

# facts

## Road safety - Safety restraints

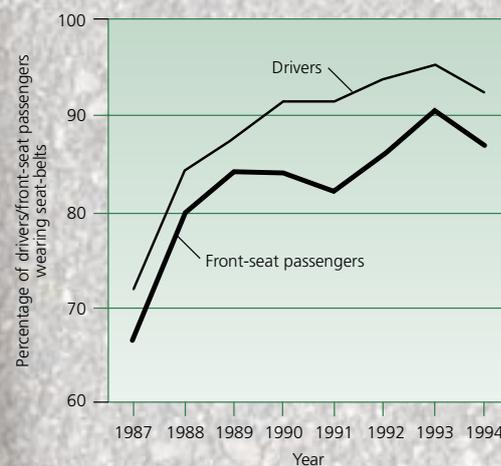
The use of seat-belts has been one of the most effective road safety measures ever implemented, saving more lives than any other intervention. The lack or inappropriate use of seat-belts and other safety restraints (child seats and booster seats) have been shown to be risk factors for the fatalities and injuries that result from road crashes.

### SEAT-BELT WEARING

Rates of seat-belt use vary between countries, depending on the existence and enforcement of laws:

- In 1995, front-seat wearing rates in European Union countries ranged from 52% to 92%, and rear-seat wearing rates from 9% to 80%.
- In the Canadian province of Saskatchewan, the use of seat-belts among vehicle drivers rose incrementally from around 70% in 1988 to more than 90% in 1994, while belt use among front-seat passengers remained slightly lower.

#### Use of seat-belts by car drivers/ front-seat passengers in Source, Canada, 1987-1994



Source: Koch et al, 1995

In low-income and middle-income countries usage rates are generally much lower:

- In Kenya, a study found that only 1% of car occupants injured in crashes were wearing seat-belts.
- In Argentina, only 26% of front-seat passengers in Buenos Aires wear seat-belts.

Failure to use seat-belts is a major contributing factor to road fatalities. The effectiveness of seat-belts depends upon the type and severity of the crash and the seating position of the passenger.

Correctly used seat-belts reduce the risk of death in a crash by approximately 61%.

- Seat-belt usage is substantially lower in fatal crashes than in normal traffic. For example, about 90% of drivers in Finland wear seat-belts, while driver seat-belt wearing in fatal collisions is about 55%.
- Seat-belts are most effective in roll-over crashes and frontal collisions, and in lower speed crashes.
- Young male drivers use their seat-belts less often than other groups and are also more likely to be involved in crashes.

### CHILD RESTRAINT USE

The use of child restraints in motor vehicles varies considerably between countries and is mainly confined to use in high-income countries.

- The use of child restraints (child seats and booster seats) can reduce infant death in car crashes by 71% and toddler deaths by 54%.
- Child restraints work in the same way as adult seat-belts. The use of a restraint depends on the age and weight of the child: rear-facing seats are particularly effective for young infants, forward-facing restraints are appropriate for younger children and booster seats used with seat-belts are effective for older children.



- The potential hazard of combining air bags with rear-facing seats in the front seat of a vehicle is well documented.
- There is a substantial amount of incorrect use of both adult seat-belts and child restraints, which markedly reduces their injury-reducing potential.

- Seat-belt use legislation in low-income countries is still not universal and will become increasingly important as car traffic levels rise in these countries.
- Technological solutions to encourage belt use are evolving and are starting to be fitted to cars. These hold the promise of raising usage rates to more than 90%.

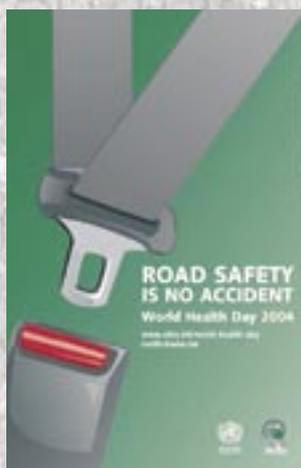
## WHAT CAN BE DONE TO INCREASE THE USE OF SAFETY RESTRAINTS?

### Seat-belts

- Seat-belt legislation is an effective way to increase restraint use and reduce injuries. Use of seat-belts can reduce the risk of serious and fatal injury by between 43% and 65%. Seat-belts are most effective in frontal crashes, which are the most common kind of crash and often result in serious head injuries. The mandatory use of seat-belts is also highly cost effective.
- Legislation on the use of safety restraints must be accompanied by strict enforcement in order to be effective. In Korea, usage rates among drivers rose from 23% to 98% in less than a year following a well-publicized national police enforcement campaign and the doubling of the penalty for non-use of safety restraints.
- Highly visible and well-publicized enforcement of mandatory seat-belt laws is effective at increasing seat-belt use. In provinces in France and Canada, compliance with seat-belt laws increased by 10–15% within one year of implementing such high-profile enforcement programmes.
- Primary enforcement (where a driver is stopped solely for not wearing a seat-belt) is more effective than secondary enforcement (where a driver can only be stopped if another offence has been committed).

### Child restraints

- Mandatory child-restraint laws in the United States led to a 13% increase in child-restraint use, a 35% reduction in fatal injuries and a 17% reduction in all injuries.
- Laws mandating child restraints are effective at increasing use, as are public information and enforcement campaigns. However, good protection requires that the type of restraint used is appropriate for the age and weight of the child. Child seats should not be placed in front of air bags.
- Cost of child restraints is a factor that negatively influences their use, even in high-income countries where child restraint loan programmes are common.



**WHO recommends that member countries set and enforce seat-belt and child restraint laws for all vehicle occupants.**