## Possible Effects of Scented Candles and Plugins on You and Your Pets

## By Dr. Karen Becker

Hi, I'm Dr. Karen Becker. A whopping 75 percent of US households these days use a variety of products to scent the air in their homes, including air freshener sprays, upholstery sprays, plugins, gels, candles and incense. Some who use these products are trying to mask odors, other just want to walk into a home that smells like a beautiful meadow or a pine forest after a rain shower.

TV commercials and other advertising for air scenting products are everywhere, sending a not-so-subliminal message that most homes stink, and that you can fix the problem with a vanilla scented candle or air freshener, [and] that is this harmless solution to a very embarrassing problem that apparently plagues a lot of US homes.

Unfortunately, as appealing and as good smelling as all of these scents are, they also produce very dangerous indoor pollutants that dramatically affect our pets. Over the past decade, scientific research has shown that many household air fresheners contain chemicals that can be harmful. I don't recommend using these types of products, especially if you have any type of pet bird in your home. Birds and cats especially, in particular, are highly sensitive to airborne toxins. But if you have any animals in the home at all, I recommend that you eliminate these products.

Studies have shown that children can have as much as 30 times greater exposure to indoor pollutants than adults due to their smaller size and activity level. Now, consider these facts: Pets are even smaller than most kids. They tend to spend a lot of time near the floor, where all of these indoor pollutants eventually wind up. They groom themselves and they groom each other, which means they're ingesting the pollutant particles that have accumulated on their fur and in the environment.

Many animals spend up to 100 percent of their time indoors or stuck living at very high levels of these airborne toxins, like indoor cats for instance. These factors combine to put pets at the highest risk for all health conditions related to indoor air pollution.

Even if neither you nor your pets are having symptoms, it's still possible that air fresheners in your home are harming your health. Most of the effects of these products aren't immediately obvious and may not even manifest as respiratory issues. Some people say, "If I was having a problem, my pets or myself would have watery eyes. We'd be coughing or wheezing." But that is not the case.

## **Possible Chemical Components Found in Air Fresheners**

Air fresheners in both aerosol sprays and plugins contain a number of toxic chemicals that are dangerous to your pet's health and yours, including volatile organic compounds, or VOCs, such as acetone, ethanol, pinene and acetate. Some of which are inherently very toxic. These substances react with ozone in the air. They generate a range of secondary pollutants, such as formaldehyde and ultrafine particles.

Ultrafine particles have been linked to heart and lung disease and respiratory problems. In fact, a 2011 news report released by the American College of Allergy, Asthma and Immunology (ACAAI) linked the VOCs in air fresheners with a 34 percent increase in health problems in people with asthma.

Formaldehyde is obviously a known carcinogen that has been definitively linked to cancers of the nose and throat. It is also known to cause ongoing irritation of the throat and airways, potentially leading to secondary infection, nosebleeds, asthma and other respiratory ailments. Naphthalene in these products has been shown to cause a lot of inflammation, but also a lot of tissue damage and cancer in the lungs of rodent studies.

Phthalates in these products are linked to a disruption in hormone levels, poor semen quality, birth defects and reproductive harm. 1,4-Dichlorobenzene has been linked to compromised lung function and liver cancer in mice.

A 2001 United States Environmental Protection Agency (U.S. EPA) study concluded that candles containing fragrance produced more soot. It's possible that these organic compounds in poor-quality candle wax actually can have an overall increase in cancer risk as well. A 2009 study warns that the chemicals emitted into the air by burning candles can have a harmful effect on human health.

Paraffin candles produce potentially toxic chemicals, including alkanes, alkenes and toluene. Like air fresheners, scented candles can also contain dangerous chemicals, such as formaldehyde and VOCs. Cheap or cheaply made candles can also have toxic levels of heavy metals in the wicks. When one of these candles burns, the lead particles are released into the air. Frequent use of these candles could contribute to the development of health conditions, such as asthma, allergies and cancer.

Research shows that burning incense can be dangerous to human health. A 2015 study even suggested it's much worse that inhaling cigarette smoke. Incense is mutagenic, which means it can cause mutations in the DNA, which can lead to cancer. In the 2015 study, incense was found to be more toxic to cells and DNA than cigarette smoke. Of the 65 compounds identified in incense smoke, two were determined to be highly toxic.

## Natural Alternatives to Keeping Your Home Smelling Fresh

One of the best ways to freshen up the airs in your home is to simply open the windows when weather allows. Just bring some fresh air into your home. You can also consider adding some pet safe indoor plants. Common houseplants can actually help to really clean up the air by using their natural ability to absorb toxins through their leaves and roots and turn them into nutrients. I also strongly recommend investing in an indoor air purifier, which can provide long-term benefits to both you and your pets over time.

To add a natural scent to your home, you can simmer mint tea, cinnamon and grated orange peels in water over the stove. Or you can just do what I do, which is dilute and diffuse pet safe essential oils in your home, which is very, very effective. It smells fantastic. It's non-toxic and very, very healthy. It's a

really nice all-natural way to keep your home smelling amazing while eliminating toxic products from your life.

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