



## CANDLE SAFETY

### The Issue

Some candles have design flaws that increase the risk of fire. Others may contain materials that pose health hazards, especially for children. There are a number of precautions you can take to reduce health and safety risks when you burn candles.

### Background

Every year in Canada, human error is responsible for starting a number of candle fires. Some of the frequent mistakes people make include:

- leaving candles burning with no one in the room
- burning candles close to materials that can catch fire (e.g., curtains, party decorations, clothing)
- leaving burning candles within the reach of children or pets
- falling asleep or leaving the house with candles burning

In some cases, fires are started because the candle wax gets so hot it catches fire itself. Canada-wide statistics for candle fires are not available. However, in Alberta between 1990 and 1999, the number of candle fires increased by 100%, reaching a total of 723 fires with 10 fire deaths, 168 fire injuries and \$12.4 million in property damages. Because people are using candles more frequently, these figures are on the rise, especially during holidays and special occasions.

### Health and Safety Risks Associated with Candles

The most obvious hazard when you burn candles is the risk of injury or death from fire. In most cases, candle fires are caused by the

human errors noted above, but the design of candles can also increase the risk of fire and fire-related injuries. One example is candles with multiple wicks. Health Canada has tested this type of candle and with certain brands lighting all of the wicks at once can produce a single high flame, or a number of large flames close together. The result is very intense heat that can ignite nearby materials, such as curtains or clothing. These candles can also melt rapidly, leaving a large pool of hot wax that can cause burns.

The materials used in and on the candles can also pose health hazards. For example, some candles have decorations made of paper and ribbons, and some have outer layers made of tree bark, paper or other non-wax coating. These materials are very flammable and may increase the risk of burns.

Some candles may also have wicks with a metallic core that may contain lead. When these wicks burn, they produce lead vapors and dust, which can be harmful, especially for children and pregnant women. You can test candles you already own to see whether the wick contains lead by removing wax from the tip of the wick, separating the fibre strands from the wick to see if there is a metallic core, and rubbing this metallic core on a piece of white paper. If it leaves a gray mark on the paper, then the metallic core is probably lead.

Another example of a material that may be hazardous is the liquid fuel used in decorative oil lamps. These lamps are also called liquid paraffin candles. The fuel is usually a petroleum distillate, which is poisonous when swallowed. There have been at least eight incidents of Canadian children being poisoned by drinking this fuel directly from the lamps. In one case, the child died.



"Relight" candles are also hazardous. These candles can reignite spontaneously after the flame has been put out. The sale, advertising or importing of relight candles has been banned in Canada since 1977.

## Minimizing Your Risk

The following steps will help minimize your risk when you burn candles in your home.

- Follow the instructions printed on the label by the manufacturer.
- Trim candle wicks to a height of 5-7 mm before lighting the candle. Trim them again every 2-3 hours to prevent high flames.
- Take extra care if you are burning candles with more than one wick. Avoid buying candles with multiple wicks that are close together.
- Use well ventilated candle holders that are sturdy and will not tip over. Avoid wooden or plastic holders, as these can catch fire. Use caution with glass candle holders. They can break when they get too hot.
- Never drop objects, such as matches, into candles.
- Keep burning candles away from materials that can catch fire (e.g., curtains, decorations, clothing). If your clothes catch fire, "Stop, Drop and Roll."
- Keep burning candles away from the reach of children and pets.
- Do not leave candles burning with no one in the room.
- Extinguish all candles before you go to sleep.
- Do not burn candles that have lead in the wicks. When you buy candles, ask the retailer if the wicks contain lead.

- Avoid using decorative oil lamps with liquid fuel if you have children under the age of five in your household. If you choose to use this type of candle, keep the fuel locked away, out of sight and out of reach of children. If you suspect your child has swallowed liquid fuel, contact your nearest poison control centre immediately.
- Teach your children to be careful around open flames. Make sure they understand that candles are not toys, or something they can eat or drink.

## Health Canada's Role

Health Canada works closely with a number of partners to promote the safe use of products and to protect the public from product related hazards. Some of Health Canada's actions regarding candles include:

- banning the sale, advertising or importing of relight candles
- working with the candle industry to bring an end to the sale, advertising or importing of candles with lead core wicks
- monitoring the marketplace to ensure that candles being sold do not have lead core wicks
- informing Canadians about health and safety risks related to candles through fact sheets and warnings
- working with community and provincial fire officials to investigate incidents involving candles

In addition, Health Canada is preparing regulations for candles. The proposed Candles Regulations specify a limit on the lead content in wicks and other parts of candles. They also outline requirements for safety labelling on packaging, and continue

the ban on the sale, advertising or importing of re-light candles.

## Need More Info?

For more information, contact your nearest Health Canada, Consumer Product Safety Office at:  
<http://www.hc-sc.gc.ca/hecs-sesc/cps/contact.htm>  
Or call (613) 952-1014 and ask for the telephone number of the Health Canada Product Safety Office nearest you.

Also, see Health Canada's Fact Sheet, Burning Candles Can Be Dangerous  
<http://www.hc-sc.gc.ca/hecs-sesc/cps/publications/candles.htm>

See also these Health Canada Advisories about health and safety risks related to candles.

Lead in wicks:  
[http://www.hc-sc.gc.ca/english/protection/warnings/2001/2001\\_02e.htm](http://www.hc-sc.gc.ca/english/protection/warnings/2001/2001_02e.htm)

Liquid fuel:  
[http://www.hc-sc.gc.ca/english/protection/warnings/2000/2000\\_70e.htm](http://www.hc-sc.gc.ca/english/protection/warnings/2000/2000_70e.htm)

Hand-shaped candles:  
[http://www.hc-sc.gc.ca/english/protection/warnings/1997/97\\_60e.htm](http://www.hc-sc.gc.ca/english/protection/warnings/1997/97_60e.htm)

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