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New research: Traffic pollution is a cause of asthma

Air Quality News from IQAir, the world leader in air purifiers.

A growing number of scientists now believe that traffic-related air pollution is a cause, not just a trigger, of asthma. Recent research confirms that traffic pollution plays a role in the development of the lung disorder that goes beyond just acting as a trigger for symptoms.

What is asthma?

Asthma is a chronic lung disease that inflames and narrows the airways in the lungs, according to the National Institutes of Health. The most common recurring symptoms include:

**Wheezing.** This is a whistling or squeaky sound that occurs during breathing.

**Chest tightness.** Often this feels like someone is sitting on your chest or squeezing your rib cage.

**Shortness of breath.** Some people with asthma say they feel out of breath or can’t get the air out of their lungs.

**Coughing.** Asthma related coughing is typically worse at night or early in the morning.

Episodes of these symptoms are known as asthma attacks. During the attack, the sides of the airways in the lungs swell and the airways shrink. An asthma attack often occurs when someone with asthma is exposed to asthma triggers. Some common triggers are:

- Tobacco smoke
- Dust mites
- Cockroach allergens
- Pets
- Mold
- Smoke
- Air pollution

What is the exact cause of asthma?

While many triggers of asthma attacks are known, the exact cause of the disorder itself isn’t known, according to the National Institutes of Health. The interaction of genetic and environmental factors is believed to be at work.
Newest research focuses on traffic pollution

Experiments conducted in 2001 at the University of California, Davis, found that monkeys exposed to ozone developed asthma after only a few months exposure. Ozone is a component of traffic-related pollution. Last year, the Swiss Tropical and Public Health Institute reported that 14% of asthma cases they studied were attributable to traffic-related pollution. According to the Institute, traffic pollution is statistically comparable to secondhand smoke as a cause of asthma.

Research conducted by the University of Southern California in 2012 found that at least 8% of cases of childhood asthma in Los Angeles County were attributable to traffic-related pollution.

Reducing exposure to traffic pollution

Exposure to traffic pollution is largely a result of where a person lives, works or goes to school. Generally, concentrations of airborne pollutants are elevated within 500 feet of a busy roadway. Prevailing winds and other factors can significantly affect where pollutant levels are highest.

**Home:** The Air Resources Board (California) recommends that new housing should be sited at least 500 feet from major roadways. Those who live near a busy roadway should close windows and doors during peak traffic hours. Also, consider a high-performance air filtration system to remove particulates and other pollutants from the indoor air.

**School:** High-performance air filtration can be installed in classrooms and in central HVAC systems in schools. A few states have instituted policies indicating how close a school can be built to major highways or other significant pollution sources:

- **California** – New school sites must be located at least 500 feet from the edge of a freeway or busy traffic corridor
- **Florida** – Site must not adjoin a through highway, if practicable
- **Georgia** – Risk/hazard analysis required if site within 3 miles of major highway
- **New Mexico** – No school to be located within 400 feet of “main artery of travel”
- **West Virginia** – Schools must be located away from arterial highways

**Work:** Air pollution from traffic and other sources can be controlled in the workplace through ventilation, source control and air filtration. Those who work in buildings with poor air quality should consider purchasing a high-performance portable air purifier for their work areas.

*This online publication is brought to you by The IQAir Group, which develops innovative air quality solutions for indoor environments around the globe. IQAir is the exclusive educational partner of the American Lung Association for the air purifier industry.*