Keep safe this Christmas

Christmas is a time for family and celebration but official data shows that it is also one of the most dangerous times of year. Read up on the risks to make sure your Christmas is a happy one.
Keep safe this Christmas

It has long been known that the number of deaths in England and Wales rises in the winter months. Seasonal illnesses brought on by winter viruses and the cold typically cause the death rate to climb by around 20% from December to March. Over the past 10 years, there have been around 25,000 "excess winter deaths" each year.¹

Less well documented is the specific risk the Christmas holidays appear to pose. Data from the Office for National Statistics (ONS) spanning 2000-2010 shows the death rate moves up significantly between December 21 and January 19 each year. On average, this period appears to have produced an additional 2,481 deaths each year for the past decade or so. The data shows deaths building to a peak around New Year’s Day. By Christmas Eve, an average of 1,682 people are dying each day – a rise of about 10% on early December. This climbs to 1,766 on New Year’s Day.²

FIGURE 1
Christmas/New Year peak in average number of daily deaths for December/January (2000-2010)

<table>
<thead>
<tr>
<th>December/January daily average:</th>
<th>Annualised daily average 2000-2010:</th>
</tr>
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<tbody>
<tr>
<td>1,607</td>
<td>1,410</td>
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</table>

SOURCE: Office for National Statistics
So what’s going on?

The rise in deaths during the festive period is not simply to do with the weather and the general winter effect. The number of avoidable deaths, accidents in particular, rises significantly as people break with routine, leave their schools and offices behind and head out for Christmas.

Monthly data from the ONS collected from January 1995 to December 2005 shows that the following causes of death all rise significantly in December and January:

- Traffic accidents (December): up about 30% for women and 9% for men
- Accidental poisoning (December): up about 15% for women and 10% for men
- Accidental falls (December): up about 16% for women and 21% for men
- Accidents caused by fire (December): up about 40% for women and 27% for men
- Accidents due to natural and environmental factors, such as exposure to cold or flooding (January): up about 103% for women and 145% for men
- Suicide (January): up about 3% for women and 5% for men
- Homicide/assault (January): up about 12% for women and level for men

(SEE FIGURE 2)

Drink and drugs

Combined ONS figures for 2010 and 2011 show deaths where the underlying cause was alcohol and drugs were 13% above the December/January daily average between December 21 and January 19.4 Britons drink 41% more in December than the annual monthly average.

In total, about 15,000 people die each year from alcohol misuse – over 3% of all deaths. Some of these deaths5 are caused by drink driving, which rises sharply at Christmas as well as the summer months.6 Falls and alcohol poisoning account for many more.

Figure 3 shows how A&E departments get hit by a wave of admissions of individuals suffering acute intoxication at Christmas, New Year and other holiday periods.7 Not all can be helped back to health.

(SEE FIGURE 3)
FIGURE 2
Accidental deaths showing Christmas/New Year peaks (1995-2005)

Monthly ratios (averaged)

SOURCE: Office for National Statistics
FIGURE 3
Emergency admissions for less than 24 hours for acute intoxication (2007)

300  Number of admissions

New Year’s Day
258

Spring Bank Holiday weekend
Sat: 149
Sun: 123
Mon: 81

Saturday before Christmas
176

May Day weekend
Sat: 148
Sun: 138
Mon: 93

August Bank Holiday weekend
Sat: 142
Sun: 131
Mon: 96

Weekday average
59 admissions

SOURCE: NHS Hospital Episode Statistics. Data courtesy of CHKS Ltd
Accidents in the home  
(including falls, fire and choking)

Combined ONS figures for 2010 and 2011 show deaths where the underlying cause was an accident in the home to be 15% above the December/January daily average between December 21 and January 19. The figures broke down into falls, fire and choking.  

In 2011, 2,911 deaths were caused by “accidents in the home and residential institutions”. It is perhaps no surprise that many of these occur at Christmas, given that more than 80,000 people a year need hospital treatment for injuries such as falls, cuts and burns during the festive period.  

Every year, about 1,000 people are injured by their Christmas tree, usually while fixing stars, lights or other decorations to the higher branches. Around 350 people a year are hurt by Christmas tree lights. Injuries include people falling while they’re putting up lights, children swallowing the bulbs, and people getting electric shocks and burns from faulty lights.  

Fire is one of the most serious hazards associated with Christmas. You are up to 50% more likely to die in a house fire over Christmas than at any other time of year. A combination of smoking and drinking alcohol are well-known risk factors, but candle fires also claim lives each year. In 2008, there were nearly 1,400 candle fires in homes across the UK, killing 18 people and injuring more than 500 others. If you don’t believe you are at risk, watch this YouTube video (http://tinyurl.com/bpgdfyc) of a living room becoming engulfed by flames in seconds after a Christmas tree catches fire.  

Food poisoning

Christmas turkey with all the trimmings is an enduring festive staple, but for some the meal goes badly wrong.  

ONS figures for 2010 and 2011 suggest there are around 30 deaths a year in England and Wales where “food poisoning” is listed as the underlying cause.
Although more food poisoning occurs in the summer months, Christmas sees its own spike, perhaps exacerbated by the fact that 80% of people wash their turkeys before cooking them, significantly increasing the risk of spreading germs to kitchen surfaces.

One in five of us will risk food poisoning this year by eating old turkey leftovers that have been around longer than the recommended limit of two days in the fridge. 

**Murder and violence**

Domestic violence also rises at Christmas.

Home Office figures show that between April 2008 and March 2011, the number of homicides (including matricide and infanticide) was around 1.6 a day on average throughout each December and January – similar to the annual daily average of 1.65. However, between Christmas Eve and January 6, the daily average rose to 2.04: around 25% above the December/January daily average for this period.

Combined ONS figures for 2010 and 2011 show deaths where the underlying cause was assault were also around 25% above the December/January daily average between December 21 and January 19. The most common method of killing is by sharp instrument.

Domestic violence incidents are reported to go up by as much as a third on Christmas Day, and are often the focus of seasonal police awareness campaigns. According to the charity Women’s Aid, “a great deal of domestic violence is not reported … [but it] is likely to increase around holiday periods, due perhaps to pressures of family members being together for long periods”. The National Domestic Violence helpline receives a spike in calls in January.

{SEE FIGURE 4}
FIGURE 4
Christmas/New Year peak in reported homicide incidents
(April 2008-March 2011)

SOURCE: Home Office statistics
Suicide

Christmas has often been cited as a time when people who have depression are at high risk of suicide. However, ONS statistics (1995-2005) show this to be an apocryphal story: December has fewer than average suicides compared with the rest of the year, with women in particular being less likely to commit suicide in December than in any other month. The arrival of a new year, however, tells a different tale: January has one of the highest suicide rates compared with other months in the year.20

Winter illnesses

There are typically up to 20,000 emergency admissions for pneumonia in December, compared with up to 4,000 in August, while asthma typically sees more than 7,000 emergency admissions in December, compared with around 4,000 in August (2005-2010 figures)21. Overall in 2011, 25,696 people died of pneumonia alone, and more than 1,000 died of asthma.22

Newly released figures show an estimated 24,000 excess winter deaths – that is deaths over and above the number that would have occurred anyway – in England and Wales in 2011/2012 (December-March). This is an 8% reduction compared with the previous winter. As in previous years, there were more excess winter deaths in females in 2011/2012.23

Excess winter deaths are associated with low temperatures, but hypothermia is not the main cause. The majority are caused by circulatory diseases (such as cerebrovascular disease and ischaemic heart disease) and respiratory diseases.24 Combined ONS figures for 2010 and 2011 show deaths where the underlying cause was a circulatory disease were 4.4% above the December/January daily average between December 21 and January 19, and deaths where the underlying cause was a respiratory disease were up about 15%. 25

According to the ONS, the number of extra deaths in the winter may not only depend on the temperature but also on the level of disease, particularly flu, in the population. Exposure to cold or to flu infection can be fatal to people who are already vulnerable because of these pre-existing health conditions.26
Roads and weather

Merrymakers deviating from their safe routines could explain the Christmas peak in bad-weather accidents. The combination of a higher number of cars on the roads as people criss-cross the country visiting relatives, and bad weather conditions, proves deadly, particularly when returning from the Christmas break: combined ONS figures for 2010 and 2011 show deaths where the underlying cause was a land transport accident were 7% above the December/January daily average between December 21 and January 19.27

A bracing family outing can carry its own risks too: in winter 2011, there were 76 deaths due to being exposed to the cold; 25 deaths caused by falling on ice or snow, and one death involving a fall from ice skates.28 In 2009, there were at least four deaths from drowning after falling through ice; many such accidents happen when someone tries to rescue a dog or another person.29 From 2009-2010, 18,565 hospital admissions were due to a fall involving ice and snow.30 The temperatures don't have to be extreme to begin with. But once the temperature falls below 18C, every further one degree decrease in average temperature results in 8,000 additional deaths.31

{SEE FIGURE 5}
**FIGURE 5**
Christmas/New Year daily averages in specified causes of death
(December 21-January 19, 2010/2011 combined)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Assault</td>
<td>1.86</td>
<td>1.46</td>
</tr>
<tr>
<td>Accidents in the home</td>
<td>2.28</td>
<td>1.98</td>
</tr>
<tr>
<td>Land transport accidents</td>
<td>3.27</td>
<td>3.06</td>
</tr>
<tr>
<td>Alcohol and drugs</td>
<td>7</td>
<td>6.14</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>309</td>
<td>268</td>
</tr>
<tr>
<td>Circulatory diseases</td>
<td>503</td>
<td>482</td>
</tr>
</tbody>
</table>

**SOURCE:** Office for National Statistics
Learning from the data:
10 tips for keeping safe this Christmas

The Christmas holiday is a period where you may find yourself doing things you wouldn’t normally. So take a second to think through any potential dangers:

1 Watch out for fires, falls and faulty fairy lights: avoid Christmas injuries at home.
   - Prevent Christmas injuries: http://tinyurl.com/c6hyfqg

2 Cut down on your drinking during the party season, and don’t drink if you drive.
   - Festive drinking: http://tinyurl.com/cddhfnx

3 Don’t let Christmas stress boil over. If you feel that you or someone you know is at risk from a partner or family member, call the National Domestic Violence helpline on 0808 2000 247.
   - Keep calm at Christmas: http://tinyurl.com/c5euzex

4 Keep warm. By setting your heating to the right temperature (18-21C or 65-70F), you can keep your home warm and your bills as low as possible.
   - Keep warm, keep well: http://tinyurl.com/ctlzoh4

5 Norovirus, flu, colds and cold hands are all unwanted Christmas presences – so find out how to fend them off (and get your free flu jab if you’re entitled to it).
   - 10 winter health risks: http://tinyurl.com/bpaevld
Learning from the data:
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6. Check in regularly with your older relatives, friends and neighbours, who are at particular risk in the cold. If severe weather is forecast, make sure anyone who takes regular medication has enough to last a few days, as pharmacy and GP opening hours may change during extreme weather or over the Christmas and New Year period.

   - Very cold weather: http://tinyurl.com/bve7yp4
   - Medicines out of hours: http://tinyurl.com/chgaam6
   - HPA: cold weather advice: http://tinyurl.com/bs93ama

7. Do you or your child have asthma? Find out how to manage asthma in the cold.

   - Asthma in the cold: http://tinyurl.com/cr267ep

8. Cook your Christmas turkey safely – and don’t wash it!

   - Cooking turkey: http://tinyurl.com/cexud3l

9. Keep your first aid kit well stocked. Learn a few simple first aid steps such as how to deal with strains and sprains or broken bones after an icy fall or collision.

   - First aid: http://tinyurl.com/c7p7wwa
   - Interactive first aid kit: http://tinyurl.com/ccu7gjt

10. Take some time to plan a healthy Christmas for all the family.

    - Healthy Christmas: http://tinyurl.com/d8nwn4m
Sources

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4. ONS: Number of daily deaths from specified underlying causes, England and Wales, 2010/2011 combined
5. RoSPA/Department for Transport: Driving for work: Drink and drugs, 2012
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9. ONS: Deaths registered in England and Wales 2011, Table 7
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15. Home Office Statistics: Reported homicide incidents per day – figures from 01/04/2008 to 31/03/2011
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19. National Domestic Violence Helpline, run in partnership with Refuge and Women’s Aid: Calls received by the Helpline over the Christmas and New Year period from 2003/2004 to 2010/2011
21. HES Online: Articles and research – Statistics papers – Health and seasons
22. ONS: Deaths registered in England and Wales 2011, table 5.10
23. ONS: Excess Winter Mortality in England and Wales – 2011/2012 (Provisional) and 2010/2011 (Final)
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27. ONS: Number of daily deaths from specified underlying causes, England and Wales, 2010/2011 combined
28. ONS: Deaths registered in England and Wales 2011, table 5.19
29. RoSPA: press release 2010: Dog walkers urged to heed icy water warning
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