

# facts

## Road safety - Helmets

Head injuries are a major cause of death, injury and disability among users of motorized two-wheel vehicles. The substantial growth in the use of motorized two-wheelers, particularly in low-income and middle-income countries, is being accompanied by an increase in the number of head and traumatic brain injuries. This is of particular concern in Asia, where, for many commuters, the motorized two-wheeler is used as a family vehicle.



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WHO data show that almost a quarter of the victims of road traffic collisions who require admission to a hospital facility have sustained a traumatic brain injury.

### HELMET WEARING

The lack or inappropriate use of helmets has been shown to increase the risk of fatalities and injuries resulting from road crashes involving motorized two-wheelers.

Non-helmeted users of motorized two-wheelers are three times more likely to sustain head injuries in a crash compared to those wearing helmets.

- Helmet-wearing rates vary from slightly over zero in some low-income countries to almost 100% in places where laws on helmet use are effectively enforced.
- Although helmets have generally been widely worn in most high-income countries, there is evidence of a decline in usage in some countries.
- Low-income countries have found that more than half of adult motorized two-wheeler riders do not wear their helmets properly secured.
- Child passengers rarely wear helmets, or wear adult helmets that do not adequately protect them.
- Helmets developed in high-income countries may not be appropriate in countries with hot climates.



## WHAT CAN BE DONE TO INCREASE THE USE OF HELMETS?

- Helmets protect very effectively against the type of head injuries that may be sustained by riders and passengers of motorized two-wheelers.
- Use of helmets has been shown to reduce fatal and serious head injuries by between 20% and 45% among motorized two-wheelers users.
- Mandatory laws on helmet wearing are important in increasing use, particularly in low-income countries where motorized two-wheeler use is high.
- Laws that mandate helmet use are effective in increasing usage rates as well as reducing fatalities and injuries among two-wheeler users.

In Malaysia, the introduction of a helmet law led to a 30% reduction in motorcycle deaths.

In Italy, the introduction and implementation of a law on helmet use resulted in helmet use increasing from 20% in 1999, to more than 96% in 2001. There was a corresponding drop in the number of head injuries.

Mandatory helmet laws in the United States of America have shown their implementation and enforcement to reduce the number of injuries sustained by two-wheeler users by 20–30%.

- In low-income and middle-income countries there is a need to develop standards for helmets that are sensitive to local manufacturing capabilities and cost constraints, and that are comfortable for local climates. For example, a lightweight helmet suitable for tropical climates has been developed in Viet Nam, while in Malaysia research is underway to develop helmets specifically suitable for children.



**WHO recommends that member countries set and enforce helmet-wearing laws.**