

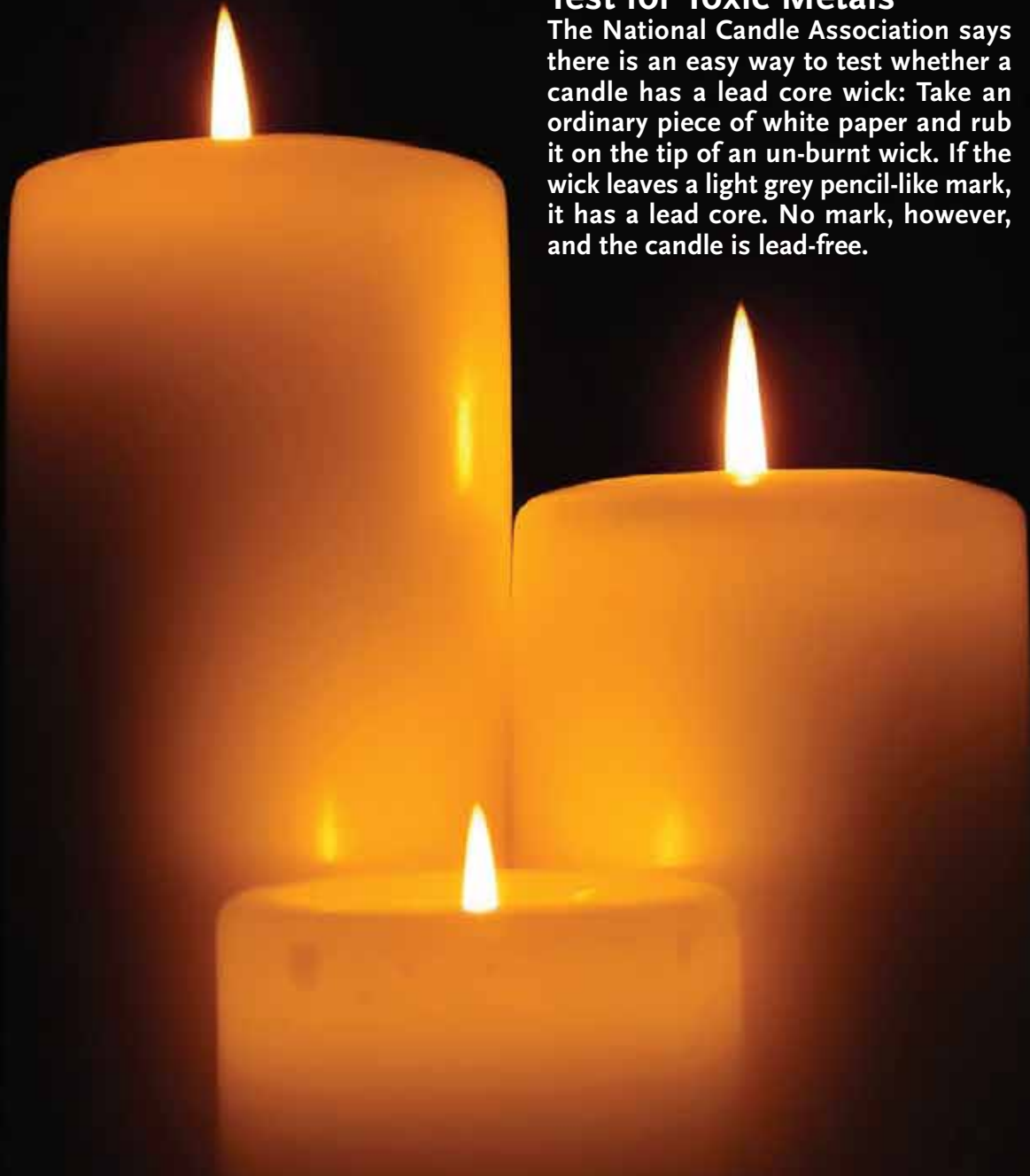
# Wicked Candles:

## Are You Unknowingly Poisoning Your Health and Environment?

### Use This Simple Test to Identify Toxic Metals

#### Test for Toxic Metals

The National Candle Association says there is an easy way to test whether a candle has a lead core wick: Take an ordinary piece of white paper and rub it on the tip of an un-burnt wick. If the wick leaves a light grey pencil-like mark, it has a lead core. No mark, however, and the candle is lead-free.



**F**all has arrived and it's that time of year when more of us add candles to inspire a relaxing atmosphere, to warm the soul and light the spirit as sunlight hours slowly diminish.

Nothing is more flattering to our face than being viewed within the glow of candles—it softens the history of our experiences. Yes, candles are instant mood-modifiers but they can also be very toxic with emissions that are not worth the ambiance.

### Identifying Health-depleting Candles

Paraffin wax—these candles are made from petroleum; a source of known human carcinogens and indoor pollution. Researchers, in a study presented at the American Chemical Society's national meeting in Washington, D.C., found that candles made from beeswax or soy, although cost more, are safer because they do not release potentially harmful toxic pollutants. According to one of the researchers, Dr. Amid Hamidi, "...some people who believe they have an indoor allergy or respiratory irritation may actually be reacting to pollutants from burning candles."

Synthetic Fragrances —synthetic fragrances used to scent candles commonly include acetone, benzaldehyde, benzyl acetate, benzyl alcohol, camphor, ethanol, ethyl acetate, limonene, linalool, and methylene chloride. The EPA studied the above listed ingredients and deemed them all potentially hazardous chemicals.

**Wick...ed Wicks** —a study conducted to measure lead released from 14 brands of candles found the following; burning four metal-wick candles for two hours results in airborne lead concentrations that pose a health threat to people and pets. Those with compromised immune systems, children, pets, and the elderly are particularly at high risk.

According to one of the researchers, Dr. Nriagu, "Besides breathing lead fumes, children can be exposed to even more lead that is deposited on the floor, furniture and walls because they often put their hands in their mouths." After similar research in Australia, lead wicks in candles were banned altogether.

### Toxicologists and candle experts offer the following advice to protect your health:

- Watch out for shiny metal wire inside the wicks of candles. Opt for pure paper or cotton instead. Remember that the label does NOT list all ingredients.
- Keep wicks trimmed to one-quarter inch for more complete combustion, and keep candles out of drafts —windiness blows more toxins into the air and causes inefficient burning.
- Watch out for slow-burning candles with additives. (These candles often feel greasy to the touch.) Instead, look for pure beeswax or soy candles, which emit less pollution.
- For aromatherapy, put a few drops of scented oil in a defuser — a tray made to fit on a light bulb; or put a few drops into boiling water.
- Don't use candles in jars when the candle leaves a soot ring on the jar's lip—the soot may be an indication of lead dust.
- Many discount and dollar stores sell candles imported from developing countries; beware, make sure you can see the cotton wick and that they're labelled all beeswax or soy.

### Historical Perspective

Most domestic candle manufacturers in the U.S. took lead out of their wicks in the 1970s, though the Consumer Product Safety Commission (CPSC) in 1974 didn't find it a health hazard; concerns about potential harm continue to rage to this day. In February 2000 the Public Citizen's Health Research Group asked the CPSC to immediately ban lead-wick candles and recall any that were still on store shelves.

According to the National Candle Association, the majority of wicks manufactured today in the U.S. are made entirely of cotton, with no metal cores. Those few wicks made with metal are typically zinc-core wicks. All of these wicks are safe, so there is no need to eschew metal wicks, just lead ones. However, candles made in many developing countries still contain lead wicks and synthetic toxic fragrance; you get what you pay for, don't jeopardize your health and that of your loved ones to save a few pennies.

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## The Health Risks

When candles with more than 95 percent lead in the wick are burnt they emit 500–1000 micrograms of lead per hour. Over one year,  $\frac{1}{2}$  to 1 micrograms of lead per cubic meter of air is regarded as the maximum level a child or adult should be exposed to. Long-term use of these candles would contaminate carpets and soft furnishings in the house with fine particles of lead. In the short-term, high exposure risks are via inhalation. Dust wipes after several months of burning lead core wick candles in a room in Texas contained 40 mg per square foot, many times the acceptable level for a room to be regarded as safe for young children. These candles are not safe to burn!

## Pregnant Women and Unborn Babies

Young children and unborn babies are particularly at risk. Even small quantities of lead are capable of causing IQ loss, learning difficulties and behavior problems. Pregnant women need to be especially wary of their lead exposure: the placenta offers no barrier to lead and exposure can result in miscarriage and damage to the fetus' developing brain and nervous system. Burning lead core wick candles poses a serious risk as these candles give off lead fumes in amounts that far exceed safe levels. Candles with more than 95 percent lead in the wick could conceivably cause severe lead poisoning (potentially death) when more than three candles were burnt in a small poorly ventilated room for more than six hours per day on an ongoing basis.

Use 100 percent beeswax or soy candles with a cotton wick. Recently, several other vegetable wax-based candles have emerged into the market; a healthy choice for your environment and our world, naturally. ■

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