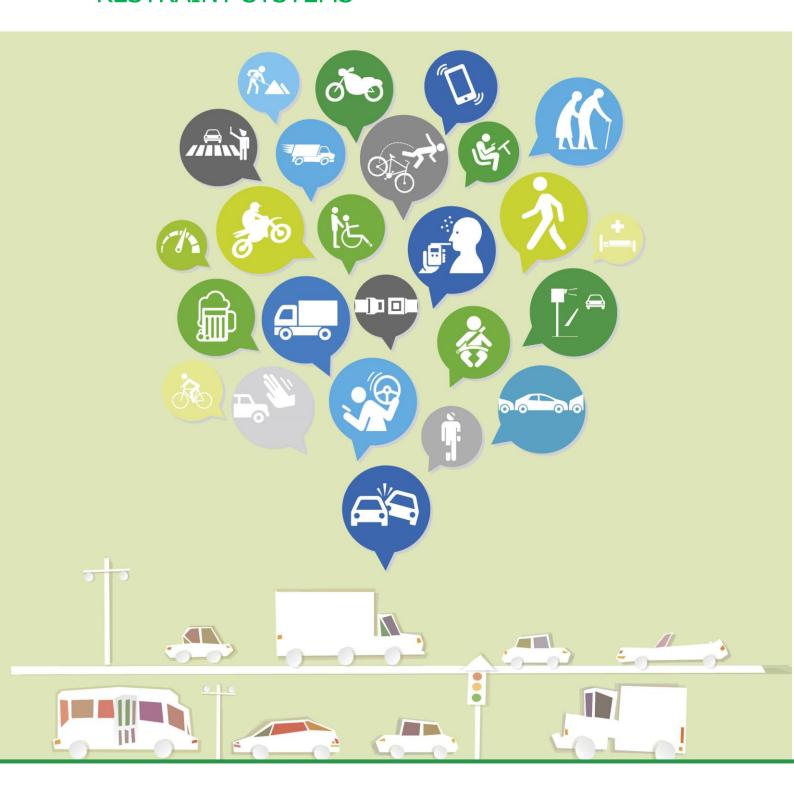
## **THEMATIC FILE ROAD SAFETY 6**

## **RESTRAINT SYSTEMS**



Knowledge center Road safety



## Thematic File Road Safety 6 - Restraint Systems (Summary)

Thematic File Road Safety 6 - Restraint Systems (2015)

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This report is a summary of the current state of scientific knowledge regarding restraints for passenger cars (seat belts and child seats). This document is intended for a non-expert audience (communications department, journalists, police officers etc.) and could serve as an entry point into the field for more scientifically oriented stakeholders. The content is consensual and does not include recommendations. The main results of scientific studies (international and Belgian) are presented in an accessible form, with references provided for more detailed information based on readers' needs.

Generally, a hundred lives could be saved in Belgium each year if all vehicle occupants were to use a restraint system. The effectiveness of safety belts and child restraint systems (CRS) and the benefits in terms of reducing the risk of being killed or seriously injured in an accident have been proven by numerous international studies. All vehicles are equipped with seat belts and use of a seat belt is mandatory on all seats.

Overall, a seat belt reduces the risk of being seriously injured or killed from 45% to 50%, and a CRS reduces this risk by 55%. A seat belt therefore appears to be one of the simplest and cheapest ways to significantly reduce the severity of an accident.

Other safety systems have been developed to increase the efficiency of seat belts (airbags, pretensioners, force limiters) or encourage its use ("seatbelt reminder" alarm).

Studies conducted in Belgium by the Belgian Institute for Road Safety make it possible to measure the situation on a regular basis in order to adapt the necessary information messages to the public, based on a real situation. To establish the national prevalence of the use of restraint systems, we have figures from behavioural measures (seat belt and CRS) and attitudinal measures. It appears that according to a survey conducted in 2012, 14% of drivers and front seat passengers, 37% of rear seat passengers and 10% of children do not wear a seat belt. Despite a sharp increase in the national seat belt usage rate, it remains below the targets set by the authorities at the General Assembly for Road Safety (EGSR). The seat belt rate in Belgium is also below the European average and that of neighbouring countries, where this figure is above 95%.

While wearing a restraint system (seat belt or child seat) is a clear behaviour and easy to measure and control by the police without ambiguity, there are various parameters that determine its use. These include gender, age and the place occupied in the car – but travel time and underestimation of the risk of an accident also have an effect. For the CRS, the factors determining proper use of a device suitable for the size and weight of the child and not being used in the wrong way, are the driver wearing a seat belt, the driver's awareness of road hazards, obtaining advice when purchasing the CRS, the distance and frequency of the trip, and using devices attached directly to the vehicle chassis by means of ISOFIX anchorages.

To change behaviour and in particular the use of restraints, the authorities should continue with and intensify their awareness drive, accompanying it with significant police mobilisation to observe safety rules.

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