

BACKGROUNDER May 25, 2012

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## The Facts about Asthma, Your Air and CRRA

"Asthma is a chronic disease of the airways that causes recurrent and distressing episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. Asthma can be difficult to diagnose and to differentiate from other respiratory illnesses.

"Asthma is a complex disease that is increasing in prevalence in the United States. Poor, inner-city minorities have disproportionately high rates of mortality from asthma. We still don't know what causes this disease or how to cure it, but science shows us that asthma can be well controlled."

—Source: Centers for Disease Control & Prevention (<u>http://www.cdc.gov/asthma/faqs.htm</u>)

The combustion of municipal solid waste, even under the most closely controlled conditions, produces some air emissions. So do cars, buses and home-heating furnaces. Even flipping on a light switch causes a portion of the air emissions back at the power plant that produced the electricity.

Since about 1970, when the <u>Clean Air Act</u> was signed, air emissions from almost every source have been subject to increasingly stringent regulation by government agencies. The Clean Air Act is working—our air <u>is getting cleaner</u>.

So, to what extent is there a link between asthma and industrial air pollution? Some "environmentalists" have claimed a direct causal relationship between the increase in asthma rates and the operation of specific industrial sources such as power plants and trash-to-energy facilities. But do the facts support such claims?

The Connecticut Department of Public Health has compiled a list of what it calls "common triggers for asthma." That list includes

- "Tobacco smoke and other smoke,
- "Animals with fur or feathers,
- "Dust mites,
- "Strong smells and sprays,
- "Mold or mildew growing in places that are damp,
- "Pollen from trees, flowers and plants,
- "Being physically active;
- "Breathing cold air and
- "Illnesses that cause breathing problems."

In addition to the indoor agents studied extensively by the Institute of Medicine of the National Academies (<u>http://www.iom.edu</u>), there are other possible triggers for asthma that affect some people (<u>http://www.webmd.com/asthma/guide/asthma-triggers</u>). These triggers can include

- strenuous physical exercise (<u>http://www.health.com/health/condition-article/0,,20287351,00.html</u>);
- adverse weather conditions like freezing temperatures, high humidity, and thunderstorms;
- some foods and food additives and drugs; and
- strong emotional states, either positive or negative, that lead to hyperventilation.

However, with proper management asthma patients can avoid episodes caused by these factors.

Outdoor air pollution, caused by industrial emissions and automobile exhaust, also can cause an asthma episode. In fact, in large cities that have air pollution problems like Los Angeles, Houston, and Atlanta, the number of emergency department visits for asthma episodes goes up during ozone-action days when air quality is especially poor.

The Connecticut Department of Energy & Environmental Protection (DEEP) Bureau of Air Management closely monitors air quality, in particular ozone

(http://www.ct.gov/dep/cwp/view.asp?a=2684&Q=321790&depNav\_GID=1744). DEEP analysis indicates that ozone-action days are caused by climatic and weather conditions and ozone or ozone precursors transported from distant upwind sources. DEEP has also found that "the number of days Connecticut exceeded the revised [ozone] standard has declined considerably over the past 30 years" (http://www.ct.gov/dep/cwp/view.asp?a=2684&g=322062&depNav\_GID=1744).

Environment and Human Health, Inc. (EHH) (<u>http://www.ehhi.org/</u>), published a study in 2000 entitled "A Survey of The Prevalence of Asthma Among School Age Children in Connecticut" (<u>http://www.ehhi.org/reports/asthma/recommendations.shtml</u>). Information from the school districts of over half a million Connecticut school children was compiled and analyzed. EHH found that "asthma prevalence rates for elementary school children are consistent among urban, suburban and rural districts," but vary significantly according to socioeconomic status. "(T)hese findings appear to follow the socioeconomic level to a far greater degree than other possible geographic relationships, such as proximity to industry, agriculture or major highway systems that traverse the state."

So to what extent does CRRA's mission of disposing of Connecticut's solid waste in an environmentally responsible manner impact those who suffer from asthma?

There is no definitive answer to this question. Much of the current study focuses on indoor factors such as exposure to tobacco smoke, dust mites, cockroaches, cleaning products and mold. EHH found that socioeconomic status plays a more statistically significant role in asthma prevalence than does proximity to industrial activity. As Dr. Michelle M. Cloutier, director of the Asthma Center at Connecticut Children's Medical Center (http://www.connecticutchildrens.org/body\_dept.cfm?id=379), wrote, "outdoor air quality has improved overall in the past 20 years while rates of asthma have increased" (http://search.proquest.com/hartfordcourant/docview/257242377/136BC4594CF66179F99/1?accountid=46299).

All this evidence might lead one to conclude that the connection between CRRA's activities and asthma prevalence is minimal, if such a connection exists at all. Yet there are some self-proclaimed environmentalists who nevertheless single out CRRA for blame.

CRRA can, and does, operate its facilities in accordance with all applicable state and federal emissions limitations (<u>http://www.crra.org/pages/emissions.htm</u>). In most cases, emissions from its facilities are well below these limits. CRRA can, and does, conduct public outreach. Early closure of the Hartford landfill is an example of CRRA responding to public sentiment (<u>http://www.crra.org/documents/press/2004/5-2004\_HartfordLF\_clips.pdf</u>).

Asthma is a complex disease whose cause is not clearly understood. Recent studies suggest causal links to socioeconomic factors but not proximity to industrial activity. Although not scientifically linked to asthma prevalence, responsible owners of industrial sources, like CRRA, must continue to operate in a way that minimizes air emissions. CRRA is committed to doing just that (<u>http://www.crra.org/pages/emissions.htm</u>).