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# Newsletter

OCTOBER 2013

## All About Air Quality

In the past decade, the recorded cases of asthma have increased exponentially. While studies are being done to connect this increase to diet and allergies among other things, it's safe to assume that it could be, at least in part, due to our increasingly poor air quality.

### NASA Study

A new NASA world map released in September of 2013 compares data from over 150 years to show an increasingly "browning" world, with dark patches of toxic air concentrated mostly over the United States, Europe, China and India, the centers of the industry. According to NASA's Earth Observatory website: "In most cases, the most toxic pollution lingers for a few days or even weeks, bringing increases in respiratory and cardiac health problems at hospitals. Eventually the weather breaks, the air clears, and memories of foul air begin to fade. But that's not to say that the health risks disappear as well. Even slightly elevated levels of air pollution can have a significant effect on human health. Over long periods and on a global scale, such impacts can add up."

According to the U.S. Environmental Protection Agency (EPA), some 2.1 million deaths per year result from just one particular form of atmospheric pollution: fine particulate matter, or PM 2.5, which is emitted in car exhaust and smokestack effluent and other industrial sources of pollutants.

## Additional NASA Research

In addition to measuring increasing outdoor air quality with satellite imagery, NASA has researched methods of cleansing the atmosphere in future space stations to keep them fit for human habitation. In their research, NASA found that many common houseplants fight pollution indoors. These common household plants remove significant amounts of harmful gases out of the air, through the everyday processes of photosynthesis. Some pollutants are neutralized in the plant's soil.

## Your Indoor Air Quality Can Be Worse

The Environmental Protection Agency estimates that people spend 90% of their time indoors, but that indoor air quality can be two to five times more polluted than outdoor air, and in some studies, more than 100 times more. According to a study by the California EPA, adults and children breathe between 10,000 and 70,000 liters of air every 24 hours. As stated by WebMD, indoor air pollution is one of the most serious environmental threats to your health, yet no agency can regulate it, and few studies have been done about its effects on your health.

## What You Find Indoors

In a 2009 study, published in Environmental Health Sciences, scientists identified 586 chemicals, including the pesticides diazinon, chlorpyrifos and DDT. Phthalates were found in very high levels. Even more disturbing was the fact that they detected 120 chemicals they couldn't even identify. The deadliest three indoor air pollutants are:

1. Carbon monoxide: 400 die and thousands are sickened annually.
2. Secondhand smoke: 7,500-15,000 children are hospitalized or sickened with respiratory tract infections, and older adults with cardiovascular or lung illness are at higher risk of health problems.
3. Radon gas: It's silent. It's odorless. It's found in many American homes, and it is the second

biggest cause of lung cancer, after cigarette smoke. It's clear that our air quality is getting worse. Results from recent studies are making that clear. So, look for options to make positive changes in the air quality in your home.

### Tips for Improving Air Quality

In their publication, *The Daily Green*, the American Lung Association offers 25 tips on how to keep the air in your home healthy.

Here are a few examples:

**Don't Allow Smoking Indoors:** Each year, second hand smoke sends up to 15,000 children to the hospital and there is no safe level of this pollutant

**Don't Idle the Car in the Garage:** Fumes from cars or lawnmowers left running in enclosed spaces can endanger your health as carbon monoxide exposure can lead to weakness, nausea, disorientation, unconsciousness and even death

**Use Low-VOC Paints, varnishes or waxes:** Paints release VOCs, or volatile organic compounds, for months after application. VOCs can include highly toxic chemicals such as formaldehyde and acetaldehyde

**Clean Your Air Conditioner and Dehumidifier:** Standing water and high humidity encourage the growth of dust mites, mold and mildew. All of these can worsen asthma

**Beware of Dry Cleaning Chemicals:** Dry cleaning solvents can be toxic to breathe. Let dry cleaned items "air out" outdoors before bringing them into your home

**Avoid Toxic Household Products:** Hair and nail products, cleaning products, and art and hobby supplies can increase the levels of VOCs in your home. Some of the VOCs in these products have been linked to cancer, headaches, eye and throat irritation and worsened asthma.

## Top 15 Houseplants Recommended by NASA for Indoor Air Purification

1. *Hedera helix* English ivy
2. *Chlorophytum comosum* spider plant
3. *Epipremnum aureum* golden pothos
4. *Spathiphyllum 'Mauna Loa'* peace lily
5. *Aglaonema modestum* Chinese evergreen
6. *Chamaedorea sefritzii* bamboo or reed palm
7. *Sansevieria trifasciata* snake plant
8. *Philodendron scandens 'oxycardium'*  
heartleaf philodendron
9. *Philodendron selloum* selloum philodendron
10. *Philodendron domesticum* elephant ear  
philodendron
11. *Dracaena marginata* red-edged dracaena
12. *Dracaena fragrans 'Massangeana'* cornstalk  
dracaena
13. *Dracaena deremensis 'Janet Craig'* Janet  
Craig dracaena
14. *Dracaena deremensis 'Warneckii'* Warneck  
dracaena
15. *Ficus benjamina* weeping fig

See the new NASA map here:

Read more at [planetsave.com/2013/09/22/new-nasa-map-shows-likely-die-air-pollution](http://planetsave.com/2013/09/22/new-nasa-map-shows-likely-die-air-pollution)

For more tips on indoor air quality, see

The Daily Green article here:

[www.thedailygreen.com/environmentalnews/latest/indoor-air-quality-47020101](http://www.thedailygreen.com/environmentalnews/latest/indoor-air-quality-47020101)