

## MOSA Guidelines

### Cycling

1. Cycling is an important and generally safe activity for all children. It has both health and environmental benefits. It is a healthy form of exercise, particularly in the light of increasing childhood obesity. It also develops co-ordination and judgement skills and is a cheap form of transport.
2. However, cycle-related accidents are a frequent cause of injury and death in both children and adults.

#### ADULTS

YEAR	Total cyclist casualties	Fatalities	Seriously injured	Slightly injured
2004	16,648	134	2,174	14,340
2005	16,561	148	2,212	14,201
2006	16,196	146	2,296	13,754

#### CHILDREN (0-15 years)

YEAR	Total cyclist casualties	Fatalities	Seriously injured	Slightly injured
2004	4,682	25	552	4,105
2005	4,286	20	507	3,759
2006	3,756	31	472	3,262

3. These figures exclude cycling accidents that occur away from a road and these could number as many as 150,000 per year.
4. Between 60-90% of cyclist casualties are not reported, especially if the victim is a child and it is a bicycle-only accident.
5. Males are more likely to be involved in accidents than females and 80% of cyclist casualties are male.
6. Over 50% of cyclist casualties suffer upper limb injuries and around 40% receive leg injuries. Chest and abdominal injuries are much less common (5%) but are often serious and accompanied by head injuries. Around 70% of all cyclists killed on the road have major head injuries and over half of cyclists injured have head injuries.
7. Cycling accidents increase as children grow older and peak at around 16 years of age. To some extent this reflects increased cycling as children grow older followed by a switch to motorised transport from the late teens onwards. It also coincides with the age when children attend secondary school and it may also indicate riskier behaviour by this age group.
8. Most cycling accidents occur in urban areas where most cycling takes place and roundabouts are particularly dangerous junctions for cyclists. 90% of child cycle accidents occur during the day, most between 0800-0900 and 1500-1800 on weekdays.
9. More cycle accidents occur from May to September than in the autumn and winter months, October to May.
10. Accidents involving child cyclists are often the result of the child playing, doing tricks, riding too fast or losing control while for teenage and adult cyclists, accidents are more likely to involve collisions with motor vehicles.
11. A wide variety of measures may help reduce the risk to cyclists: -
  - Cycle route networks.
  - Traffic calming schemes.
  - Improved driver awareness and training; cycle awareness in the national car driving test.
  - Cyclist training run by local road safety officers.
  - Cyclists being more conspicuous.
  - The wearing of cycle helmets.

12. The Highway Code recommends that cyclists wear a helmet although there is no legal requirement in the UK to do so.
13. There is contradictory evidence about the effectiveness of cycle helmets, with regard to both the incidence and the type of injuries. Some authorities, including the Department for Transport, maintain that there is considerable evidence for the effectiveness of cycle helmets and justification for helmet promotion policies, while some national cycling organisations cite the use of flawed scientific data in reaching these conclusions.
14. In several countries where helmet use has become significant there is no measurable reduction in fatal or serious injuries relating to cycling. Cycle use has fallen where helmets have been promoted or legislation for the compulsory wearing of helmets has been passed, the effect being most pronounced among teenagers.
15. Some circumstantial evidence suggests that helmeted cyclists are more likely to crash, one explanation being so-called “risk compensation” – the tendency, conscious or otherwise, for people to take greater risks if they feel better protected.
16. Cycle helmets are only designed and tested to withstand an impact equivalent to an average weight rider falling onto a stationary kerb-shaped object from a height of one metre at a speed of 12 mph.
17. Any helmet should be purchased from a reputable stockist and should be correctly fitting and fitted .
18. All helmets should fit snugly without feeling tight and should be worn correctly. The buckle should be under the chin, the straps should not cover the ears, the side adjusters should be just below the ear lobes and the helmet should be low on the forehead and not tipped backwards.
19. Only a helmet that meets one of the following standards should be used: -
  - BS EN 1078:1978 (European Standard)
  - BS 6863:1989 (British Standard)
  - SNELL B.95 (American Standard)
20. Also, the helmet should have a “CE” mark and, ideally, a BS kite mark.
21. A helmet should be replaced after one accident and if it is dropped from a height of greater than 1 metre. Some manufacturers will replace a helmet at a reduced price after an accident.
22. All cycles should be checked before each use, maintained correctly and serviced at regular intervals.

#### References:

- “Do enforced bicycle helmet laws improve public health?”. Robinson D L. BMJ. 2006: 332: 722.
- “Arguments against helmet legislation are flawed”. Hagel B *et al.* BMJ. 2006: 332: 725-726.
- “Trends in serious head injuries among English cyclists and pedestrians”. Cook *et al.* Injury Prevention. 2003: 9: 266-267.
- Cycling Accidents Facts and Figures, June 2005. Royal Society for the Prevention of Accidents.
- Dept. of Transport Road Casualties Great Britain 2004/2005/2006

#### Useful websites:

[www.rosipa.com](http://www.rosipa.com) (Royal Society for the Prevention of Accidents)  
[www.brake.org.uk](http://www.brake.org.uk) (Road safety charity)  
[www.cyclesense.net](http://www.cyclesense.net) (from the DoT)  
[www.ctc.org.uk](http://www.ctc.org.uk) (The UK’s national cyclists’ organisation)  
[www.cyclehelmets.org](http://www.cyclehelmets.org) (Bicycle Helmet Research Foundation)  
[www.bhsi.org](http://www.bhsi.org) (Bicycle Helmet Safety Institute)  
[www.bhit.org](http://www.bhit.org) (The Bicycle Helmet Initiative Trust)

#### Recommended reading:

“Cyclecraft”. John Franklin. The Stationery Office. 4<sup>th</sup> Edition. April 2007. ISBN 978-0-11703740-3.