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**Latest driver death rates highlight dangers of muscle cars**

ARLINGTON, Va. — American muscle cars with high horsepower and a hot rod image rank among the deadliest vehicles on the road, both for their own drivers and for people in other vehicles, recent calculations by the Insurance Institute for Highway Safety show.

Six of the 21 vehicles with the highest driver death rates for model year 2020 are variants of the Chevrolet Camaro, Dodge Challenger, Dodge Charger and Ford Mustang, while eight others are small cars or minicars. Eighteen of the 23 vehicles with the lowest driver death rates are minivans or SUVs, and 12 are luxury vehicles.

“We typically find that smaller vehicles have high driver death rates because they don’t provide as much protection, especially in crashes with larger, heavier SUVs and pickups,” said IIHS President David Harkey. “The muscle cars on this list highlight that a vehicle’s image and how it is marketed can also contribute to crash risk.”

IIHS has been calculating driver death rates approximately every three years since 1989. This year for the first time IIHS also calculated the best and worst models according to the number of drivers in other vehicles killed in crashes with them.

Using that lens, the story of big and small is partially reversed, illustrating the danger that large vehicles pose to other road users. But three Dodge muscle cars with excessively high driver death rates also rank among the worst performers when it comes to other-driver deaths, suggesting these vehicles are driven in an aggressive manner.

Seven of the 20 vehicles with the highest other-driver death rates are large or very large pickups, and four more are midsize SUVs — categories that aren’t represented among the models with the worst track record for protecting their own drivers. Seven of the vehicles with the highest other-driver death rates also rank among the worst for driver death rates: the Dodge Challenger two-wheel-drive, Dodge Charger two-wheel-drive, Dodge Charger HEMI two-wheel-drive, Kia Forte, Kia Optima, Kia Rio sedan and Nissan Altima.

The list of vehicles with the lowest other-driver death rates include two small, two midsize and one large car, as well as six small and 10 midsize SUVs. Ten models are luxury vehicles.

The rates include only driver deaths because all vehicles on the road have drivers, but not all of them have passengers or the same number of passengers. The number of deaths is derived from the federal Fatality Analysis Reporting System. Registration data come from IHS Markit.

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The latest rates are based on fatalities that occurred from 2018 to 2021 for vehicles from the 2020 model year, as well as earlier models with the same designs and features. The numbers represent the estimated risks for 2020 models, but the data include models from as far back as 2017 if the vehicles have not been substantially redesigned over the intervening period. Including these older, equivalent vehicles makes the sample size larger and therefore increases the reliability of the results. To be included, a vehicle must have had at least 100,000 registered vehicle years of exposure from 2018 to 2021 or at least 20 deaths.

### Death rates vs. safety ratings

Driver death rates are a useful companion to the Institute’s safety ratings, as they capture different aspects of risk. In the Institute’s front crash tests, vehicles are propelled into a stationary barrier at 40 mph, so the kinetic energy involved in the crash is determined by the vehicle’s own weight. That makes IIHS safety ratings useful for comparing vehicles in the same size category but not for comparing small and large cars or cars and SUVs.

In contrast, driver death rates can be compared across vehicle classes. However, they don’t only reflect the properties of the vehicles themselves. The crash database includes driver age and gender, allowing analysts to adjust the rates to account for the fact that men are involved in more crashes than women and older drivers are more likely to be killed in a given crash than young ones, for example. They are not adjusted for other factors that might influence fatality rates, such as the speeds people drive and the number of miles they travel per day.

A comparison of the best and worst performers suggests some of those factors are at work.

The lists of vehicles with the lowest driver and other-driver death rates have nine models in common. These include the Acura MDX four-wheel-drive, Audi Q5 four-wheel-drive, Chevrolet Traverse four-wheel-drive, Lexus RX 350 four-wheel-drive, Mercedes-Benz E-Class sedan four-wheel-drive, Porsche Macan, Subaru Ascent, Toyota C-HR and Volvo XC60 four-wheel-drive. Notably, six of those are luxury vehicles.

“The models that rank among the best and worst performers on both lists point to the unfortunate fact that vehicle cost remains a factor in road safety,” Harkey said.

Crash avoidance systems and other advanced safety features are most often standard equipment on luxury vehicles — as well as the Subarus that rank among the top performers on both lists. In contrast, crash avoidance is optional on nearly all of the worst performers, many of which also fall short of a good rating in at least one IIHS crashworthiness evaluation. The Challenger, for example, earns a marginal rating in the driver-side small overlap front crash test and acceptable ratings for roof strength and head restraints.

Highest rates of driver deaths		
Deaths per million registered vehicle years, 2020 and equivalent earlier models, 2018-21		
Vehicle name	Vehicle type	Death rate
Chevrolet Impala	Large car	80
Kia Optima	Midsize car	80
Ford EcoSport 2WD	Small SUV	84
Chevrolet Trax 2WD	Small SUV	89
Chevrolet Malibu	Midsize car	91
Dodge Charger 2WD	Large car	91
Ford Mustang convertible	Midsize sports car	97
Chrysler 300 4WD	Large car	100
Hyundai Elantra sedan	Small car	103
Chevrolet Sonic	Small car	107
Chevrolet Camaro coupe	Large sports car	110
Kia Forte	Small car	111
Chevrolet Camaro convertible	Large sports car	113
Nissan Altima	Midsize car	113
Dodge Charger HEMI 2WD	Large car	118
Kia Rio sedan	Minicar	122
Chevrolet Spark	Minicar	151
Hyundai Accent	Minicar	152
Dodge Challenger 2WD	Large car	154
Mitsubishi Mirage hatchback	Minicar	183
Mitsubishi Mirage G4	Minicar	205

Lowest rates of driver deaths		
Deaths per million registered vehicle years, 2020 and equivalent earlier models, 2018-21		
Vehicle name	Vehicle type	Death rate
BMW X3 4WD	Midsize luxury SUV	0
Lexus ES 350	Midsize luxury car	0
Mercedes-Benz E-Class sedan 4WD	Large luxury car	0
Nissan Pathfinder 2WD	Midsize SUV	0
Audi Q5 4WD	Midsize luxury SUV	2
Toyota C-HR	Small SUV	2
Nissan Murano 2WD	Midsize SUV	4
Volvo XC90 4WD	Midsize luxury SUV	4
GMC Canyon Crew Cab 4WD	Small pickup	5
Lexus RX 350 4WD	Midsize luxury SUV	5
Subaru Outback	Midsize wagon	5
Toyota Sienna 2WD	Very large minivan	5
Volvo XC60 4WD	Midsize luxury SUV	5
Acura MDX 4WD	Midsize luxury SUV	6
Acura RDX 4WD	Midsize luxury SUV	6
BMW X5 4WD	Midsize luxury SUV	6
Chevrolet Traverse 4WD	Midsize SUV	6
Ford Edge 4WD	Midsize SUV	6
Honda Odyssey	Very large minivan	6
Lexus NX 300 2WD	Midsize luxury SUV	6
Porsche Macan	Midsize luxury SUV	6
Subaru Ascent	Midsize SUV	6
Toyota Tacoma Double Cab long bed	Small pickup	6

It's not all about vehicle features and capabilities. Several of the luxury vehicles with the lowest driver and other-driver death rates pack nearly as much horsepower as some of the muscle cars that rank among the worst performers. For example, relative to their weights, there isn't a huge difference between the 275-305 horsepower provided by the entry-level Camaro, Challenger, Charger and Mustang and the 241-252 horsepower provided by the Audi A4 and Mercedes-Benz E-Class. So why are the muscle cars among the worst performers and the luxury cars among the best?

The explanation may lie in the image of the vehicles. Luxury cars are associated with ease and comfort. In contrast, the muscle cars on this list are associated with the early days of the drag strip, as illustrated by features like racing stripes, hood scoops and spoilers, and that seems to influence how they're driven.

Marketing for the Dodge Charger HEMI, for example, focuses on its "ground-shaking" power, its acceleration "bolting off the line" and its "racing-inspired" high-performance brakes, while the Chevrolet Camaro promises buyers the ability to "dominate on the daily" with an "extreme track performance package" and the Ford Mustang offers "adrenaline chasers" the power to "keep ahead of the pack."

"These two lists illustrate some of the intangibles of crash risk," Harkey said. "We can measure horsepower and weight and test for crashworthiness. However, the deadly record of these muscle cars suggests that their history and marketing may be encouraging more aggressive driving."

### The big picture

Zooming out highlights more general trends.

The average driver death rate for all 2020 and equivalent models increased to 38 deaths per million registered vehicle years, compared with [36 for 2017 models](#). That's a further increase from a low of 28 for 2011 models following a steady decline since the 1970s. The rise is consistent with a larger number of U.S. traffic fatalities over the four-year period covered by this study, compared with the previous one. From 2018 to 2021 there were 155,136 fatalities, compared with 147,599 from 2015 to 2018.

Minicars had the highest driver death rates, averaging 153 deaths per million registered vehicle years. Very large luxury cars had the lowest, averaging only 4 deaths. In contrast, very large pickups had the highest other-driver death rates, averaging 121 deaths, while small sports cars had the fewest other-driver deaths, averaging only 11 per million registered vehicle years.

The average other-driver death rate for all 2020 and equivalent models was 53 deaths per million registered vehicle years. There are more other-driver fatalities than driver fatalities because these newer models are more crashworthy than many of their crash counterparts, which come from the wider U.S. fleet, made up of mostly older vehicles.

"Overall, newer vehicles are much safer than those of the past," said Chuck Farmer, vice president of research and statistical services, who calculated the rates. "But, unfortunately, there are still

Highest rates of other-driver deaths		
Deaths per million registered vehicle years, 2020 and equivalent earlier models, 2018-21		
Vehicle name	Vehicle type	Death rate
Jeep Wrangler 2-door 4WD	Midsize SUV	89
Dodge Journey 2WD	Midsize SUV	90
Jeep Renegade 2WD	Small SUV	90
Dodge Challenger 2WD	Large car	91
Chevrolet Blazer 2WD	Midsize SUV	93
Jeep Gladiator 4WD	Small pickup	93
Nissan Altima	Midsize car	94
Ford F250 SuperCab 4WD	Very large pickup	95
Kia Forte	Small car	96
Jeep Grand Cherokee 2WD	Midsize SUV	103
Ram 1500 Crew Cab short bed 2WD	Large pickup	104
Dodge Charger 2WD	Large car	105
Ford F-250 Crew Cab 4WD	Very large pickup	120
Ram 2500 Crew Cab short bed 4WD	Very large pickup	122
Kia Rio sedan	Minicar	133
Kia Optima	Midsize car	134
Ram 2500 Mega Cab 4WD	Very large pickup	145
Ford F-350 Crew Cab 4WD	Very large pickup	147
Dodge Charger HEMI 2WD	Large car	164
Ram 3500 Crew Cab long bed 4WD	Very large pickup	189

Lowest rates of other-driver deaths		
Deaths per million registered vehicle years, 2020 and equivalent earlier models, 2018-21		
Vehicle name	Vehicle type	Death rate
Buick Encore 4WD	Small luxury SUV	6
Mercedes-Benz E-Class sedan 4WD	Large luxury car	10
Acura MDX 4WD	Midsize luxury SUV	14
Subaru Ascent	Midsize SUV	16
Toyota RAV4 hybrid 4WD	Small SUV	16
Volvo XC60 4WD	Midsize luxury SUV	16
Porsche Macan	Midsize luxury SUV	18
Chevrolet Bolt	Small car	19
Chevrolet Trax 4WD	Small SUV	19
Honda HR-V 4WD	Small SUV	19
Lexus NX 300 4WD	Midsize luxury SUV	19
Toyota C-HR	Small SUV	19
Volkswagen Atlas 4WD	Midsize SUV	19
Honda Civic hatchback	Small car	20
Honda Pilot 4WD	Midsize SUV	20
Lexus RX 350 4WD	Midsize luxury SUV	20
Audi A4 4WD	Midsize luxury car	21
Audi Q5 4WD	Midsize luxury SUV	21
Chevrolet Traverse 4WD	Midsize SUV	21
Subaru Forester	Small SUV	21
Tesla Model 3 2WD	Midsize luxury car	21

major differences in the levels of protection that various models provide. There was also a spike in speeding-related fatalities during the pandemic, which may help explain why we find so many muscle cars among the worst performers for this period.”

The driver death rates for 2020 models range widely from 0 for four models to 205 for the worst performer, the 2020 Mitsubishi Mirage G4. A four-door minicar, the Mirage G4 is not equipped with a front crash prevention system and earns a marginal rating in the IIHS driver-side small overlap crash test and an acceptable rating in the original side test.

Other-driver death rates range from 6 for the Buick Encore four-wheel-drive, a small luxury SUV, to 189 for the Ram 3500 Crew Cab long bed pickup four-wheel-drive.

**For more information, go to [iihs.org](https://www.iihs.org)**

The Insurance Institute for Highway Safety (IIHS) is an independent, nonprofit scientific and educational organization dedicated to reducing deaths, injuries and property damage from motor vehicle crashes through research and evaluation and through education of consumers, policymakers and safety professionals. IIHS is wholly supported by auto insurers.

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