The Probability of Dying in a Car Accident

William E.
Current Rates

Rates from 2022

- On average, there was 1.35 fatalities for every 100 million vehicle miles
- About 42,939 fatalities were vehicle accident related.

Rates from 2021

- There were 6,102,936 collisions
  - Of those, only 39,508 were fatal accidents
- The percentage that I calculated from these two numbers was 0.7%
Some Facts

Even though your at 99.3% of not dying in a car accident there are factors that can decrease your survival chances:

- Not wearing your seatbelt already decreases your survival rate by 45%
- Speeding is another way
  - About 29% of all the fatal accidents
    - Taking the number from 2021 that's about 11,457 accidents that were speed related
- Accidents are the leading cause of death in teens.
A Little History Goes a Long Way…

Because automobile safety at the time is considered primitive to today's standards:

- 1937 was the year with the highest amount of fatal car crashes in US history
  - With a death rate of 30.8 per 100,000 people
- The National Highway Traffic Safety Administration (NHTSA) was created in 1970 by order of congress.

Image above by Coren
Technology That Dropped Accident Deaths

ABS (anti-lock brake system):
- Technology that was first invented and installed in 1980 made mandatory in 2004.
- Prevents your wheels from locking up fully when you brake fully.
  - Which allows you to steer last minute which could prevent an accident.
- Without ABS, your car would still keep going straight even if you turn.

Air bags:
- Technology that was first invented in the 1980s and made required in 1987
- Prevents you from hitting the dashboard in the case of an accident.
- This safety device would only work if you have your seatbelt on this alone cannot save you.
More Technology

Autonomous Emergency Braking:
- This is newer technology which was first installed in 2008.
- Almost all new vehicles have this.
- A system of braking that involves the car’s sensors to pick up an obstacle on road way and brakes automatically.

Traction Control:
- First invented in 1978 but wasn't required until 2011, but almost all vehicles had the technology by that time.
- This is more built in the PCM (Powertrain Control Module) and this prevents your car from losing traction which can result in accident.
  - This is used more in rainy or sometimes snowy conditions.
Resources


