Avoiding slips, trips and broken hips

Falls on stairs in the home involving older people

STATISTICS
## CONTENTS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Deaths</td>
</tr>
<tr>
<td>2.</td>
<td>Non-fatal falls</td>
</tr>
<tr>
<td>3.</td>
<td>Where falls happen</td>
</tr>
<tr>
<td>4.</td>
<td>Why falls happen</td>
</tr>
<tr>
<td>5.</td>
<td>When falls happen</td>
</tr>
<tr>
<td>6.</td>
<td>Regional information</td>
</tr>
</tbody>
</table>

**Table 1:** Falls on stairs or steps in the home – 1996 to 1998 | 7

**Table 2:** Falls on stairs or steps in the home – 1996 to 1998 – per million people in age band per year | 7

**Table 3:** Location of non-fatal falls on stairs or steps in the home – 1996 to 1998 | 7

**Table 4:** Falls in the home – deaths and non-fatal injuries involving the over-65s – totals from 1996 to 1998 – by county or country | 8

**Table 5:** Falls on stairs or steps in the home – deaths and non-fatal injuries involving the over-65s – totals from 1996 to 1998 – by district | 9

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This report was compiled by Metra Martech Limited.
FALLS ON STAIRS IN THE HOME INVOLVING OLDER PEOPLE

Each year there are about 2.7 million accidents in the home which result in a visit to hospital. Of these accidents almost 4000 are fatal. Falls are by far the biggest cause of these accidents, 3000 every day, and of these five or six are fatal. A third of all falls, 1000 a day, and three-quarters of the deaths, three or four every day, happen as a result of falls on stairs or steps.

I. Deaths

Most of the deaths from falls on stairs or steps involve the older age groups. Detailed figures are shown in Table I. Figure 1 shows that 90 per cent of the victims are aged over 40 and 65 per cent of them are over 64. Two or three people over the age of 65 die each day as the result of a fall, at home, on stairs or steps.

![Figure 1: Deaths from falls on stairs or steps in the home, by age band – 1996 to 1998](image)

*This report was prepared by Metca Martech Limited. Figures relating to deaths are based on data supplied by the Office for National Statistics (ONS) for England and Wales, the National Health Service in Scotland for Scotland and the General Register Office in Belfast for Northern Ireland. Figures for non-fatal accidents are based on data supplied by the Consumer Affairs Directorate of the Department of Trade and Industry (DTI). The DTI data were supplied from their Home Accidents Surveillance System (HASS), a database which contains details of a representative sample of cases across the UK where the victim visits a hospital accident and emergency department as the result of an accident at home.

For both fatal and non-fatal accidents the figures have been adjusted to take account of the fact that, in a proportion of cases, the type of fall is not specified.

Non-fatal accidents are classified as 'very serious' if the victim is admitted to hospital for more than three days. Accidents are classified as 'serious' if the victim is admitted to hospital for between one and three days, if a bone is fractured, if the victim is unconscious for an hour or more, if there is a serious cut or laceration or if there is a haemorrhage of an artery or vein. Other accidents are classified as 'minor'.

All figures relate to the whole of the UK and include falls on stairs or steps, including doorsteps and stepladders, but they do not include falls from ladders.
Figure 2 shows that up to the age of 64 the number of deaths of men is double that of women, between 65 and 84 the numbers are very similar but over that age more women than men die from a fall. The higher proportion of women among the older victims arises in part because they form an increasing proportion of the population.

**FIGURE 2** Falls on stairs or steps in the home — 1996 to 1998 — total deaths by age

Table 2 shows the accident rates for men and women. It will be seen from Figure 3 that these increase with age, particularly after the age of 65, and that the rate for men is substantially higher than that for women at all ages. Among those over 85, 50 per cent more women than men die as a result of falls on stairs or steps. However, there are about three times as many women as there are men in this age band so that the rate of death for men is substantially higher than for women.

**FIGURE 3** Falls on stairs or steps in the home — 1996 to 1998 — deaths per year, per million men or women in age band
2. **Non-fatal falls**

The pattern is very different for non-fatal falls on stairs or steps. Over 80 per cent of these accidents are minor. However, nearly 20,000 accidents each year are very serious* resulting in a stay in hospital of more than three days. People are much more at risk as they get older and almost 90 per cent of the very serious injuries involve those over 40 whilst two-thirds involve those over 65. Figure 4 shows the numbers of very serious accidents in each age band and there are more details in Tables 1 and 2.

![Graph showing very serious falls on stairs or steps in the home from 1996 to 1998](image)

**FIGURE 4** Very serious falls on stairs or steps in the home – 1996 to 1998

Figure 5 shows how accident rates increase with age for the very serious injuries. Up to the age of 65 the risk is small but then increases dramatically. Accident rates for women are consistently higher than for men.

![Graph showing accident rates for very serious, non-fatal falls on stairs or steps in the home from 1996 to 1998](image)

**FIGURE 5** Accident rates for very serious, non-fatal falls on stairs or steps in the home – 1996 to 1998

* See footnote to page 1 for definition of very serious accidents.
3. Where falls happen

Accident rates for falls on stairs or steps increase as people get older but because the number of people in each age band decreases the actual number of falls declines. See the table below.

**Falls on stairs or steps and the over-65s – accidents per year**

<table>
<thead>
<tr>
<th>Age band</th>
<th>65 – 74</th>
<th>75 – 84</th>
<th>85+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths</td>
<td>257</td>
<td>382</td>
<td>246</td>
<td>885</td>
</tr>
<tr>
<td>Non-fatal accidents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very serious</td>
<td>3,300</td>
<td>14%</td>
<td>5,200</td>
<td>23%</td>
</tr>
<tr>
<td>Serious</td>
<td>4,500</td>
<td>18%</td>
<td>3,600</td>
<td>16%</td>
</tr>
<tr>
<td>Minor</td>
<td>16,600</td>
<td>68%</td>
<td>13,500</td>
<td>61%</td>
</tr>
<tr>
<td>Total non-fatal</td>
<td>24,400</td>
<td>100%</td>
<td>22,300</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Metra Martech

There are between two and three deaths each day as well as 30 very serious injuries and almost as many serious ones. Although the number of accidents declines with increasing age the proportion that are very serious increases substantially, and for the over-85s nearly half involve admission to hospital or a significant fracture.

The Department of Trade and Industry’s HASS database includes a brief description of where and when the non-fatal accidents happen. Analysis of the information shows that accidents happen when the victim trips or falls:

- on a staircase;
- over the doorstep leaving or entering the house – these accidents frequently involve the weather bar;*
- over other interior steps, usually a flight of two or three steps between adjacent rooms;
- on outside steps either in the garden or leading up to the front door;
- from a stepladder while cleaning windows etc.

Table 3 shows the relative importance of each type of accident. Figure 6 shows that over 60 per cent of the accidents occur on a staircase. These accidents tend to be more serious as victims get older. Accidents on interior steps account for 17 per cent of injuries and are less serious. Outside steps are involved in 13 per cent of cases and doorsteps in a further 7 per cent.

* The raised bar on the doorstep or threshold which prevents water blowing in under an outside door.
FIGURE 6 Where non-fatal falls happen on stairs and steps in the home – 1996 to 1998

The ONS data do not allow a similar analysis for fatalities but there is likely to be a similar pattern, though perhaps with a higher proportion of accidents on staircases and a lower one on doorsteps. Although staircase accidents are clearly the most important, the other types of accidents contribute significantly to the total.

4. Why falls happen

Other factors are mentioned in the HASS database in connection with some falls on stairs or steps. Although the information is incomplete it does give an indication of some of the more important factors that contribute to falls. The most important ones are given below together with the percentage of times each factor is mentioned as a proportion of all the factors identified:

- Many people fall at the last step thinking they are already at the bottom of the stairs. This is sometimes due to poor lighting, impaired eyesight or because the victim is carrying something. (21%)
- Accidents happen in other people’s houses (for example when the victims are visiting their children) where surroundings are unfamiliar. (12%)
- Carrying something is frequently a contributory factor, particularly on stairs. (11%)
- Slippers are often loose and lead to a trip or stumble and then a fall. (9%)
- Alcohol is recorded as contributing to 6 per cent of the falls on stairs and steps. It is likely that it contributes to a substantially higher proportion where the fact is not mentioned.
- Falls happen when victims are visiting the toilet. This may be because they are in a hurry and are suddenly on the move after a period of inactivity or are drowsy during the night. (6%)
- People trip over all sorts of things including children and pets. (5%)
- Poor lighting or failing to turn a light on is sometimes a factor and may be coupled with visits to the toilet during the night. (4%)
- Poor eyesight makes a contribution, often coupled with one of the other factors. (3%)