

Press Release

DEKRA Road Safety Report 2020

Bicycle Helmet – Yes or No? Big Differences Among Europe’s Capitals

- Helmet usage is almost zero in the “bicycle country” Netherlands
- London takes the lead: almost two thirds of cyclists wear a helmet
- E-scooter crash demonstrates the protective effect of bicycle helmets

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In European capitals, people’s attitudes to wearing a bicycle helmet vary considerably. This was the finding of a large-scale traffic monitoring survey conducted by DEKRA Accident Research. These results are included in the 2020 DEKRA Road Safety Report exploring two-wheeled modes of transportation. A total of over 12,000 cyclists and e-scooter riders in nine cities were monitored in the study. The monitoring teams were out and about – prior to the coronavirus pandemic – in Amsterdam, Berlin, Copenhagen, Ljubljana, London, Paris, Vienna, Warsaw and Zagreb.

“The overall rate of helmet-wearing in all cities was 22 percent,” says DEKRA accident researcher Luigi Ancona. “That said, this total average percentage is of little value because the individual results varied massively.”

At 60.9%, the highest rate of helmet-wearing was observed in London. In second and third places, though far behind, were Vienna (26.7 percent) and Berlin (24.3 percent). The lowest rate of helmet-wearing was observed in Amsterdam – in fact, at just 1.1 percent, hardly anyone wears a helmet there. Low rates were also observed in Zagreb (5.9 percent) and Ljubljana (9.1 percent). Occupying the middle range were Copenhagen and Paris (both 19.9 percent) and Warsaw (22.0 percent).

Children more likely to wear a helmet

Less surprising was the observation that children are more likely to wear a bicycle helmet than other age groups, which can be attributed above all to the fact that parents are especially concerned about the safety of their children. In addition, four of the countries in which the DEKRA monitoring teams conducted the survey impose mandatory helmet-wearing for children and, in some cases, young people: in Austria and France, up to the age of 12; in Slovenia, up to the age of 15; and in

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Croatia, even up to the age of 16. Another striking observation was that teenagers were the least likely to wear a helmet.

Fewer people wear helmets when riding e-scooters

Among cyclists who own their own bicycles – the cohort that makes up the vast majority of cyclists in all the cities studied – the rate of helmet-wearing was considerably higher than among those who rent bicycles. E-scooters were especially popular in Berlin, Warsaw, Vienna and Paris. Very few e-scooter riders wore a helmet, with the figure considerably less in all cases than among cyclists. In Berlin, 173 e-scooters were recorded – and not one rider was wearing a helmet. In Paris, 30 out of 316 e-scooter riders observed were wearing a helmet (9.5 percent).

In all nine cities, the traffic monitoring survey was conducted on weekdays at different times and at different locations around the city centers.

Link between a feeling of safety and helmet-wearing

One finding that was particularly interesting for the DEKRA accident researchers was the fact that almost no one in “bicycle country” Netherlands wore a helmet. “When you look at the number of accidents as a ratio of distance traveled, the Netherlands is the second safest country after Denmark in which to ride a bicycle,” says Ancona.

“Our figures clearly suggest a link between a bicycle-friendly infrastructure, the subjective feeling of safety and the rate of helmet-wearing.” This fact aligns with another observation, which is that in London, the city with by far the highest rate of helmet-wearing, a strikingly large number of cyclists were also wearing high-visibility jackets so that they could be seen more easily.

The recommendation of the DEKRA accident researchers is clear: “Always wear a helmet when riding a bicycle or e-scooter.” However, Ancona is also calling for a comprehensive strategy to improve the road safety of cyclists. The infrastructure has to be bicycle-friendly and as safe as possible – but even then, to avoid the worst-case scenario, a helmet is essential.

E-scooter crash test demonstrates the protective effect of bicycle helmets

“This was affirmed by our most recent e-scooter crash tests in which a dummy rode an e-scooter, once with and once without a helmet,” says Peter Rucker, Head of DEKRA Accident Research. At the DEKRA Crash Test Center in Neumünster, the e-scooter was made to crash into a curb at different angles at a speed of 20 km/h. The readings from the dummy when its head hit the ground revealed that, without a helmet, head injuries ranging from serious to fatal could be expected. With the helmet, the measured stress value (HIC36) was 97 percent lower, which means that the risk of a serious head injury was much less.

Even an airbag helmet, which is worn around the neck and deployed in the event of an accident, proved highly effective in the test. The readings were comparable to those in the test during which the dummy was wearing a standard bicycle helmet.

However, that was only the case in the single-vehicle accident scenario. In two further tests simulating crashes in which, first, a cyclist was struck by a car and, second, the cyclist crashed into the side of a car, the airbag helmet did not deploy at all. “In cases where the rider simply hit the ground, the airbag helmet deployed very reliably and offered the same level of protection as a conventional helmet,” says Rucker. “But when the bicycle and the car crashed into each other, the airbag helmet did not reliably recognize this scenario as a crash. It seems that there are still problems with the deployment algorithm, which means that a conventional bicycle helmet is still the most reliable form of protection.”

The DEKRA Road Safety Report

The annual DEKRA Road Safety Report, which first appeared in 2008, focuses on a different topic every year. The 2020 report covers two-wheeled modes of transportation, with DEKRA experts examining road safety in relation to bicycles, pedelecs, e-scooters and motorcycles from a variety of perspectives. The report concludes with specific demands and recommendations regarding technology, infrastructure and the human factor.

The online portal at www.dekra-roadsafety.com contains not only the latest report but also more detailed information, including video. You can also download all the DEKRA Road Safety Reports as PDF files.

Captions

1 Copenhagen / 6 City comparison: The rate of helmet-wearing among cyclists in Europe’s capital cities varies enormously. This was the finding of a traffic monitoring survey conducted by DEKRA Accident Research for the DEKRA Road Safety Report 2020.

2 Berlin: E-scooters were also included. In Berlin, not one of the 173 scooter riders observed was wearing a helmet.

3 E-scooter crash test: Crash test with an e-scooter at the DEKRA Crash Test Center in Neumünster: Without a helmet, head injuries ranging from serious to fatal can be expected.

4 E-scooter crash test: With a helmet, the risk is significantly reduced. This was borne out by the head stress measurements recorded on a dummy.

5 E-scooter crash test: An airbag helmet, which is worn around the neck and deployed in the event of an accident, also proved highly effective in the single-accident scenario test.

About DEKRA

DEKRA has been active in the field of safety for more than 90 years. Founded in 1925 in Berlin as Deutscher Kraftfahrzeug-Überwachungs-Verein e.V., it is today one of the world's leading expert organizations. DEKRA SE is a subsidiary of DEKRA e.V. and manages the Group's operating business. In 2019, DEKRA generated sales totaling 3.4 billion euros. The company currently employs almost 44,000 people in approximately 60 countries on all six continents. With qualified and independent expert services, they work for safety on the road, at work and at home. These services range from vehicle inspection and expert appraisals to claims services, industrial and building inspections, safety consultancy, testing and certification of products and systems, as well as training courses and temp work. The vision for the company's 100th birthday in 2025 is that DEKRA will be the global partner for a safe world.