

LOOSE IN THE CAR

MISTAKES ADULTS MAKE CARRYING CHILDREN
CRASH TESTS AT 19MPH



www.AAtrust.com

The **AA** Motoring Trust

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The AA Motoring Trust was created by the AA to champion the interests and safety of Britain's road users.

At the heart of its work is research and information on road safety, particularly to protect our children.

The charity's work includes:

- mapping Britain's safest and least safe major roads
- crash testing new cars
- crash testing child car seats
- research showing how, where and when children are injured on the roads
- research into children's attitudes to road safety to enable better teaching
- inspecting road tunnel safety equipment

**FOR MORE INFORMATION ABOUT THE AA MOTORING TRUST'S
ACTIVITIES, OR TO MAKE A CONTRIBUTION, PLEASE VISIT**

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WELL FITTED CHILD SEATS KEEP CHILDREN SAFE

Young children in this country are very safe when travelling in cars. This is because nearly all of them use child safety seats.

Child seats are supremely effective. Rear facing baby seats reduce the risk of fatal injury in a crash by more than 70 per cent and forward facing toddler seats by more than 50 per cent. In the USA only ten per cent of children under the age of five travel unrestrained – yet they account for more than half of child deaths in cars.

But child seats must be used properly to protect our children. The AA Trust's research has shown that at least half the seats in use are not fitted properly.

Every year over 100,000 children are involved in crashes where how well they are restrained matters. Fortunately most children receive little more than a jolt or a nasty fright. But 10,000 children are hurt and 700 are killed or seriously injured.

Sometimes parents make simple mistakes fitting seats. Sometimes they take short cuts in fitting the seats, or make compromises in how they are worn in an effort to keep children quiet. This can have disastrous results.

Unfortunately using a child seat is not straightforward. Adults need to invest time in checking the seat is fitted properly. This leaflet, recreating crashes at just 19 mph, shows why, and the most important things to do and not to do.

The most important thing we can do to keep children safe in the car is to strap them in.

The tests

The tests show the results of crashes at just 19mph, using the bodyshell of a car. The dummies are the standard dummies used for safety testing in Europe and act in the same way as real people in collisions. The tests show what is likely to happen when people misfit child seats in the most common ways.

Many of the tests are based on real accidents in which children have died. The details have been changed slightly to protect those involved.

NEVER LEAVE THEM LOOSE IN THE CAR

SHE WAS LOOSE IN THE CAR

Test one

No seat belt
at all



A mother was driving her six year old daughter and 20 month old son to the shops. The toddler was in a child seat in the back, but the girl was unrestrained. The car swerved to avoid a car and hit a stationary van.

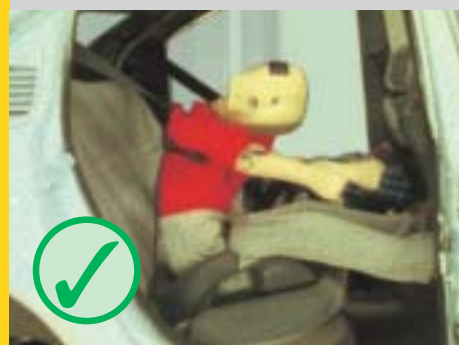
The six year old was thrown into the back of the seat in front and then upwards into the roof lining. She suffered multiple injuries and died from brain injuries. The toddler in the child seat received minor cuts to his face.

The most important thing we can do to keep children safe in the car is strap them in. Some restraint is always likely to be better than none.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



HE UNDOED IT HIMSELF

Test two

Child unfastens
his own
harness



A three year old boy was sitting in his child seat in the back, next to his eighteen month old sister who was in her own seat. At some stage in the journey the boy undid his harness, to pick up a toy he had dropped on the back seat. Later, the car collided with another.

The unrestrained boy was thrown forwards, pulled to the right by an unfastened strap caught round his arm, and hit the door pillar. He was found in the rear footwell and suffered brain injuries and leg fractures. His younger sister, who was still restrained, received only cuts and bruises.

Children can undo harnesses – so they have to be watched.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



WRONG STRAP, WRONG PLACE

Test three

Wrongly fitted
infant carrier



A baby was in an infant carrier in the rear seat of a car that struck another vehicle.

The infant carrier slid forward. The baby's head was pushed downwards and hit the back of the front seat causing a fractured skull and serious brain injury.

Investigations showed that the infant carrier had been fitted incorrectly. The adult belt, used to attach the infant carrier to the seat, had been misrouted. The lap part of the belt followed the route designed for the diagonal part and vice versa.

The baby may well have escaped serious injury if the infant carrier had been installed correctly.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



DON'T HURRY – GET IT RIGHT

Test four
Too much
strain on
a buckle



In the pouring rain a mother hurriedly loaded her two children into the car.

Later, they hit another car. Mother and one child were held in place escaping injury, but the older child, complete with her safety seat, was thrown forward, sustaining serious head injuries and fracturing a leg.

Accident investigators found that the adult seat belt buckle which should have held the child seat in place had failed under the force of the impact. This was because its buckle was in direct contact with the child seat frame. The buckle, rather than the webbing, had taken the full force and had failed catastrophically.

Proper fitting matters and needs to be checked every time.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



SHE DIDN'T WANT TO WAKE HIM

Test five

Mother holding child on her lap



An eighteen month old was travelling with his parents late at night. The boy had been sleeping before they set out and his mother didn't want to wake him by putting him in his child seat. Instead she put the child on her lap and fitted the adult seat belt round both of them believing this to be safe. The family were travelling through a junction when they struck another car.

The child was killed, crushed between his mother and the seat belt. His spine was fractured. His head hit the fascia.

The parents had no idea of the danger of carrying a child this way, and how much safer his seat was.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



THE LAP BELT ALONE ISN'T ENOUGH

Test six

Only the lap belt was used



A boy was killed by massive internal injuries when the car in which he was travelling skidded and hit a tree.

Later investigations showed that it had been common for him to travel wearing an adult belt instead of using a child seat. Because the diagonal belt ran across his neck and was uncomfortable, his parents routed it behind his back.

But the absence of the diagonal meant his body "jack-knifed" around the lap belt. The lap belt rode up, and the child's soft tummy, not his bony pelvis, took the forces following the collision.

All the parts of a seat belt or child seat need to be used properly if they are to protect as designed.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



IF ONLY SHE'D CHECKED THE INSTRUCTIONS

Test seven

Wrongly fitted combination restraint



A 30 month old boy was restrained in a "combination" seat. "Combination" car seats allow babies to sit facing backwards and for the seat to be turned so toddlers can face forwards.

The car was involved in a crash. In the impact the whole seat moved far too far forward. Because of this the boy's head hit the front seat and he suffered facial bone fractures and brain injury.

Investigations showed that the seat had moved excessively because the adult seat belt had been wrongly routed.

A combination seat uses different fitting methods when forward and rear facing. Each has to be learned and checking the instructions is vital.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



SEATS ARE FOR SITTING, BELTS ARE FOR WEARING

Test eight

Kneeling on the back seat



A girl was on a long journey in the back seat of a car when it drove into a ditch.

The girl was thrown forward. Her body hit the front seat but her head did not, breaking her neck and damaging her spinal cord.

Investigators found that because the girl was bored she had been allowed to kneel on the rear seat and look at the road behind to relieve the monotony.

Children need to be kept occupied on long journeys, but the most important thing we can do to keep children safe in the car is to strap them in.



marks areas of the body that would have suffered significant injury.

A properly restrained child in the same crash (shown below) would have suffered little or no injury.



CODE FOR IN-CAR SAFETY

NEVER

- let a child travel loose in the car
- use rear-facing infant carriers on a front-passenger seat where a passenger airbag is fitted - an airbag explosion can kill a baby
- move children to an adult belt until they are big enough
- share your seat belt with a child

ALWAYS

- strap children in
- use a child seat that fits your child and your car
- read the instructions, follow them, check them, believe them and keep them
- keep an eye on your child – many can undo the buckle

These tests were undertaken by TRL for The AA Motoring Trust at the Britax testing facility. The child restraints used in the tests were provided by Britax and deliberately installed so as to illustrate the consequences of misuse for children. These misuses can occur with all makes of child restraint.

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