

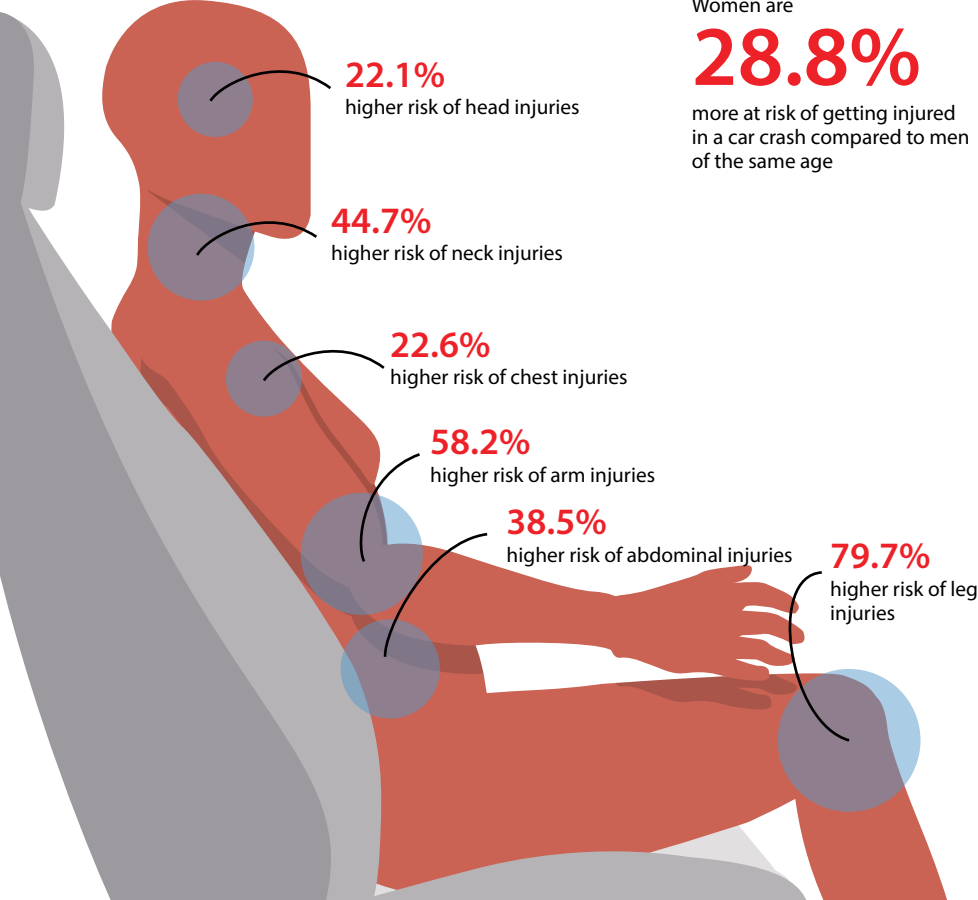
Gender bias in car safety

One Size Fits Men

Gender gap in car safety standards puts women at a greater harm than men

UNFORSEEN DANGER for half of the population lies in something as inconspicuous as occupying a vehicle. Due to shortfalls in car safety standards, women are at a greater risk of injury and fatality despite men getting into a car crash more frequently. A severe data bias is to blame for the disparity of harm between men and women involved in car crashes. Since the inception of crash testing in the 1960s, standard crash test dummies used by vehicle regulation agencies have referenced the 50th percentile male body for male crash test dummies and the 5th percentile male body for female crash test

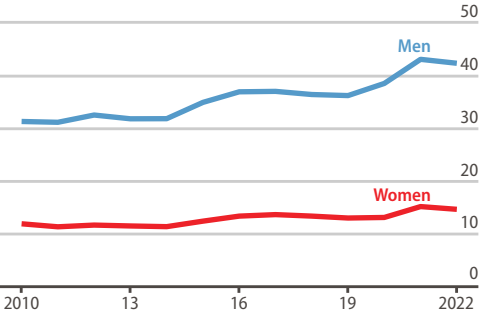
Risk Increase in Injury for Women Seated in the Front During a Car Crash  
Based on Injury Type, %



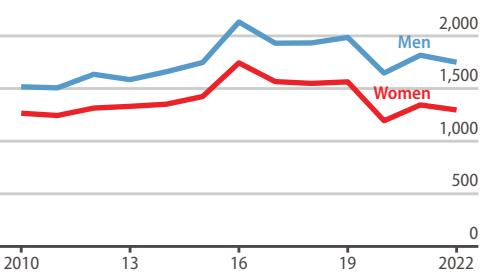
dummies. Since female dummies mirror the male body, testing data does not account for physiological differences in women like a wider pelvis, smaller thorax, and lower bone density. Recent advancements, such as the THOR-5F crash test dummy, accurately represents the female body. However, bureaucracy stands in the way of standardizing new dummies in car safety testing, with agencies like the National Highway Traffic Safety Administration (NHTSA) and Euro NCAP still using outdated models. To close the gender gap, vehicle regulation agencies must enforce gender-inclusive car safety testing standards by replacing antiquated dummies with more accurate dummies. Furthermore, automakers must proactively include women in the workforce to drive unbiased innovation. Without these changes, the road will continue to pose a risk for half of the population.

Men are more likely to be involved in a car crash

Number of Men vs Women Involved in a Car Crash  
Based on Fatal Crashes, '000

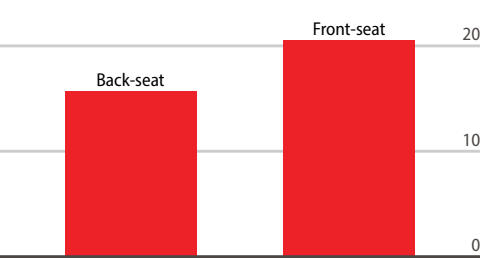


Number of Men vs Women Involved in a Car Crash  
Based on Injury Crashes, '000

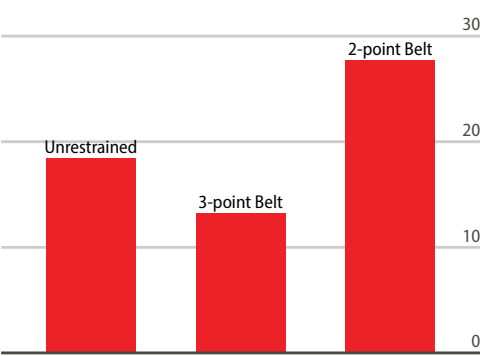


But women are more at risk in injuries and fatality per-case basis

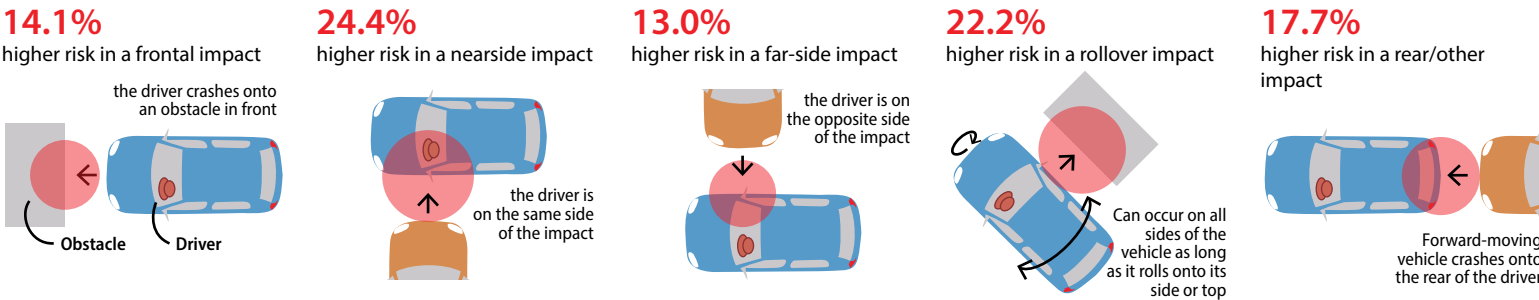
Risk Increase in Fatality for Women in a Car Crash  
Based on Seat Position, %



Risk Increase in Fatality for Women in a Car Crash  
Based on Seatbelt Type, %

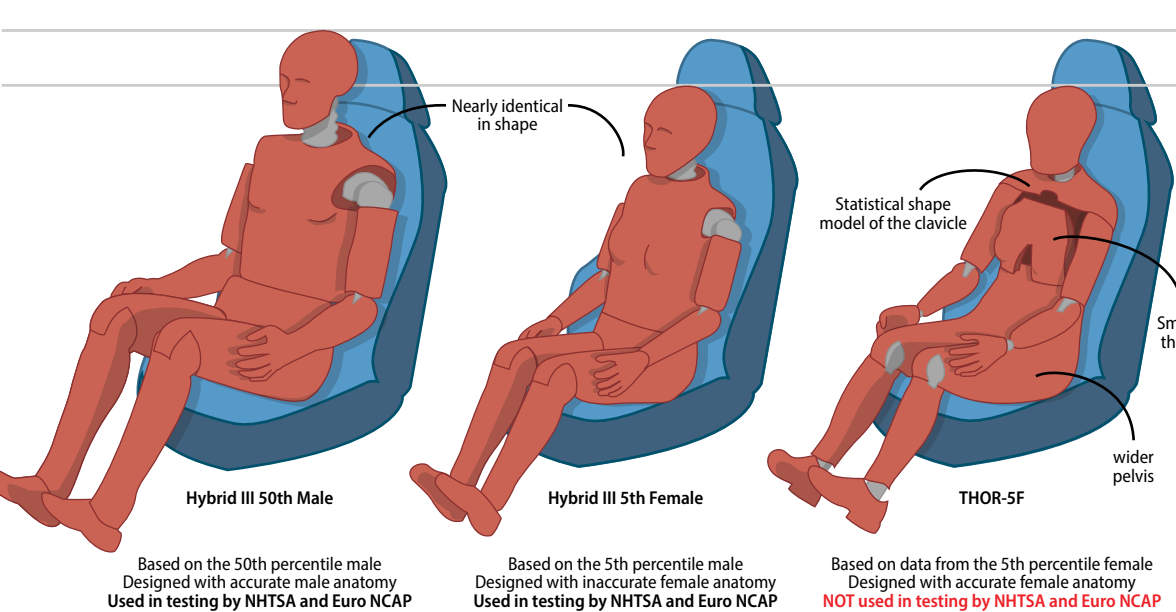


Risk Increase in Fatality for Women in a Car Crash  
Based on Impact Type, %

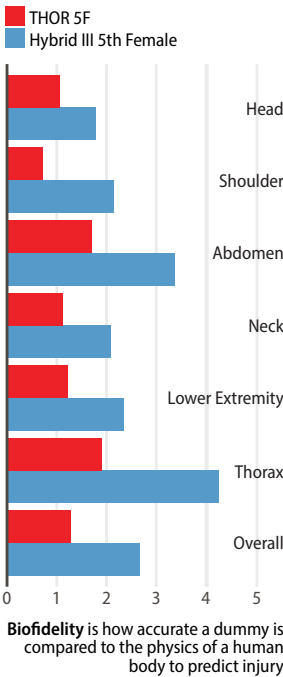


While new dummies like THOR-5 offer a more accurate representation of the female body, safety agencies still rely on outdated models

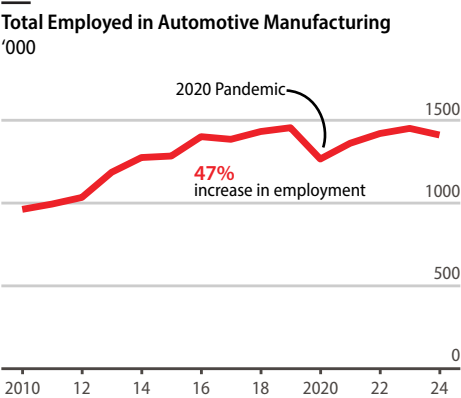
Crash Test Dummy Comparison  
Seating Height, in.



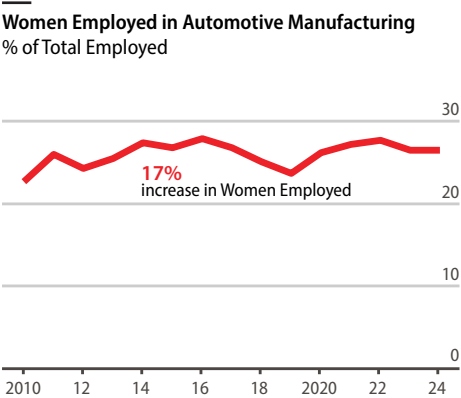
Crash Test Dummy Biofidelity Ranking  
Lower is Better



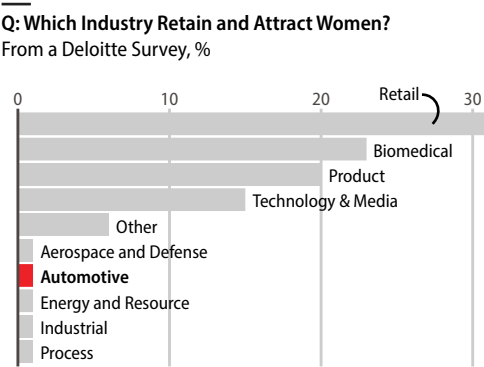
People employed in the automotive manufacturing industry has been steadily increasing since 2010



But % of women employed in the automotive manufacturing industry has remained stagnant in comparison



Only 1% of women chose that the automotive industry does the best job at retaining and attracting women



Source: U.S. Department of Transportation, U.S. Bureau of Labor Statistics, Humanetics, Consumer Reports, Deloitte