

Contact Burns and Scalds

- In the European Union, burns and scalds are the **fourth leading cause of injury death to children**. The highest death rates are to children under 5 years old ¹.
- Young children are particularly vulnerable to burn-related injury and death as their skin is thinner than adults' and can suffer serious deep burns more quickly ².
- More than 55% of burn injuries occur to boys, with scalds and burns occurring predominantly to toddlers under the age of 2 years ³. With the exception of fire-works burns, which boys suffer from much more frequently, the gender difference is smaller than for other injury types ⁴.
- Momentary lack of close supervision is the most frequent cause for a burn or scald injury ⁵.
- In a study of children under 7 years of age in Norway, burns and scalds were only second to fractures in requiring hospitalisation ⁶.

Cigarette Lighters

- Children playing with cigarette lighters is a major cause of both contact burns (through contact with the flame) and household fires (when the flame ignites an object) ².
- It is estimated that between 1500—1900 injuries and 34—40 fatalities per year in the EU are the result of children finding and playing with lighters ².

Kitchen and Bathroom Burns and Scalds

- Most burns and scalds to children occur at home, particularly in the kitchen, and are caused by contact with saucepans, kettles, hot tap water, stoves, hot beverages, cooking water, irons and heaters ⁷.
- Scald burns in children are nearly as common as heat contact burns. Although they represent globally just 5% of burn fatalities, scalds tend to be severe burns and account for a disproportionate number of burn centre patients ².
- Water at 60 degrees Celsius causes a burn within 3 seconds, whilst water at 49

degrees Celsius takes approximately 10 minutes to cause significant burn injury ².

- In Athens, Greece 60% of scalded children presenting to the emergency department had been burned when a child reached for or knocked into a hot drink on a table or counter, or for a pot handle on the stove ⁸.
- Hot bath water is the most common cause of fatal and severe scalds to young children in Europe ⁹.
- Every year in the United Kingdom there are over 20 deaths as the result of scald injuries from hot baths. Around 500 children under five are admitted to hospital with a severe scald caused by bath water, and 2,000 children under age five go to their local accident and emergency department ⁹.
- A study from the UK investigated the financial costs of managing minor paediatric scalds. The mean average cost of treating such a case was 1850 Euro ²⁰. In contrast, the medical cost of treating a severe scald has been estimated at 250,000 Euro ¹⁰.
- In the United States the total annual cost of scald burn-related deaths and injuries among children aged 14 and under is estimated to be \$2.1 billion, with children aged 4 and younger accounting for \$1.2 billion ¹¹.

Fireworks

- Another cause of severe burns to children is fireworks. Most injuries occur to the hands, face, and eyes ².
- Boys are significantly more at risk for fireworks injuries than girls, likely because they handle them more. The majority of the injuries occurred in boys 12 to 15 years of age, and in a Greek study, 93% of fireworks injuries treated in emergency rooms were to boys ^{12, 13}.
- The risk of injury and death relative to exposure makes fireworks one of the riskiest consumer products available ².
- An analysis of burn accident statistics

FACTS



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suggests that at least half of all burn accidents could be prevented ¹⁴.

EFFECTIVE PREVENTION

Tap water temperature and mixing valve regulations

- Legislation requiring a safe pre-set temperature (50°C) for all water heaters has proven to be a more effective method of reducing scalds burns, especially to children, than education to encourage parents to turn down water heaters ¹⁵.
- Also, thermostatic mixing valves provide control over the water temperature exiting the bath or shower faucet and are especially recommended for dwellings in which one can not turn the heater temperature down ¹⁶.
- Maintaining lower water temperatures has the added benefit of reducing greenhouse gas emissions as well as household energy costs ¹⁷.

See ECSA'S [position statement on tap water scalds](#) for more information.

Child resistant cigarette lighters

- In 2006, The EU adopted legislation only allowing child resistant lighters to be sold in Europe. However, enforcement must be consistent, as last year 35% of lighters tested still failed to meet the requirements¹⁸.
- The 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 alone ².

Kitchen and bathroom safety

- Adopting the following simple preventive measures in the kitchen helps in the reduction of burns injuries (see *Tipsheet: Contact Burns and Scalds for more tips on prevention*):

- * using the rear positions of the cooker when cooking, and not leaving pan handles facing outwards

- * keeping hot objects, foods and liquids in places where children have no access
- * avoiding the use of tablecloths on kitchen tables ⁸.

Fireworks safety

- The impact of strict implementation and enforcement of national legislation on fireworks-related injuries helps reduce injury rates. After imposing stricter legislation in the UK, the number of injuries fell from 707 in 2001 to 494 in 2005 ².
- Aspects of fireworks safety worthy of legislation include not only safety features regarding how the fireworks are made, but also restrictions on minors purchasing fireworks, as well as limits regarding when they may be both purchased and used ².

RECOMMENDED POLICY ACTIONS

Because of the varied causes of burn and scald injuries, diverse interventions are required which target those at highest risk: children, especially those living in poverty.

The following actions are therefore recommended to address this important public health problem:

- For the European Commission to recommend to Member States that to prevent scald injuries, the water exiting bathroom taps in new and refurbished private dwellings should not exceed a maximum temperature of 50°C.
- For Member States to amend building codes for all dwellings to require installation of thermostatic mixing valves to ensure water exiting bathroom taps in new and refurbished private homes does not exceed a maximum temperature of 50°C.
- For the European Commission to enforce the ban and conduct regular market surveillance on non child resistant cigarette lighters throughout Europe.



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- For the European Commission to make selling fireworks to children under 18 years of age illegal in all Member States (presently only some countries have enacted such a law).
- For Member States to widely communicate the risks of burns and scalds at home to families with babies and toddlers.
- For Member States to widely communicate the risks of fireworks through annual campaigns targeting appropriate national holiday events such as New Year's Eve.

References

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Related European Child Safety Alliance Resources:

[Tipsheet Contact Burns and Scalds](#)

[Factsheet: Fires in the Home](#)

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

[Position Statement: Tap Water Scalds](#)

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