

# Road Safety Factsheet

October 2018

## Seatbelts: Advice and Information

This factsheet covers:

- General advice and information about seatbelts
- Seatbelt laws
- Seatbelt technology

### The Purpose of Seatbelts

Seatbelts are designed to retain people in their seats, and so prevent or reduce injuries suffered in a crash. They ensure that as little contact is made between the occupant and vehicle interior as possible and significantly reduce the risk of being thrown from a vehicle.

Seatbelts are designed to work as the key part of wider injury prevention measures and safety systems, such as airbags and head restraints, which will not be as effective in reducing the risk of injury if an occupant is not wearing a seat belt.

**ALWAYS WEAR YOUR SEATBELT WHEN TRAVELLING IN THE FRONT OR REAR OF A VEHICLE.**

**ALWAYS MAKE SURE THAT CHILDREN TRAVEL IN AN APPROPRIATE CHILD RESTRAINT UNTIL THEY ARE AT LEAST 135CM TALL OR 12 YEARS OLD, WHICHEVER COMES FIRST.**

### Facts and Figures

Car occupants form almost 60% of all road casualties. In 2016, 100,082 people were killed or injured while travelling in cars, of these 68,290 (68%) were drivers.

#### Number of car occupant casualties in 2017, by severity<sup>1</sup>

	Drivers	Passengers	All Occupants
Killed	554	233	787
Seriously Injured	5,912	2,892	8,804
Slightly Injured	61,842	28,577	90,419
All	68,290	31,792	100,082

A 2014 survey observed 98% of car drivers and 96% of front seat passengers wearing a seatbelt. 87% of rear seat passengers wear a seatbelt<sup>2</sup>. Since the law to wear seatbelts in the front was introduced in 1983, front seatbelts are estimated to have saved tens of thousands of lives in Great Britain.

A review of research about the effectiveness of seatbelts can be found on the [Road Safety Observatory](#).

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## Wearing a Seatbelt Correctly

In order to wear a seatbelt safely, the following points should be adhered to:

- The belt should be worn as tight as possible, with no slack
- The lap belt should go over the pelvic region, not the stomach
- The diagonal strap should rest over the shoulder, not the neck
- Nothing should obstruct the smooth movement of the belt by trapping it

In many vehicles, the height of the top of the seatbelt can be adjusted on the B-pillar. If you cannot get the seatbelt to fit over you correctly, as described above, you should try adjusting the height.



## Damaged Seatbelts

Seatbelts should be regularly checked for damage. Common forms of damage to the seatbelt that will reduce its effectiveness in an accident, and also lead to the vehicle failing an MOT test, are:

- Fraying or fluffing around the edges of the seatbelt
- A cut which causes the fabric to split
- A hole in the seatbelt
- Damage to the buckle

In an accident, the webbing of a seatbelt stretches, which absorbs some of the energy in an impact. This helps prevent any injury from the contact between the seatbelt and occupant. A seatbelt that has restrained an occupant in an accident would be more likely to cause an occupant injury if it were involved in another accident, and must always be replaced.

If any forces are applied to a seatbelt, which are larger than would be expected during its usual operational life, it may also be worth having it checked to see if the webbing of the belt has been strained.

If in doubt, take your car to a garage to have the belt inspected by an expert.

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## Pregnant Women and Seatbelts

All pregnant women must wear seatbelts by law when travelling in cars. This applies to both front and back seats and pregnancy does not in itself automatically provide exemption from the law.

The safest way for pregnant women to wear a seatbelt is:

- Place the diagonal strap between the breasts (over the breastbone) with the strap resting over the shoulder, not the neck.
- Place the lap belt flat on the thighs, fitting comfortably beneath the enlarged abdomen, and over the pelvis not the bump.
- The belt should be worn as tight as possible.



In this way the forces applied in a sudden impact can be absorbed by the body's frame.

Pregnant women should not wear 'Lap-only-Belts' as they have been shown to cause grave injuries to unborn children in the event of sudden deceleration. Mother and unborn child are both safer in a collision if a lap and diagonal seatbelt is being worn correctly.

## Lap Belts

Although lap belts are not recommended for pregnant women, they are safe and suitable for other adult passengers. Three-point seatbelts are safer, but wearing a lap belt is far better than wearing no seatbelt at all, because the greatest risk of injury to car occupants in an accident comes from being thrown about inside the vehicle or being ejected from it.

The lap belt should go over the pelvis (not the soft stomach area) and fit as tightly as possible. Most car manufacturers now fit at least some of their range with a three-point seatbelt in the centre of the rear seat.

## Seatbelt Adjustment

Several devices exist which are designed to attach to the seatbelts in order to pull them into a different position or change the way in which they rest on an occupant. RoSPA do not recommend the use of these devices, as no standards currently exist ensuring a basic crashworthiness.

## Child Car Seats

Children must use a child car seat until they are either 135cm in height or 12 years old. For more information on Child Car Seats, RoSPA's website, [www.childcarseats.org.uk](http://www.childcarseats.org.uk), provides advice on choosing, fitting and using child car restraints and the law about using them.

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## Seatbelt Laws

### Cars:

#### Adults

##### In the Front Seat

Drivers and front seat passengers aged 14 years or over in cars must wear a seatbelt, unless they have a medical exemption certificate.

##### In the Rear Seats

Passengers aged 14 years or over in the rear of a car must also use seatbelts, if they are fitted. It is the responsibility of the adult passenger (not the driver) to ensure that they are using the seatbelt.

##### Exemptions

Anyone with a Certificate of Exemption from Compulsory Seatbelt Wearing issued by a doctor for medical reasons is exempt from having to wear a seatbelt, but they must keep the certificate in the vehicle and show it to the police if stopped. They should also inform their insurer.

### Taxis

Licensed taxi drivers are exempt from wearing a seatbelt when 'plying for trade' or carrying passengers.

Passengers using taxis and private hire vehicles **MUST** wear a seatbelt.

### Delivery Drivers:

Van drivers and passengers must wear a seatbelt. However, goods vehicle drivers who are travelling 50m or less between deliveries or collections do not need to wear a seatbelt.

## Children

### Children Under 3 years old

#### In the Front Seat

The child **MUST** use the correct child restraint.

It is illegal to carry a child in a rear-facing child seat in the front if there is an active front passenger airbag. In this case the airbag must be deactivated or the rear-facing child seat must be placed in the rear.

#### In the Rear Seat

The child **MUST** use the correct child restraint.

It is the driver's legal responsibility to ensure that the child is correctly restrained within the law. Children under 3 years old cannot be carried in a car that does not have seatbelts fitted.

The only exception is that a child under 3 years may travel unrestrained in the rear of a licensed taxi or licensed private hire car that has a fixed partition separating the front and rear seats, if a child restraint or seatbelt is not available. However this only applies on an unexpected journey.

### Children 3 to 11 years and under 135cm tall

#### In the Front Seat

The child **MUST** use the correct child restraint.

#### In the Rear Seat

The child **MUST** use the correct restraint, where seatbelts are fitted.

There are three exceptions where a child may travel in a seatbelt rather than a child seat, if a child seat is not available. These are if the child is travelling:

1. in the rear seats of a licensed taxi or private hire vehicle
2. if the child is travelling a short distance and the journey is necessary and unexpected
3. if there are two occupied child restraints in the rear preventing a third one being fitted.

In addition, children aged 3 years or over may travel unrestrained in the rear seat of a car that does not have seatbelts fitted, provided it was originally manufactured without seatbelts.

It is the driver's legal responsibility to ensure that the child is correctly restrained.

## Children Aged 12 or 13 years or younger children 135cm or more in height

### In the Front Seat

The adult seatbelt **MUST** be worn if available.

### In the rears seats

The adult seatbelt **MUST** be worn if available.

It is the driver's legal responsibility to ensure that the child is correctly restrained

## Minibuses and Coaches:

### Minibuses and Coaches Registered On or After 1 October 2001

All minibuses and coaches registered on or after 1 October 2001 (whether they carry child or adult passengers) must have forward-facing or rearward-facing seatbelts.

### Minibuses and Coaches Registered Before 1 October 2001

When the main purpose of the trip is to transport three or more children, minibuses and coaches registered before 1 October 2001 must have a forward-facing seat for each child, fitted with either a three-point seatbelt or a lap belt.

### Minibuses - Front Seats

Drivers must wear a seatbelt.

All children must travel in rear seats (any seat behind the driver) if a child car seat or an adult seatbelt is not fitted in the front. The driver is responsible for ensuring that:

- Children under three years of age use an appropriate child restraint (if one is not fitted, they must travel in the rear)
- Children aged from three years up to their 12th birthday, and under 1.35 metres (approximately 4'5") tall use an appropriate child restraint if available, or if not available, wear the seatbelt
- Children aged 12 and 13 years (and younger children who are 1.35 metres or taller) use the seatbelt.

Passengers aged 14 years or more travelling in the front seats, or any exposed seat, must wear a seatbelt and are personally responsible for doing so.

Passengers sitting in the front seats, and any exposed seat, **MUST** use the seatbelts that are provided.

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**Rear Seats in Small Minibuses**

Passengers sitting in the rear of minibuses that have an unladen weight of 2,540 kg or less must wear seatbelts or use an appropriate child restraint. It is the driver's responsibility to ensure that:

- Children under three years of age use an appropriate child restraint
- Children aged from three years up to their 12th birthday, and under 1.35 metres (approximately 4'5") tall, use an appropriate child restraint if available, or if not available, wear the seatbelt
- Children aged 12 and 13 years (and younger children who are 1.35 metres or taller) use the seatbelt.

Passengers 14 years or over must wear seatbelts and are legally responsible for doing so.

**Rear Seats in Larger Minibuses**

In minibuses over 2,540 kg unladen weight, passengers aged 14 years or over must wear seatbelts and are legally responsible for doing so themselves. Passengers aged under 14 years are not yet required by law to wear seatbelts.

All passengers are strongly advised to wear seatbelts, or to use child restraints if available, on all journeys.

**Coaches**

Passengers sitting in seats that are in line with, or in front of, the driver (excluding seats on an upper deck) **MUST** use seatbelts that are fitted.

Passengers over the age of 14 **MUST** wear seatbelts in the rear seats of coaches. However, passengers of all ages are strongly advised to wear seatbelts or the correct child seat on all journeys.

## Seat Belt Law At-A-Glance

	Front Seats	Rear Seats	Who is responsible?
Driver	Seatbelt Must be worn if fitted	-	Driver
Child up to 3 Years of Age	Correct child restraint must be used	Correct child restraint must be used. If one is not available in a licensed taxi or private hire vehicle, the child may travel unrestrained.	Driver
Child Aged 3 to 11 and Under 135cm in height (about 4.5 Feet)	Correct child restraint must be used	Correct child restraint must be used if seatbelts are fitted.  If a child seat is not available, a child may travel using just the seatbelt in these situations : <ul style="list-style-type: none"> <li>• In a licensed taxi or private hire vehicle</li> <li>• For a short distance if the journey is unexpected and necessary</li> <li>• There isn't room to fit a third child seat</li> </ul>	Driver
Child Aged 12 or 13 years or Younger Child 135cm or more In height	Adult seatbelt must be worn if fitted	Adult seatbelt must be worn if fitted	Driver
Passengers aged 14 years and over	Must be worn if fitted	Must be worn if fitted	Passenger



## Legal Penalties

The fixed penalty for failing to wear a seatbelt as a driver or passenger is a £100 fine. If the case is taken to court, you could face a fine of up to £500.

As a driver, if you are convicted of failing to ensure that a child passenger is using an appropriate child car seat or wearing a seatbelt according to the legal requirements described above, the fixed penalty is a £100 fine. If the case is taken to court, you could face a fine of up to £500.

In addition to the legal penalties, failure to wear a seatbelt or failure to ensure that a child passenger uses an appropriate child car seat or wears a seatbelt according to the legal requirements described above, could affect any claims against your motor insurance cover.

You could also face civil proceedings for damages, if (for example) you failed to safely carry someone else's child.

**But, of course, the most serious penalty of all could be that you or a passenger loses their life.**

## Seatbelt Technology

### Pretensioners

Seatbelt pretensioners tighten the webbing in a crash to remove the slack in the belt and this helps to reduce the occupant's movement and distribute the load over the whole body.

Pretensioners tighten the seatbelt, in the first vital milliseconds of a crash, by using a very small pyrotechnic charge. Pretensioners will need replacing after a vehicle has been involved in a collision.

The pretensioners usually use the same sensor system as the vehicle's airbag to detect a rapid deceleration caused by a collision, and deploy. This can help to ensure that an integrated protection is achieved between the systems, by keeping the occupant in a position where the airbag will be most effective in reducing the risk of injury. By removing the slack in the seatbelt, the risk of the occupant coming loose from the belt and being ejected is also reduced.

There are two types of pretensioner, both of which are equally effective in removing the slack from the belt. Buckle pretensioners work by pulling the belt buckle downwards towards the floor, whereas other pretensioners are located in the B-pillar and pull the belt tight from the top attachment.



## Load Limiters

Some car seatbelts are fitted with load limiters, which have been developed because of the relatively small risk that seatbelts may cause occupant injury from the restraining force. They respond when the belt is applying a large restraining force, and release a small amount of belt to compensate. The load that the belt applies on the occupant is kept below a threshold, above which the risk of injury would be higher.

This is an important consideration when elderly occupants are using the seatbelt, as the aging of bones makes them brittle and increases the risk of injury.

## Seatbelt Reminder Systems (SBR)

Despite publicity campaigns and legislation on the use of seatbelts, not everyone uses them. Some of the excuses given for not wearing a seatbelt are, they forget to put them on, or they are only travelling short distances. 94% of men and 98% of women wear their seatbelts in the front and around 15% of rear seat occupants still don't wear their seatbelts.

To increase the use of seatbelts and encourage people to use them, vehicle manufacturers have developed reminder systems, which alert occupants that seatbelts aren't being worn.

The systems tend to operate by detecting the weight of an occupant in the chair and whether the belt is buckled. If it detects an occupant isn't wearing a seatbelt, an alarm will sound. These systems are now mandatory. Since November 2014, SBRs have been compulsory in Europe in the driver's seat on new cars.

However, from September 2019, seatbelt reminder systems will become mandatory on every new car seat, front and rear. Under the new regulations, set out by the United Nations Economic Commission for Europe (UNECE), front seat systems will need to be able to detect a passenger sitting and make an audible warning at the start of the journey if the belt is not attached. The requirements for rear seats will differ slightly, as the audible warning will only sound if the seatbelt is unbuckled during the journey<sup>3</sup>.

You should consult your vehicle's manual, which will tell you exactly when, and how the system will warn you that seatbelts are not being used. Systems can have both audio and visual alerts. Usually there will be a light on the dashboard but an alarm may sound after the vehicle has moved a certain distance, travelled for a certain length of time, or exceeded a certain speed.



## References

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<sup>1</sup> Department for Transport (2018) 'Table RAS30010: Reported casualties by gender, road user type and severity, Great Britain, 2010-14 average, 2010-2017'

URL: <https://www.gov.uk/government/statistical-data-sets/ras30-reported-casualties-in-road-accidents>

Date Accessed: 30/10/2018.

<sup>2</sup> Department for Transport (2015) 'Seatbelt and mobile phone use surveys: 2014 report'

URL: <https://www.gov.uk/government/statistics/seatbelt-and-mobile-phone-use-surveys-2014>

Date Accessed: 30/07/2018.

<sup>3</sup> Road Safety GB (2018) 'Seatbelt reminders on every new car seat from 2019'

URL: <http://roadsafetygb.org.uk/news/seatbelt-reminders-on-every-new-car-seat-from-2019/>

Date Accessed: 28/08/2018.