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Speed and speeding

Thematic File Road Safety N° 9



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Van den Berghe, W. & Pelssers, B. (2020). Dossier thématique Sécurité Routière n° 9 - Vitesse et vitesse excessive. Bruxelles, Belgique : Vias institute – Centre Connaissance de Sécurité Routière

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Summary

Excessive and inappropriate speed major causes of traffic unsafety. Yet, the speed limits are still frequently exceeded, as evidenced by the many traffic violations and evidence from national and international behaviour and attitude measurements. It turns out to be mainly young, male and certain professional drivers who do not respect the speed limit.

Excessive or inappropriate speed results in a higher number of crashes and a higher accident severity. It is estimated that 10 to 15% of all accidents and 30% of all fatal crashes are the direct result of speeding or inappropriate speed.

As the speed increases, the risk to crash also increases significantly. This increase is even stronger as the severity of the accidents increases. An increase in speed from e.g. 50 to 60 km/h doubles the probability of a fatal crash, and as the speed increases, the probability of such crashes increases more and more. Another important factor influencing the crash rate is the speed dispersion of the vehicle on a road. The less the speeds of the vehicles differ from each other, the lower the risk of a crash.

If the speed limits of a road are adjusted, the average speed (and therefore the crash rate) will also evolve in the same direction, but not to the same extent. For example, if the speed limit is lowered from 80 km/h to 70 km/h, the average speed will decrease, but by less than 10 km/h. All studies on recent decreases or increases of speed limits in European countries indicate that - if all other factors remain unchanged - a decrease leads to fewer crashes and an increase to more.

Not only the crash probability increases strongly with speed, but also the severity of the crash increases and the probability that the crash is fatal. Whether a crash is fatal or not also strongly depends on the nature of the crash. Between cars, rear-end collisions are those with the least serious consequences. The probability that a vulnerable road user (pedestrian, cyclist, motorcyclist) will die in a collision with a passenger car or truck is much higher than that for the occupants of a vehicle. This is also one of the main arguments in favour of the introduction of low speed zones in densely populated areas.

This report also contains an overview of the speed limits in force in Belgium, as well as the sanctions when these speed limits are not respected. It is important to note that since 1 January 2017 the standard in Flanders is 70 km/h outside built-up areas. In Wallonia and Brussels this remained 90 km/h.

Based on the Vias behaviour measurements, it appears that in Belgium the highest percentage of speeding offences is committed in school environments (without infrastructural restrictions) with a permanent speed limit of 30 km/h. Here, the number of speeding offences with more than 10 km/h is also worryingly high (59%). On the 50 km/h roads, 64% of drivers comply with the imposed speed limit. Outside built-up areas, the speed problem mainly occurs on roads with two lanes per direction and a 90 km/h speed limit. This is where the speed limit is least respected. For example, almost 60% of the observed vehicles committed an offence. On roads with one lane by direction and a speed limit of 90 km/h, the least (29%) speeding offences occur. On motorways, 22% of vehicles were found to have committed a minor offence (less than 10 km/h) and 31% of vehicles were found to have committed an offence exceeding 10 km/h.

In addition to the figures obtained through behavioural measurements, interesting information can also be found by means of surveys in which the self-reported behaviour is registered and in which attention is drawn to attitudes towards speeding. The international ESRA studies, coordinated by Vias institute, indicate that Belgium occupies a middle position in this area. Approximately 2/3 of Belgian drivers admit to having driven faster than the speed limit at least once in the past month - both on motorways, inside and outside built-up areas. When it comes to speed enforcement, Belgium is among the frontrunners in Europe in terms of the number of checks and observed traffic offences. Nevertheless, a majority of Belgians do not oppose measures that would tighten speed regulation.

Measures against speeding are possible in several areas: determination of suitable speed limits, adaptation of infrastructure, education and awareness activities, traffic law enforcement and vehicle technology. It is mainly through an integrated approach that inappropriate or excessive speed can be fought against.



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