

## InterRisk Thai Report <2022 No.02>

### Importance of seat belt and helmet

#### [Summary]

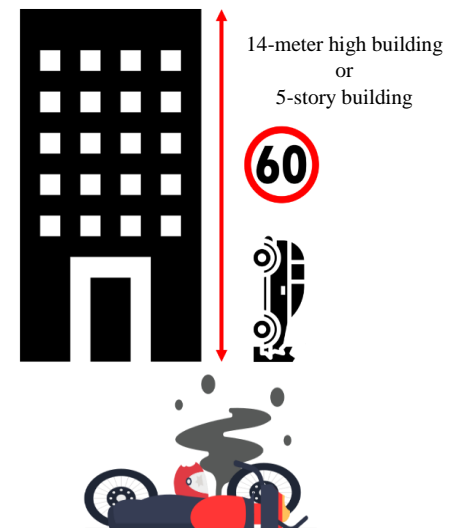
- Fastening a seat belt can reduce the risk of accident fatalities by 40% for the passengers in the front roll and 70% for the back seat passengers.
  - Helmet-wearing is effective in preventing death by an estimated 43% (for riders) and 58% (for passengers).
  - Fastening a seat belt and wearing a helmet with the right type and right method will help reduce severe injuries and deaths.
  - The car seat of children should be selected and installed appropriately for safety.
  - All persons in a car are required to fasten seat belts / on a motorcycle are required to wear helmets.
- The infraction can result in a fine of up to 400 - 5,000 THB.

#### What happens to your body during a road accident?

The impact caused by a car traveling at 60 km/hr. is equal to a car falling from a 14-meter high building or a 5-story building. During the traveling, the passenger's speed will equal to the car's speed. If the accident occurs while the passenger does not fasten the seat belt, the head, face, and body will be thrown against the steering wheel and windshield causing unconsciousness or death.

In case of an accident without wearing a helmet, the centrifugal force will cause the head to hit the ground or solid object, causing the injury. There is a possibility of bleeding from the head wound. Even though there is no wound, severe concussion can cause brain contusion, hemorrhage in the head or other brain regions, damage to the nerve or vascular system, paralysis, and brain tumor.

Figure: The impact caused by a car traveling at 60 km/hr



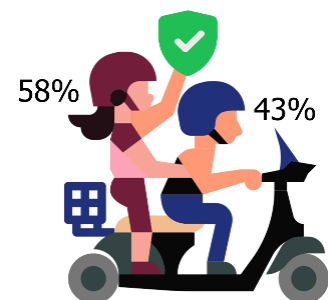
#### Advantages of fastening a seat belt and wearing a helmet



The seat belt keeps a body in the seat. It is designed to work with the airbag system during a car crash. Airbags are designed to help support the head and chest from the front, along with the seat belt locking the body to the seat. If the passengers do not fasten the seat belt, the cooperation with airbag system will be ineffective. Fastening a seat belt can reduce the risk of accident fatalities by 40% for the front seat passengers and 70% for the back seat passengers.

A helmet-wearing helps reduce the impact of an accident on the head. Due to the inner lining of the helmet can absorb the shock, the wearing of the full-face helmet which covers the entire face can mostly reduce the impact on the head from the accident. According to the published study of the statistical analysis about crashing, motorcycle helmets reduce the risk of head injuries by 50-70%. Moreover, helmet-wearing is effective in preventing death by an estimated 43% (for riders) and 58% (for passengers).

Fastening a seat belt and wearing a helmet with the right type and right method will help reduce severe injuries and deaths.

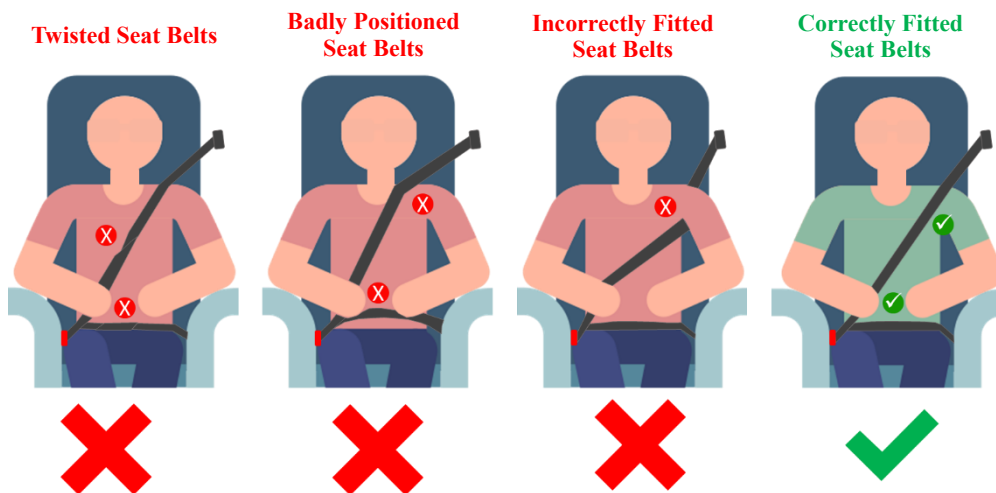


## How to use a seat belt and a helmet for safety

### Fastening a seat belt

For general passengers, a safety belt should be fastened tightly through the collarbone and not be flipped over to avoid malfunction. The thin edge of the belt can easily slice into the skin. To avoid neck and under armpit injury, the diagonal strap should rest over the shoulder. Moreover, the horizontal seat belt should be placed over the pelvic region and not across the abdomen to reduce the pressure from the belt during an accident.

Figure: How to fasten a seat belt



For pregnant women, a safety belt should be fastened across the cleavage and dropped to the side to avoid belting directly on the abdomen. Using pillows or pads on the lower abdomen to reduce the friction and pressure that may harm the unborn child. Adjusting the seat about 10 inches from the steering wheel will reduce injuries from seat belt jerks in the case of an accident.

Figure: How to fasten a seat belt for pregnant women



Children under 140 cm in height or less than 30 kg in weight should not be fastened to a seat belt due to the improper position. A car seat should be provided by attaching to the back seat of the car and straps to tighten the body of the child. There are several types of car seat provided for newborns to 12-year-old children that should be selected and installed appropriately for safety.

Figure: Types of car seat provided for children

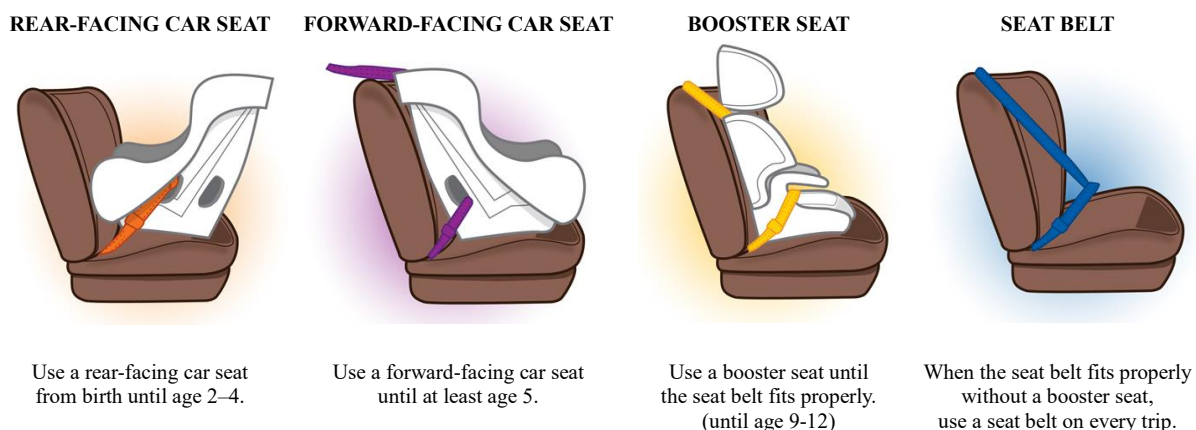


Photo: [https://www.cdc.gov/injury/images/features/child-passenger-safety/infographic\\_child-passenger-safety-2021\\_2500x1406.png](https://www.cdc.gov/injury/images/features/child-passenger-safety/infographic_child-passenger-safety-2021_2500x1406.png)

## Wearing a helmet

What to know when choosing a helmet is that helmet meets safety standards. TISI Certification is the regular standard in Thailand. For wearing safely, the helmet retention system called the chinstrap should be secured below your chin to keep the helmet on your head while riding. If an accident causes the helmet to break, the helmet should be replaced immediately and not be used again. The helmet's lifetime is 3 years, thus it should be replaced according to its lifetime. The general types of helmets are as follows;



**TISI Certification**

- A full-face helmet gives the most protection since it covers the entire head and chin.
- An open-face helmet is constructed with the same basic components as a full-face helmet but does not include chin protection.
- A half-shell helmet protects only the head, but it is more likely to come off the head upon impact. Thus, half-shell helmets are not recommended.

Figure: Types of helmet



Full-face helmet



Open-face helmet






Half-shell helmet

## **Thailand Road Safety Regulations**

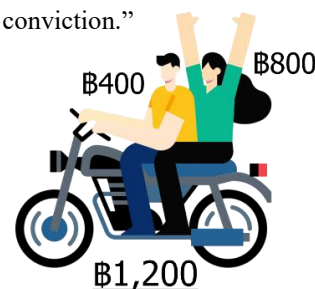
All passengers in a car are required to fasten seat belts (driver, front-seat passenger, and rear-seat passengers). Even though traveling in a car or taxi, remember to buckle up. An infraction can result in a fine of up to 500 baht per passenger. Moreover, all passengers traveling on buses and in mini-vans must fasten seat belts as well. Passengers not fastening seat belts can be fined up to 5,000 Baht per person.

Table: Fines according to Thai regulations

			
Driver	500 THB	500 THB	500 THB
Passenger	500 THB / Person	500 THB / Person	5,000 THB / Person

However, the website of the Royal Gazette published the Road Traffic Act (No. 13) B.E. 2022 dated May 7, 2022, which will come into effect in the next four months or on September 5, 2022, said as follows; “Children under 6, or with 135 cm or less in height, must be placed in a booster seat or a child safety seat (car seat), and all passengers must fasten seat belts at all times, or face a fine of up to 2,000 baht on conviction.”

For the fines for riding a motorcycle without wearing a helmet, according to the latest announcement from the Royal Thai Police, details are as follows; “If the rider does not wear a helmet is punishable with a maximum fine of not more than 400 baht, while a passenger who does not wear a helmet will be subject to a maximum fine of 800 baht or a total of 1,200 baht.”



## Conclusions

Traffic accidents are frequent in Thailand, causing a particularly high number of injuries and fatalities. Factors contributing to these injuries and fatalities include the negligence to wear seatbelts and helmets. The purpose of both driving cars and riding motorcycles is not only for personal use but also for business trips, it is a risk that companies cannot overlook accordingly. To reduce the risk of traffic accidents and fatalities, it is effective to provide regular safety driving training to employees. We, InterRisk Asia (Thailand) have been providing road safety training with KYT tools for cars and motorcycles. If you are interested, please contact us through our website.

## References

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MS&AD InterRisk Research & Consulting, Inc.  
International Section, Corporate Planning Department  
TEL.03-5296-8920  
<http://www.irric.co.jp>

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InterRisk Asia (Thailand) Co., Ltd.  
175 Sathorn City Tower, South Sathorn Road, Thungmahamek, Sathorn, Bangkok, 10120, Thailand  
TEL: +66-(0)-2679-5276  
FAX: +66-(0)-2679-5278  
<http://www.interriskthai.co.th/>

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