

## Accidents to Children

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Accidental injuries are a major health problem throughout the United Kingdom. They are the commonest cause of death in children over one year of age. Every year they leave many thousands permanently disabled or disfigured.

Over 1 million children under the age of 15 experience accidents in and around the home every year, for which they are taken to Accident and Emergency Units. Many more are treated by General Practitioners and by parents and carers.

Those most at risk from a home accident are the 0-4 years age group. Falls account for the majority of non-fatal accidents whilst the highest number of deaths are due to fire. Most of these accidents are preventable through increased awareness, improvements in the home environment and greater product safety.

### What injuries occur?

The most severe injuries are associated with heat related accidents and falls from a height. Older children are more likely to sustain fractures than younger counterparts.<sup>3</sup> Younger children have a higher percentage of burns and scalds as well as poisoning and ingestion accidents.<sup>3</sup>

### Where do accidents happen?

The largest number of accidents happen in the living/dining room.<sup>3</sup> However, the most serious accidents happen in the kitchen and on the stairs. Every year over 67,000 children experience an accident in the kitchen - 43,000 of these are aged between 0-4 years, 58,000 children have accidents on the stairs.<sup>3</sup>

### When do accidents happen?

- Most happen between late afternoon and early evening, in the summer, during school holidays and at weekends.
- Factors such as stress, death in the family, chronic illness, homelessness or moving home increase the likelihood of the child having an accident.
- Some happen when the usual routine is changed or when people are in a hurry.
- Distractions and inadequate supervision are often the cause of accidents.
- Poor housing and overcrowded conditions lead to increased numbers of accidents.
- Some accidents are caused by lack of familiarity with surroundings, for example, when visiting friends or relatives, or in holiday accommodation.

### Cost of children's accidents

It is difficult to give a true cost of treating children's accidents as outpatients and inpatients but in the past it has been estimated at over £200 million a year.<sup>9</sup> It can cost as much as £250,000 to treat one severe bath water scald.<sup>11</sup>

This figure does not reflect the long-term costs of prolonged treatment and rehabilitation or the cost of pain suffering to the patient. Nor does it reflect the lifetime disfigurement or disability and the financial loss to the patient and family or work hours lost caring for an injured child.

### Who is at risk?

- 0-4 year olds have the most accidents at home.<sup>3</sup>
- Boys are more likely to have accidents than girls.<sup>3</sup>

Childhood injuries are closely linked with social deprivation. Children from poorer backgrounds are 5 times more likely to die as a result of an accident than children from better off families - and the gap is widening.<sup>1</sup>

## Why do children have accidents?

Because children are often absorbed in their own immediate interests they can be oblivious to their surroundings. They only have a limited perception of the environment because of their lack of experience or development. They are not aware of the consequences of the many new situations that they encounter daily.

### Small Stature

This may prevent a child from seeing above an obstruction or being seen by an adult.

### Inquisitiveness

Curiosity and a spirit of adventure may lead a child into danger.

### Bravado and Horseplay

Boys are particularly prone to showing off and over reaching their abilities, especially among friends. Many accidents are caused by horseplay involving pushing, shoving and wrestling.

### Stress

Tensions at home and emotional upsets caused by temper, jealousy and over excitement may cause a child to run blindly into danger. Such action may even be deliberate to seek attention.

### Inexperience

A child's interpretation of a situation may be inaccurate and adults looking after small children should be aware not to expect too much of them.

### Inadequate supervision

Children need constant supervision. Medicines, pills and toxic substances should be locked away and fires and stairs should be guarded.

### Safety and Child development

Children differ in their rate of development but the information below is a guide to development stages:

| Age        | Development  | Advice  |
|------------|--|---|
| 0-6 months | Wriggle and kick, grasp, suck, roll over.  | Do not leave on a raised surface.   |
| 6mths-1 yr | Stand, sit, crawl, put things in mouth.  | Keep small objects and dangerous substances out of reach  |
| 1-2 years  | Move about, reach things high up, and find hidden objects, walk, and climb.                                | Never leave alone, place hot drinks out of reach, use a fireguard and stairgates  |
| 2-3 years  | Be adventurous, climb higher, pull and twist things, watch and copy. Be a good role model and be watchful. | Place matches and lighters out of sight and reach.  |
| 3-4 years  | Use grown-up things, be helpful, understand instructions, be adventurous, explore, walk downstairs alone.  | Continue to be a good role model, keep being watchful but start safety training.  |
| 4-5 years  | Play exciting games, can be independent, ride a bike, enjoy stories  | They can actually plan to do things and carry it out. Rules are very important to them, as long as everybody keeps to the same ones. They enjoy learning. Continue safety training. |
| 5-8 years  | Will be subject to peer pressure and will still forget things.   | Still need supervision, guidance and support.   |

## Preventing accidents to children

"A safe, secure and sustainable environment is a prerequisite for a healthy nation." <sup>1</sup>

## **A combination of factors is required:**

### **Environment**

Improvement in planning and design results in safer homes and leisure areas. Adaptations such as fireguards and stairgates help to make the home environment safer.

### **Education**

This involves increasing the awareness of the risk of accidents in a variety of settings and providing information on ways of minimising these risks.

### **Empowerment**

Local consultation and community involvement can generate a strong sense of commitment and ownership. Accident prevention initiatives, which have been influenced by the community, are more likely to reflect local need and therefore encourage greater commitment.

### **Enforcement**

There is legislation which relates to child safety. These regulations ensure that the products we buy meet a reasonable level of safety performance and that new dwellings meet an acceptable level of safety.

## **General Safety Advice**

- Children should be supervised at all times.
- Keep floors free of toys and obstructions that can be tripped over.
- Always use a securely fitted safety harness in a pram, pushchair or highchair.
- Never leave babies unattended on raised surfaces.
- Do not place baby bouncers on raised surfaces - they could fall off with the movement of the baby.
- The use of baby-walkers and table-mounted high chairs is not recommended.

## **Falls**

Around 10 children die as a result of falls each year - some from windows and balconies and the remainder mostly from stairs. [2.4.10](#)

44% of all children's accidents involve falls. [3](#)

Most falls involve tripping over on the same level. However, the most serious consequences result from falls between two levels, such as falling out of a pram or highchair or falling from a bed. The worst injuries are sustained when a child falls from a great height or lands on something hard, sharp or hot.

## **Stairs and Windows**

### **Prevention**

- Fit a safety gate (to BS 4125) [5](#) at the top and bottom of stairs.
- Never leave tripping hazards on the stairs.
- Stairs should be carefully maintained - damaged or worn carpet should be repaired or removed.
- Make sure balustrades are strong and do not have any footholds for climbing.
- Stairs should always be well lit.
- Fit child resistant window locks but make sure you can get out easily in an emergency.
- Do not put anything under the window that can be climbed on.

## **Fires**

Domestic fires pose one of the greatest risks to children. Children playing with matches and lighters frequently start house fires - 46% of all fatal accidents to children are in house fires. [2](#)

### **Prevention**

- Keep matches and lighters out of sight and reach of children.
- Always use a fireguard and secure it to the wall.

- Extinguish and dispose of cigarettes properly.
- Have an escape route planned, and practise it, in case of fire.
- Fit a smoke alarm which complies with BS 5446 and check it regularly.
- The incidence of burns and scalds in young children is much higher than that of older children and adults. <sup>3</sup>

### Scalds

Most scalds are caused by hot drinks being spilt. A child's skin is much more sensitive than an adult's and a hot drink can still scald a child 15 minutes after being made. Hot bath water is responsible for the highest number of fatal and severe scalding injuries among young children. Around 500 children, mainly under fives, are admitted to hospital and a further 2000 attend A and E departments every year as a result of bath water scalds.

### Prevention

- Never hold a hot drink and a child at the same time.
- Put hot drinks out of reach.
- Encourage the use of a coiled flex or a cordless kettle.
- Keep small children out of the kitchen whenever possible.
- Run the domestic hot water system at 46°C or fit a thermostatic valve to taps.
- When running a bath turn the cold water on first and always test the water temperature with your elbow before letting a child get into the bath or shower.
- Always use rear hotplates and turn the panhandles away from the front of the cooker.

### Glass- related accidents

The increased use of glass in the home has led to more glass related accidents. Every year children die following an accident with architectural glass. Many children are also injured when glass tumblers and bottles break.

### Prevention

- Use safety glass to BS 6206 (laminated, toughened or glass which passes the impact test) in all replacement windows and doors - especially at low level. Laminated glass is good for safety and security.
- Make existing glass safer by applying shatter resistant film.
- When buying furniture which incorporates glass, look for approval to BS 7376 and BS 7449
- Always clear up broken glass quickly and dispose of it safely.
- Buy a greenhouse or cold frame with special safety glazing features or isolate with fencing.

### Poisoning

Most poisoning accidents involve medicines, household products and cosmetics. Some poisoning agents can cause breathing difficulties - seek medical attention immediately.

Over 28,000 children receive treatment for poisoning, or suspected poisoning accidents every year. <sup>3</sup>

### Prevention

- Keep medicines and chemicals out of sight and reach of children, preferably in a locked cupboard.
- Wherever possible, buy products in child resistant containers.
- Always store chemicals in their original containers.
- Dispose of unwanted medicines and chemicals safely.
- Avoid buying plants with poisonous leaves or berries or those that can irritate the skin

### Suffocating and choking

Children can swallow, inhale or choke on items such as small toys, peanuts and marbles.

### Prevention

- Choose toys appropriate to the age of the child.
- Ensure that small objects such as marbles and peanuts and small toys are kept out of reach of children under 3 years old.

- Encourage older children to keep their toys away from their younger playmates.
- Pull cords on curtains and blinds should be kept short and kept out of reach.
- Keep animals, especially cats, out of the bedroom and use a net on a pram.

### Drowning

Children can drown in less than 3cm of water. They should be under constant supervision when in or near any water.

### Prevention

- Never leave children or babies in the bath unsupervised, even for a moment.
- Never leave uncovered bowls or buckets of water around the home.
- Paddling pools should be emptied and stored away when not in use.
- Garden ponds should be filled in while children are small or securely fenced off. Take special care when visiting other people's gardens.

### References

- 1 DEPARTMENT OF HEALTH. Our healthier nation: a contract for health. Consultation Paper. London: The Stationary Office, 1998.
- 2 Office for National Statistics: Mortality Statistics; injury and poisoning 2002: England & Wales. Series DH4 no. 27
- 3 CONSUMER SAFETY UNIT. 24th Annual Report, Home Accident Surveillance System. London: Department of Trade and Industry, 2002.
- 4 General Register Offices for Scotland: Annual Report of the Registrar General for Scotland 2002.
- 5 BS 4125: 1991 Specification for safety requirements for child safety barriers for domestic use.
- 6 BS 5446: Part 1: 1990 Specification for self contained smoke alarms and point-type smoke detectors.
- 7 BS 7376: 1990 Specification for inclusion of glass in the construction of tables or trolleys.
- 8 BS 7449: 1991 Specification for inclusion of glass in the construction of furniture other than tables or trolleys, including cabinets, shelving systems and wall hung or free standing mirrors.
- 9 HOGG, C. Preventing children's accidents: a guide for health authorities and boards . London: Child Accident Prevention Trust, 1996.
- 10 General Register Office (Northern Ireland): Registrar General Annual Report 2002: Section 6- Causes of death.
- 11 CAPT (Child Accident Prevention Trust) 18 Farringdon Lane, London EC1R 3HA