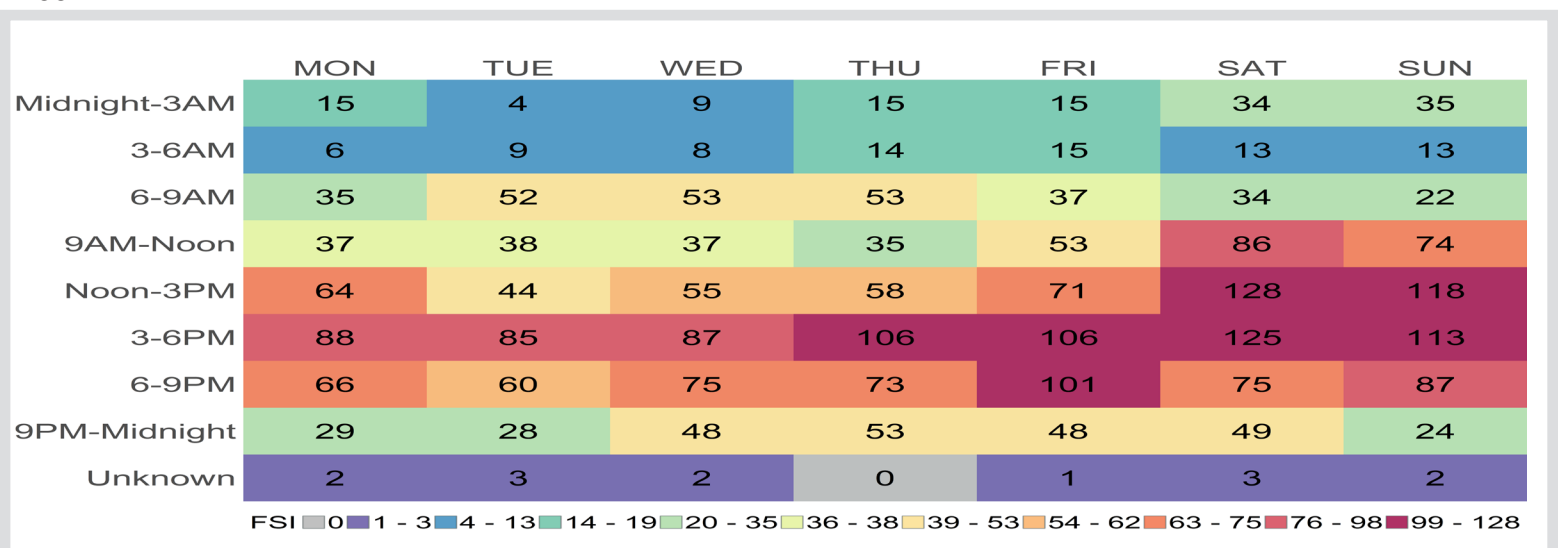


Source: SWITRS 2015\*

- There were 717 injured persons (6%) riding as passengers on motorcycles.
- Alcohol use by motorcyclists is relatively low. Only 7% of motorcycle operators had been drinking prior to the collision, compared with 11% of operators of cars and light trucks.
- The top causes of motorcycle collisions included unsafe speed, right-of-way violations, and improper turning (Figure 4).

- The number of collision-related injuries varied greatly by the day of week and time of day. Figure 5 shows the number of motorcyclists with fatal or severe injury by time and day of week in 2015. The number in each day-time period ranged from 4 to 128, a 32-fold range. The number of injured riders was markedly higher between 3-6 pm the afternoons of Thursdays, Fridays, Saturdays, and Sundays. In addition, early afternoons (noon-3 pm) were high collision times on weekends only. The only evening that has a disproportionate number of collisions were Fridays between 6-9 pm.

Figure 5  
**Motorcycle Collisions: Time of Day & Day of Week**



Source: SWITRS 2015\*

Table 1

**Injured Motor Vehicle Occupants, By Injury Severity And Vehicle Type**

Injury Severity	Vehicle Type					
	Cars and Light Trucks		Motorcycles		Total	
	No.	%	No.	%	No.	%
Fatal	1,908	1.0%	491	3.8%	2,399	1.1%
Severe injury	6,155	3.1%	2,317	18.0%	8,472	4.0%
Other visible injury	41,932	21.0%	5,901	45.9%	47,833	22.5%
Complaint of pain	149,903	75.0%	4,135	32.2%	154,038	72.4%
Total	199,898	100%	12,844	100%	212,742	100%

Source: SWITRS 2015\*

- There were 22% of motorcycle riders severely or fatally injured, compared with 4% of other motor vehicle occupants.
- Because motorcycle riders are susceptible to injury during collisions, they comprise a disproportionate share of all injured vehicle occupants - 27% of severely injury occupants and 20% of fatalities.

\*SWITRS data from 2014 and 2015 are provisional.

**CITATIONS**

<sup>1</sup>Highway Statistics 2014. Federal Highway Administration, Washington, DC. <https://www.fhwa.dot.gov/policyinformation/statistics/2014/mv1.cfm>

<sup>2</sup>Fatality Analysis Reporting System, 2011-2015. National Highway Traffic Safety Administration. Washington, DC. <https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars>

<sup>3</sup>Statewide Integrated Traffic Records System. California Highway Patrol, Sacramento, CA. <http://iswitrs.chp.ca.gov/Reports/jsp/userLogin.jsp>

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