



FACTS

Fires in the Home

- Each day in Europe approximately 12 people die in house fires and 120 people are severely injured. Most at risk are young children and the elderly.¹
- In 2006 in the EU, cigarettes caused 12,900 fires which resulted in 650 deaths, 2,400 injuries, and 48 million euros in property damage.²
- The risk of death from fire is as much as 16 times higher for children of lower income families. A study done in a poor urban setting in the United Kingdom found that the major cause of burn injuries there was house fires.³
- Fatal fires most often start and spread in upholstered and polyurethane foam filled furniture².
- Fires started due to cigarettes, lighters or matches tend to result in more deaths and higher property damages than other fires⁴.
- Having a smoker in the household seems to increase the risk of death in house fire by up to 4.8 times, and impairment by alcohol and drugs, by 7.5 times⁵.
- In Europe it is estimated that fires caused by children using cigarette lighters cost the taxpayers of Europe 95 million Euros each year⁶.
- Fires which begin due to lighters or cigarettes igniting furniture or clothing pose a 20 times higher risk of death than cooking appliance fires⁷.

EFFECTIVE PREVENTION

A combination of active (smoke alarms) and passive (fire resistant products) measures is most effective. Smoke alarms increase escape time and warn of noxious carbon monoxide fumes, but do not prevent fires. Fire resistant products aid by preventing fires and slowing the growth of a fire, which lengthens escape time⁸.

Smoke Alarms

- Homes with smoke alarms typically have

a death and injury rate that is 50% **less** than the rate for homes without alarms².

- In the USA, where 95% of households have a smoke alarm, the 5% which don't have one account for 39% of reported home fires and nearly half of fire fatalities².
- In UK homes which have functioning smoke alarms the risk of death in a fire is 4 per 1000 fires, and in homes without an alarm, the risk of death is more than double that, at 9 per 1000 fires⁹.
- For every 1 EUR spent on smoke alarms, 69 EUR are saved in fire-related costs. Furthermore, the combination of smoke detectors and sprinkler systems could reduce fire-related deaths by 82% and non-fatal injuries by 46%¹⁰.
- UK research has shown that free distribution programmes can significantly increase smoke detector use in low income households².

Flame resistant nightwear and furnishings

Flame resistant products help prevent fires from igniting and slow or stop the spread of small fires, as well as increase escape times. Whilst several flame retardant chemicals have over the years been banned due to serious health risks, there are emerging options which are safer, such as barrier technology, as well as new chemicals and processes being tested under the EU's REACH programme. Close monitoring and more studies are required to ensure emerging methods are safe, but flame resistant products prove to be effective in fire and burns prevention².

The UK and Ireland are the only two EU countries to have imposed strict requirements regarding flame resistant standards for furniture and furnishings as well as for sleepwear.

Several studies on the results there support the effectiveness of this legislation, including the following:

- UK accident data shows a significant



Fires in the Home

reduction in serious burns resulting from sleepwear catching fire since the introduction of the nightwear regulations which are stricter than the current EU standard¹¹.

- The UK, which has the strictest fire safety regulations in Europe since the 1988 introduction of the Furniture and Furnishings Regulations, has reduced furniture ignited fires by 37% and fatalities by 64%¹².
- The UK Furniture and Furnishings Regulations combined with an increase in smoke alarm use have been credited with annually saving 54 lives per year, and preventing 1065 house fires in the period 2003—2007¹².
- In the first 10 years of implementation of the UK's stricter fire regulations, the number of lives saved is between 970—1860¹³.
- UK statistics show that In 1992 there were 526 fewer recorded injuries caused by upholstery fires, and in 1997 1,126 fewer reported injuries. It is expected that the UK regulations will further double in effectiveness as pre-1988 furniture gets replaced in households⁸.
- If Europe adopted the same counter-measures as the UK has done, it is estimated that annually 850 fewer people would die in house fires, and 3.6 billion euros in costs could be avoided⁸.
- The benefit to cost ratio of making fabrics and furnishings flame resistant is 40:1, and the people who will benefit the most are low income families, and young children between 1 to 4 years of age and the elderly, who may start more fires and who are the most vulnerable from escaping them⁹.
- Following the passage of the Flammable Fabrics Act of 1972 in the United States there was a 75% reduction in hospital admissions due to sleepwear burns, 17 and 66% fewer sleepwear burn fatalities².

- Worldwide, in the jurisdictions where flame resistant sleepwear regulations and testings have been implemented, the laws have been very effective in reducing sleepwear burns².

Reduced ignition propensity (RIP) cigarettes

- RIP cigarettes, sometimes called self extinguishing or fire safe cigarettes, prevent fire by quickly self-extinguishing when left unattended¹⁴.
- New York State pioneered RIP cigarette laws in 2004 by requiring all cigarettes sold in the state to be self extinguishing. As a result cigarette fire fatalities decreased 41%, and all US states, Canada and Australia passed similar legislation².
- Finland was the first EU country to pass legislation requiring RIP cigarettes, and in 2010 cigarette fire related fatalities fell 43% there as a result¹⁵.
- In the EU, RIP cigarettes have been mandatory since November 2011.

Child Resistant Lighters

- In 2006, The EU adopted legislation only allowing child resistant lighters to be sold in Europe. Whilst improvements are being made, 35% of lighters tested still don't meet safety requirements¹⁶.
- The introduction and enforcement of child resistance requirements in the United States resulted in a 58% reduction in fire and burn related injuries, saving over a half billion dollars in societal costs in 1998 alone².

RECOMMENDED POLICY ACTIONS

- For the European Commission to implement harmonious flame resistance/retardant standards for furnishings and sleepwear, and require manufacturers to prove that the flame resistance measures they use do not cause harm to health or the environment.



Fires in the Home

- For the European Commission and Member States to enforce the recent legislation on RIP cigarettes and child resistant lighters and monitor the impact on fire prevention and injuries.
- For the European Commission to establish a mechanism for the collection and publication of comparable Member States fire statistics.
- For the European Commission and Member States to widely communicate the risks and prevention measures for household fires, particularly in lower income settings.
- For the European Commission and Member States to implement smoke detector distribution and installation programmes in lower income settings.

References

- ¹ Information Bulletin of the World Fire Statistics Centre. Geneva Association. www.genevaassociation.org
- ² World Health Organisation. Burns Preventions: Success Stories from Lessons Learned. Geneva, 2011.
- ³ Roberts I. Cause specific social class mortality differentials for child injury and poisoning in England and Wales. *J Epidemiol Commun Health* 1997; 51:334—335.
- ⁴ Miller T, Romano E, Spicer R. The cost of childhood unintentional injuries and the value of prevention. *The Future of Children*: 2000 Spring/Summer; 10(1): 137-63.
- ⁵ Warda L et al. House fire prevention update. Part 1. A review of risk factors for fatal and non fatal house fires. *Injury prevention*, 1999, 5:145-150.
- ⁶ European Consumer Safety Association. Priorities in the European Union. Amsterdam, 1. 2001.
- ⁷ Fire and Flame Retardant Policy Studies. Polymer Research Centre, University of Surrey. http://www3.surrey.ac.uk/PRC/docs/openday/12_PRC_FRs.PDF. Accessed August 4 2012.
- ⁸ International Fire Statistics and the Potential Benefits of Fire Counter-Measures. Polymer Research Centre, University of Surrey, May 2005.

- ⁹ Effectiveness of the Furniture and Furnishings Fire Safety Regulations of 1988. Government Consumer Safety Research, Department of Trade and Industry UK. June 2000.
- ¹⁰ CDC Injury Fact Book 2001-2002. Residential Fires. United States Center for Disease Control, 2003.
- ¹¹ New Requirements for the Fire Safety of Children's Nightwear. BERR, Department of Business Enterprise and Regulatory Reform, October 2008.
- ¹² A statistical report to investigate the effectiveness of the Furniture and Furnishings (Fire) (Safety) Regulations 1988. UK Department for Business, Innovation, and Skills (BIS), December 2009.
- ¹³ Fire safety of upholstered furniture, A Life-Cycle Assessment—Summary Report. Swedish National Testing and Research Institute and Swedish Environmental Research Institute. 2003.
- ¹⁴ Gann, R, Steckler K, Ruitberg S, et al. Relative Ignition Propensity of Test Market Cigarettes-NIST Technical Note 1436. Gaithersburg, MD, National Institute of Standards and Technology, 2001.
- ¹⁵ Kokki E. Presentation :Fire Safety in Housing and Self-preparedness. The 19th Conference of the Nordic Safety Research Network. MSB College Revinge, Sweden. 22 June 2011.
- ¹⁶ ProSafe. Press Release: Joint Action on Lighters Significant Improvement in Cigarette Lighter Safety in the EU. Brussels, June 2012.

Related European Child Safety Alliance

Resources:

[Tipsheet: Preventing Fires in the Home](#)

[Factsheet: Contact Burns and Scalds](#)

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