

Romantic candles could cause cancer, say scientists

Candlelight may be key to creating the perfect atmosphere for a romantic dinner or a relaxing bath - but it could also be a dangerous one, claim American scientists.



The study, published at American Chemical Society annual conference, involved burning the candles in a small chamber for around five hours and soaking up the chemicals released in charcoal. Photo: GETTY

By Richard Alleyne, Science Correspondent

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Researchers have found that the fumes from paraffin wax – the most common and cheapest form of candle wax – can be poisonous and even cause cancer.

They found that in unventilated spaces levels can build up and, over time, cause health problems such as allergies and asthma. In extreme cases they add to the risk of major disease, they said.

“An occasional paraffin candle and its emissions will not likely affect you,” said Amid Hamidi, the co-author of the study at South Carolina State University.

“But lighting many paraffin candles every day for years or lighting them frequently in an unventilated bathroom around a tub, for example, may cause problems.”

Besides the more serious risks, he also suggested that some people who believe they have an indoor allergy or respiratory irritation may in fact actually be reacting to air pollutants from burning candles.

The study, published at American Chemical Society annual conference, involved burning the candles in a small chamber for around five hours and soaking up the chemicals released in charcoal.

The chemicals in the charcoal were then identified using a spectrogram.

Paraffin-based candles produced clear sharp peaks for many products such as toluene, which can cause dizziness, and benzene, a carcinogen also found in tobacco smoke.

“Inhalation of hazardous chemical emissions can be the underlying cause of considerable health conditions, many possibly undetected,” the report said.

“Ideally, emission products from burning any candle source would be water and carbon dioxide, for in this case, there are no health hazards whatsoever for humans.

“However, burning candles does not produce high enough temperatures to completely burn the heavy molecules contained in paraffin wax causing the formation and emission of hazardous molecules like toluene, and benzene.”

Dr Hamidi and his colleague Ruhullah Massoudi, also tested candles made from beeswax and soy and found they did not produce the dangerous chemicals.

“Although more expensive, apparently [they] are healthier. They do not release potentially harmful amounts of indoor air pollutants while retaining all of the warmth, ambience and fragrance of paraffin candles (which are made from petroleum).”

Candles, once reserved only for power cuts, have become ever more popular in recent years. Tea lights and scented candles have become essential to the stylish home.

People are turning to candles as a way of escaping their hectic lives - and as a way of saving on energy. However they are unlikely to save money as many designer candles now cost upwards of £20.

The authors did not specify a 'safe' amount of candles. Tens of millions of candles are sold every year and the market is thought to be worth in excess of £125 million.

Dr Noemi Eiser, Honorary Medical Director, British Lung Foundation, said: “We would like to reassure people that occasional use of paraffin candles should not pose any risk to their lung health.

“However we would advise people to take sensible precautions when burning candles, such as

opening a window to keep the room ventilated to minimise the amount of emissions breathed in.”

Dr Joanna Owens, science information manager at Cancer Research UK, said: "There is no direct evidence that everyday use of candles can affect our risk of developing cancer. In terms of cancer, a far more significant type of indoor air pollution is second-hand cigarette smoke.

"When talking about cancer risk, it's important to focus on things we have hard evidence for. Lifestyle factors such as smoking, alcohol, obesity, unhealthy diets, inactivity and heavy sun exposure account for a much larger proportion of cancers."

* Meanwhile plastics believed to be virtually indestructible decompose with surprising speed in the sea and release hazardous chemicals, scientists have discovered.

A Japanese study by Nihon University in Chiba showed that polystyrene began to break down within a year, producing detectable levels of pollutants.

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