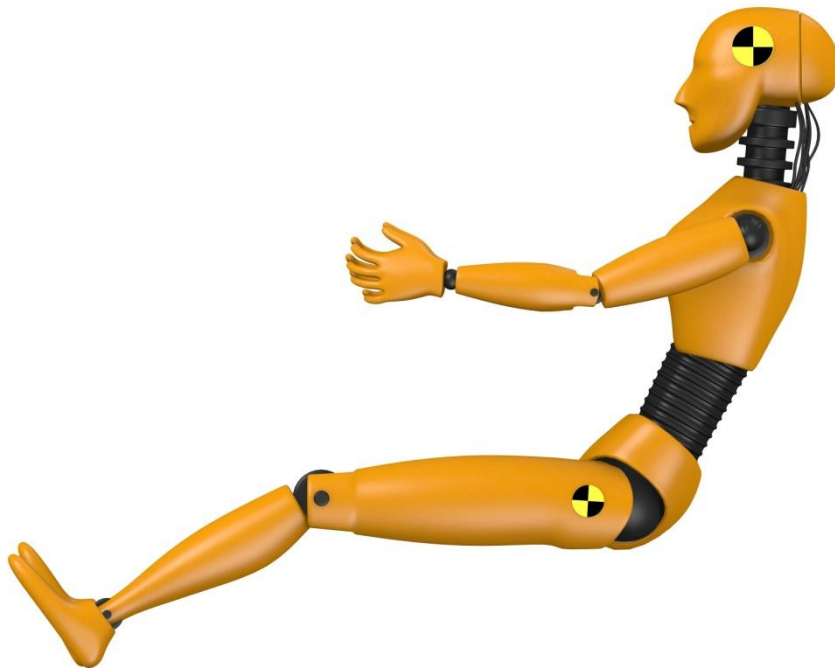




Female Crash Test Dummies

Resolution Shortlist Briefing Notes



Female Crash Test Dummies

Women are significantly more likely to die, or be seriously injured, in car crashes than men. The WI calls on the government to mandate equitable testing with female crash test dummies to that of male dummies in regulatory vehicle safety tests; and for consumer organisations, such as EuroNCAP, to include a gendered breakdown in their published results.

Proposer's position

The proposer highlights that car crash testing is usually based on a male crash test dummy. She wants changes to the regulatory vehicle safety tests to establish the impact of safety features on women; to improve and promote the design of new safety features in cars to reduce the risk of death or injury to female drivers; and to enable consumers to make informed choices when deciding on a vehicle to meet their needs.

The current situation

Crash test dummies are used when developing and evaluating the occupant protection performance of a vehicle in vehicle regulatory tests and in consumer tests.

Crash testing is often based on a standardised 50th percentile male dummy. This equates to a 1.77m tall man weighing 76kg which is significantly taller and heavier than an average woman.

Female crash test dummies do exist but they are not mandated to be used in most tests. A pregnant crash-test dummy was created in 1996 but testing with it is still not government-mandated either in the US or in the EU.

Women are thought to be less well protected than men. A study by researchers at the University of Virginia found that women wearing seat belts were 47% more likely than male seat belt-wearers to be seriously injured and 71% more likely to be moderately injured. A separate study found that women were 17% more likely to die in crashes.

Research published by Volvo has found that women are more exposed to certain types of injuries than men in a car crash. In response, it has developed systems such WHIPS (Whiplash Injury Protection System) and has launched the initiative Equal Vehicles for all (E.V.A) which focuses on gender in product development.

Current EU regulatory crash test requirements define five tests that must be passed before a car is allowed onto the market. None of these tests are required to be carried out using an anthropometrically correct female dummy, whereas four out of the five tests specify the use of a 50th percentile male dummy. There is one regulatory test that requires the use of a 5th percentile female dummy, which is meant to represent the whole female population. This dummy is only tested in the passenger seat and no data is available on how a female driver would be affected.

Safety features do not reflect the different driving position adopted by many women due to their size. Women tend to sit closer to the wheel to reach the pedals and more upright to see clearly over the dashboard, placing them in what is described as a non-standard driving position. Women also have different muscle mass distribution and lower bone density. Consequently, when women are involved in a crash, they may suffer injuries that safety standards have not accounted for.



Astrid Linder, research director of traffic safety at the Swedish National Road and Transport Research Institute is calling on the EU to make testing on such dummies a legal requirement.

This is an issue of gender inequality. Article 8 of the Treaty of the Functioning of the European Union reads, “In all its activities, the Union shall aim to eliminate inequalities, and to promote equality, between men and women.”

The majority of the cars on sale in the UK are tested by Euro NCAP (European New Car Assessment Programme), the European consumer vehicle safety test organisation. Euro NCAP encourages car manufacturers to offer levels of safety that significantly exceed the statutory minimum standards and issues up to five-star ratings for safety. According to the AA, five star ratings have become the norm since 2001 with most manufacturers aiming for this target when developing new models.

Since 2015, when Euro NCAP introduced the full width frontal impact test, it has been using 5th percentile female dummies in the driver and rear passenger seating positions. 5th percentile female refers to a small sized female with only 5% of the female population being shorter in stature than this dummy.

The safety results released by Euro NCAP are not broken down by gender therefore it is not possible to identify which vehicles are safest for female drivers. The lack of available female-specific safety data has been highlighted by researchers.

The Head of the Global New Car Assessment Programme (Global NCAP), which promotes vehicle safety and crash test research, has noted that it could be difficult for the UK to influence the automotive industry outside of the EU.

How could the WI work on this issue if it was passed?

A full campaign would be developed by the NFWI if the resolution is passed, taking into account developments since then. To help inform your discussions, here are some ways the WI could consider working on this issue.

At local and regional levels, members could discuss and raise awareness of the issue in their WIs.

Members could also be encouraged to find out about the car safety rating of their vehicles and when making a new purchase.

Nationally, the NFWI could establish partnerships with road safety organisations, consumer organisations and researchers.

The NFWI could also raise the issue with car manufacturers and urge the Government to make changes to the regulatory vehicle safety tests.

Arguments for the resolution

- This resolution would enable the WI to raise awareness of the gender inequality that currently exists in car crash testing and to campaign for the protection of both females and males to be addressed equally when designing and evaluating vehicle safety systems.
- This resolution could provide an incentive for car manufacturers to develop female crash test dummies.

Arguments against the resolution

- There would be limited opportunities for WIs to work on this issue at a local level.
- Car safety testing is a complex area and not one on which the WI has existing expertise.

Further information

European New Car Assessment Programme (Euro NCAP):

<https://www.euroncap.com/en/about-euro-ncap/>

Gendered Innovations:

https://genderedinnovations.stanford.edu/terms/not_considering.html

Study reviewing how men and women are represented in regulatory tests conducted to assess adult occupant safety in vehicles in Europe:

<https://www.sciencedirect.com/science/article/pii/S0001457519303483#!>

Volvo Equal Vehicles for All initiative:

<https://www.volvocars.com/uk/about/human-innovation/future-of-driving/safety/cars-safe-for-all>

Video content

Presentation by Astrid Linder, research director of traffic safety at the Swedish National Road and Transport Research Institute:

<https://www.youtube.com/watch?v=jv06vMYCgYY>

A video by Volvo Car UK highlighting that most crash tests are only based on male crash test dummies:-

<https://www.facebook.com/volvocaruk/videos/346941312840161/>

Public Affairs Department Contacts

If you have any questions about the resolutions or the resolutions process then please get in touch with the NFWI Public Affairs department.

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