

# Road Safety Factsheet

September 2017

## Carrying Children on Bicycles

There are a number of ways of carrying children while you are cycling, such as on a bike seat or in a child cycle trailer.

### Types of seat

Bike seats fall into two categories, front and rear fitting.

#### Rear fitting seats

Rear fitting seats are most common type of bike seat and typically offer the widest variety of choice. These seats fit over the back wheel and usually have a high back, safety harness and raised sides. Their features may include a reclining back meaning your child can sleep, adjustable headrests, cushion covers, storage compartments, tool free fitting, grab bars and rain covers<sup>1</sup>.

#### Front fitting seats

Front fitting seats are more compact and less common than rear fitting seats. These seats are placed in front of the rider and the rider places their arms around the seat to hold the handlebars. Their features may include headrests, cushion covers, tool free fitting and grab bars<sup>1</sup>.

### Tips for choosing a seat:

1. Use one of the special child seats readily available from good cycle dealers and child-care shops. Look for one that conforms to BS EN 14344:2004, the British Standard for "Child Seats for Cycles".
2. Seats which conform to BS EN 14344 are designed to carry children who are between 9 – 22 kgs (roughly 9 months – 5 years of age) in weight or between 9 – 15 kgs. Make sure your child is within the weight range of the seat you choose.
3. Check that your child can sit comfortably in the seat.
4. Check that the seat is suitable for use with your type of bicycle – ask the retailer.
5. Most injuries suffered by children riding in child seats happen when the children's feet get caught in the spokes of the wheel. So never use a seat without footrests to act as a shield between the child's



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feet and the wheel. It is also particularly useful to look for a seat that has secure foot straps, as a child's feet may slip off the footrest<sup>2</sup>.

6. A harness is essential. Seats that conform to BS EN 14344 must have a good restraint system, with a child-proof quick release buckle, to hold your child in place.
7. If the seat is designed to be mounted on a rear luggage carrier, make sure that the carrier can take the weight of the seat and child. It should conform to ISO 11243. Check that the seat's fixing brackets will fit the carrier. The more brackets, which fasten the seat to the bike, the better.
8. Other good features are a high back, hand rests and wrap-around construction. As the cyclist, you may be glad of a fairly light-weight seat.
9. Make sure the seat comes with good instructions about fitting and use. It is better to avoid buying a second-hand child bike seat unless you know the history of the seat. If you do decide to buy second hand, ensure that the seat has instructions and all fixings are included. You should also check that the seat is sound with no visible signs of damage (but remember, not all damage is visible to the naked eye).
10. Seats which are fixed to the front of a bicycle and are attached to the handlebars reduce the bicycle's manoeuvrability and can affect steering and balance. The child (and sometimes the seat too) can also be flung forward when the rider brakes. If you use a seat that fits onto the front of your bike, make sure it does not attach in any way to the handlebars, and that it fits between the rider and the handlebars. Do not fit one in front of the handlebars.

### Fitting a seat:

1. Be prepared to spend money on getting the seat fitted by a cycle dealer if you are at all unsure about how to do it yourself. Always ask for advice.
2. If you fit the seat yourself, follow the instructions carefully and make sure all the brackets are tight.
3. If the position of the seat is adjustable, position it so that it does not interfere with pedalling or steering. The further back a seat is, the more it will affect the handling of the bike.



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## Using a seat:

1. Children should not be carried unless they are within the weight range for the seat and they can sit up unaided for at least the length of the cycle journey. They should no longer be carried in the seat when they are above the maximum weight; in any case when they are about 4 - 5 years old they will probably complain about being cramped.
2. Always use the harness. Children often fall asleep in cycle seats, and might slip out if unrestrained. If you have a spill, or just have to brake hard, the harness will act like a seat-belt to lessen the chance of the child being hurt.
3. When you are not carrying a child, make sure that the loose harness cannot get caught in any moving parts.
4. Always make sure your child wears a cycle helmet because small children's skulls are fragile, and it is good to get them into the habit of wearing a helmet as early as possible. Ensure that the child is warm and dry: it can be cold on a bike for a child, especially when they are not pedalling to keep warm! As a rule of thumb, put at least one more layer on your child than on you.
5. Practice riding off-road or on quiet roads first. It may take a while to get used to the effect the extra load has on handling, and the child may fidget. Getting on and off, signalling and cornering will all be a little more awkward, so you'll need to re-learn how to do these things without too much wobbling. A child is quite an extra weight, especially up hills, so take it easy and use the lower gears. It can even be a good idea to load up the seat with some heavy shopping or a bag of potatoes (ensure it is safely secured) to get used to the effect that the weight has on your stability, braking and riding style before taking your child out<sup>3</sup>.
6. Slow down gradually, well in advance of junctions. The extra weight means stopping takes longer, and harsh braking will give the child a rough ride.
7. Make sure the child can't reach any moving parts, such as brakes, which might trap little fingers. Fingers can also get caught in saddles that have springs. If your saddle has springs, it could be useful to swap your saddle for one that does not, or buy a finger guard<sup>2</sup>. You should also make sure the child is correctly strapped in and that there are no loose straps or clothing that could get caught and interfere with the mechanisms of the bike<sup>3</sup>.
8. Bike seats might not be as visible as a trailer. It can be a good idea to invest in a high visibility seat cover, baby on board sticker or an LED light fixed to the seat<sup>2</sup>. If riding at night or in poor visibility, lighting must always be used. The Highway Code Rule 60 states that at night your cycle must have white front and red rear lights lit. It must also be fitted with a red rear reflector and amber pedal reflectors, if manufactured after 1/10/1985.
9. The seat needs looking after. If you've been riding in the rain, dry it to reduce the risk of rusting.



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10. Every time you use the seat, check that the fastenings are sound and all nuts, screws and so on are still tight.

## Trailers

Trailers are becoming a popular way to carry children while riding a bike, although they can be much more expensive than a bike seat.

Trailers have two bicycle type wheels and an arm attaching the trailer to your bicycle. Almost all trailers are 1 or 2 seaters, allowing cyclists to carry 1 large child or 2 smaller children. Restraining harnesses are provided so that children are strapped in comfortably, and most seats in trailers are fabric, increasing the comfort of passengers. Some trailers may also include features such as a solid floor or compartments for luggage. However, it is important to note that any luggage carried must be included when calculating the overall weight to comply with the weight restriction of the trailer<sup>4</sup>.

The two major advantages of trailers are that it can be the easiest way to transport more than one child at a time and carry more weight than a child bike seat, meaning that this can be an option once your child has outgrown their seat. The second advantage is that balance and control issues are reduced for the rider. However, as the trailer is articulated, it doesn't follow in a straight line behind you when you turn a corner, meaning you will need to practice using it<sup>5</sup>.

Trailers are usually constructed of steel or alloy tubing with a fabric cover. Often, there are windows so that children can see out of the trailer and some windows have roll up screens with a mesh behind for warm days. This has the advantage of preventing any debris entering the trailer. This is fitted to the adult bike using a secure fastener which attaches to the back of the bike frame<sup>4</sup>. There is also typically an extra retaining strap connecting the trailer arm to the bike, providing extra security<sup>5</sup>.

Unlike bike seats, trailers are low to the ground. To ensure that the trailer is clearly visible, it is advised that the trailer is fitted with an orange safety flag.



## References

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<sup>1</sup> WhyCycle? 'Cycling with Children... Baby Seats'

URL: <https://www.whycycle.co.uk/cycling-advice/cycling-with-children/baby-carrying-seats/> Date Accessed: 08/09/2017.

<sup>2</sup> Cycling UK (Undated) 'A guide to child bike seats'

URL: <http://www.cyclinguk.org/guide/guide-to-child-bike-seats> Date Accessed: 08/09/2017.

<sup>3</sup> Cycle Sprog (2017) 'How to start cycling with a small child in a bike seat, cargo or trailer'

URL: <http://www.cyclesprog.co.uk/family-cycling-advice/start-cycling-with-a-small-child-in-a-bike-seat/> Date Accessed: 08/09/2017.

<sup>4</sup> WhyCycle? 'Cycling with children...child trailers'

URL: <https://www.whycycle.co.uk/cycling-advice/cycling-with-children/child-trailers/> Date Accessed: 08/09/2017.

<sup>5</sup> Cycling UK (Undated) 'A guide to child trailers'

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