

# URBAN AIR INITIATIVE



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**FLEXFUEL**  
AWARENESS  CAMPAIGN  
[WWW.FFV-AWARENESS.ORG](http://WWW.FFV-AWARENESS.ORG)

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# What is Urban Air Initiative?

- Urban Air Initiative (UAI) is a 501c4 organization that was established to serve as an educational resource on urban air pollution and health problems caused by poor quality gasoline.

**In short, we want to put the brakes on harmful emissions from poor quality gasoline!**

- UAI is asking the EPA to follow what Congress ordered them to do more than 23 years ago – **reduce toxic aromatics in gasoline**. To our dismay, the oil refiners continue to dump toxic aromatics into our gasoline. EPA refuses to enforce the law. Did you know that 25% of our gasoline contains toxic aromatics?
- **Whose most at risk for exposure to these air toxics?** People who live in urban areas. Little people, as seen below, are the same height as a vehicle tailpipe. If it's in the air, it's in your lungs.
- Since toddlers/children's lungs are still developing, when they're exposed to increased levels of air toxics, they have increased risks for developing asthma, respiratory disease & other neurological problems.
- We know the problem, but we also have a solution: ***Convey the value of ethanol as an octane replacement we can achieve cleaner air, healthier people & prosperous economies.***



**Toddlers paying the price of harmful exposure to their lungs from bad gasoline – we can do better than this!**

# Particulate Emissions from Mobile Sources are of Concern

*(Society of Automotive Engineers [SAE] research paper numbers & study sponsors referenced below)*

- Particulate matter (PM) emissions contribute to smog formation and **adverse health effects** such as **respiratory diseases** and **lung cancer**. It has been shown that most **severe toxicological** effects are caused by small particles. In addition, high surface area per mass may contain high levels of **toxic compounds like PAH's**. (**General Motors Powertrain**, SAE 2008-01-1746)
- Over the past 10 years, there has been increasing evidence that particulates generated by combustion of fossil fuels are damaging to human health. Nano-scale particles **penetrate cell membranes** and defenses, **damage DNA**, and **increase cancer** risk. (**National Renewable Energy Laboratory, U.S. Dept. of Energy**, SAE 2010-01-2125)
- Several health studies have related PM to both environmental pollution and **human health risk** such as **respiratory diseases, heart-attacks, and cancer**. The health effects are found to correlate more with the **PM size**, and less with mass. (**Massachusetts Institute of Technology**, SAE 2011-01-1305)
- Nanoparticles may pass **through the lungs** and be retained in the human body. Smaller particulates with **higher surface area**. **Toxic chemicals** are components that may impose **more harm** to humans. (**National Safety & Environment Laboratory, Japan** SAE 2008-01-2437)



The old saying of “a picture is worth a thousand words” is spot-on, judging from the mainstream media coverage of this issue.

**CNN Health**

### AIR POLLUTION MAY INCREASE STROKE, HEART ATTACK RISK

Source: CNN Health

Wed, February 15, 2012

By Anna Harding, Health.com

In their report, Monday in the *Interna Medicine* and his colleagues 1,705 stroke or Boston area with on the day-to-day various airborne including vehicl such as partic black carbon dioxide.

An analysis of 10 years of data from a major Boston stroke center has found that strokes are more likely to occur immediately following 24-hour periods in which air quality drops into the range the Environmental Protection Agency (EPA) considers “hazardous.”

**THE WALL STREET JOURNAL.**

November 8, 2011 Source: THE WALL STREET JOURNAL

### The Hidden Toll of Traffic Jams

Scientists Increasingly Link Vehicle Exhaust With Brain-Cell Damage, Higher Rates of Autism.

By ROBERT LEE HOTZ

**Los Angeles Times**

December 16, 2010 Source: Los Angeles Times

### Proximity to Freeways Increases Autism Risk, Study Finds

Short suggests air pollution could be a factor.

**REUTERS**

The Nov 16, 2011 Source: Reuters

### NIGHTMARE ROADS IDENTIFIED IN CONGESTION STUDY

By Jim Foxworth

**ScienceDaily**

### Ultrafine Particles in Air Pollution May Heighten Allergic Inflammation in Asthma

A new academic study led by UCLA scientists has found that even brief exposure to ultrafine pollution particles near a Los Angeles freeway is potent enough to boost the allergic inflammation that exacerbates asthma.

July 9, 2010 Source: Science Daily

**CBSNEWS.com**

August 16, 2009 Source: CBSNews WEBEO

### Harmful New Air Pollutant Found

By Daniel Deffen

Every day, we breathe in 300 cigarettes' worth of a newly discovered form of air pollution, new research shows.

H. Barry DeLinger, PhD, director of environmental health at Louisiana State University, calls the new finding of the 23rd national meeting of the American Chemical Society, held Aug. 17-21 in Philadelphia.

“We now have evidence that PFRs are pervasive in the environment and may exist in higher concentrations than most organic pollutants,” DeLinger says in his presentation abstract.

“One of the hazards of cigarette smoke is that it carries free radicals directly into their lungs. The new finding suggests that in person breath, the average amount of free radicals is in 300 cigarettes — every day.

DeLinger says that the chemical methods used to detect free PFRs into molecules that were mistaken for other pollutants. His studies show that these free radicals persist in the air for days or longer.

Free nitroson particles — the dangerous form of nitro-

**Air Pollution's Effect on Asthma**

Source: Univ. of California, Berkeley

October 8, 2010

By Sarah Yang

Exposure to dirty air is linked to decreased function of a gene that appears to increase the severity of asthma in children, according to a joint study by researchers at Stanford University and the University of California, Berkeley.

While air pollution is known to be a source of immediate information, this new study provides one of the first pieces of direct evidence that explains why.

The findings have potential implications for asthma both outcomes associated with polluted air, much the same as those noted for the effects of cigarette smoke.

“When it came out that cigarettes can cause molecular changes, it meant the possibility that mothers who smoked could affect the DNA of their children during fetal development,” said study lead author Dr. Karl Zegerian, a pediatrician at UCSF.

The researchers compared the participants from Fresno with 50 children, half with asthma and half without, in the relatively low-pollution city of Palo Alto, Calif. The children were matched by age, gender and asthma status, among other variables. The children were treated for breathing function, allergic sensitivity and Treg cells in the blood.

Daily air quality data came from California Air Resources Board monitoring stations. The researchers calculated an annual average of children’s exposure to particulate matter (PM<sub>2.5</sub>).

**TIME Health & Family**

09.23.2012 Source: TIME Health & Family

### Mom's Exposure to Air Pollution Can Increase Kids' Behavior Problems

By Alice Park

Pregnant women who are exposed to high levels of air pollution may be putting their children at increased risk of developing anxiety, depression and attention problems, a new study finds.

In the trial involving 253 non-smoking inner-city women who gave birth between 1999 and 2005, those with the highest levels of detectable PAH in their homes, as measured by the researchers during the motherly 3rd trimester of pregnancy, were 4.5 times more likely to have children with anxiety problems that might qualify for a clinical diagnosis. Peters and her colleagues also measured levels of compounds that PAH form in the blood, to get a sense of how much of the toxin that

“Our study provides new evidence that prenatal exposures to these air pollutants, at levels commonly encountered in New York City and other urban areas, may adversely affect child behavior,” says Peters.

The trial is a continuation of Peters’s work investigating the factors that can influence fetal development. In the first stage of this research, Peters reported in 2011 that higher levels of PAH in cord blood was

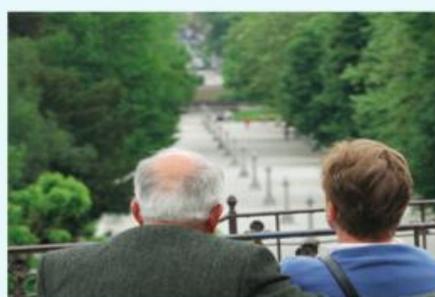
**ScienceDaily**

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July 9, 2010 Source: Science Daily

# QUESTIONS?



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