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Children's Environmental Health Disparities: **Hispanic and Latino American Children and Asthma**

This fact sheet focuses on relationship between environment and asthma among Hispanic children. This fact sheet also provides important actions that can be taken to protect all children.

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Pollution in the environment may harm children more than adults. This is because children's bodies are still growing. Also, they eat more, drink more, and breathe more in proportion to their body size than adults. And children's normal behavior can expose them more to pollution. This means that exposure to a given amount of pollution results in a larger quantity of the pollutant in children's bodies compared to adults.

Children of racial and ethnic minorities and poor children may be exposed to more pollution.⁹³ Thus, they may face the biggest health risks from pollution. This fact sheet describes Hispanic children's environmental health risks related to asthma. It also tells you how you can take actions to protect all children.

The burdens of asthma fall heavily on Black and Hispanic children. Overall, 8% of Hispanic children have asthma. But there are big differences among ethnic groups. Puerto Rican children have the highest rates of asthma at 20%, compared with 7% for Mexican-American children. There are also differences in hospitalizations

due to asthma. Hispanic children are almost twice as likely to be hospitalized for asthma as White children.¹⁵

What is Asthma?

Asthma is caused by the narrowing or blocking of the lung airways. People with asthma often have trouble breathing. They may experience wheezing and shortness of breath. They may feel pain or tightness in the chest and cough at night or early morning.¹³ However, children can have symptoms at anytime.⁸⁴

Asthma is a leading chronic disease affecting children. About 6.5 million children in the United States have asthma.¹⁰³ It is a major reason for children going to the hospital or being absent from school.

Asthma rates have increased worldwide.⁸⁵ The US rate increased 75% from 1980 to 1994. The largest increase was among children up to 4 years old (160%). Rates among children 5 to 14 years old increased by 74%.⁸⁶

Increases in asthma rates among poor minorities have been even

larger than the averages. They have also had larger increases in deaths from asthma.⁸⁷

Asthma is a complex disease with a number of causes. Some children may inherit a tendency to develop asthma. Racial and ethnic differences in the burden of asthma may be related to social and economic status, access to health care, and exposure to environmental triggers.¹³

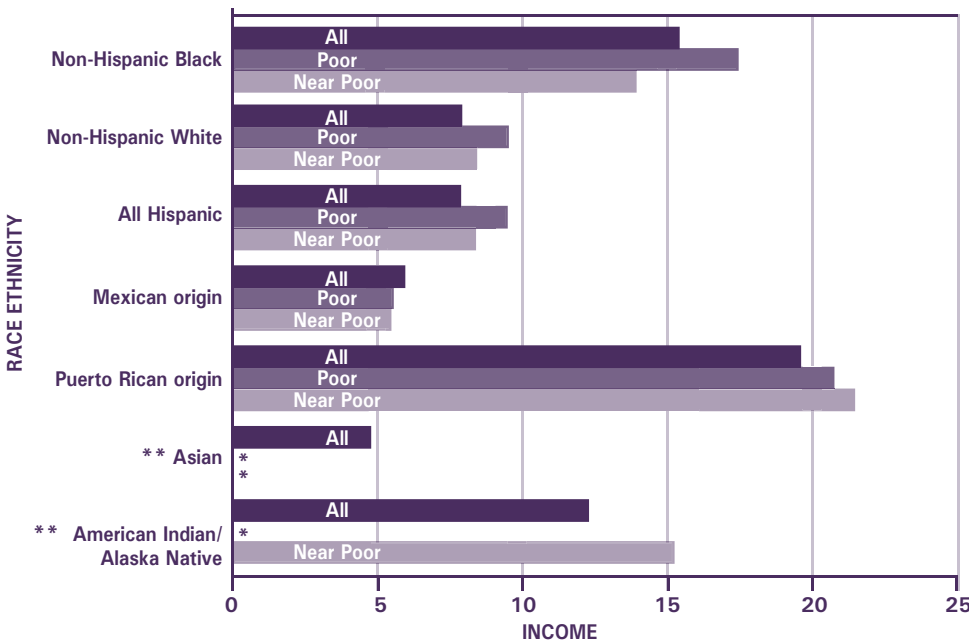
Asthma Triggers

Asthma cannot be cured. However, people with asthma can manage the disease by avoiding triggers, both indoors and outdoors and using medications.¹⁸ Triggers are objects or pollutants that cause asthma symptoms (e.g. shortness of breath, cough, wheezing and chest tightness in someone who already has developed asthma) or make them worse.¹⁸

- **Indoor Triggers:** Secondhand smoke, dust mites, cockroaches, pets with fur or feathers, household pests, mold, household sprays, and nitrogen dioxide (from gas appliances)

Asthma

Figure 1: Percentage of Children Under 18 with Asthma, 2000-2005



SOURCE: National Center for Health Statistics http://www.cdc.gov/nchs/health_data_for_all_ages.htm

* Unreliable data
 ** Includes Hispanics

can make asthma worse and/or provoke asthma attacks.^{19, 20, 88}

Outdoor Triggers: High levels of air pollution (ozone, nitrogen oxides, acidic aerosols, and fine particles) in the air are also associated with making asthma symptoms worse.^{21, 22, 89} These pollutants come from smoke, dust, and emissions from cars, factories, and power plants. Exposure to high levels of ozone may trigger asthma attacks or cause children to develop asthma. The risk is greatest when children exercise or play sports outdoors when ozone levels are high.²³ Ozone levels are usually highest in summer. Particle pollution can be high any time of year and is higher near busy roads.

What Can You Do?

If your child has asthma or you suspect he or she has asthma, visit a doctor. Ask the doctor to help you learn which triggers affect your child's asthma, and ways to help

your child avoid these triggers at home, school, and play. Work with your child's doctor to develop an asthma management plan. Be sure to share a copy of the plan with your child's teacher and school nurse. For more information on indoor asthma triggers and developing an asthma management plan, visit <http://www.epa.gov/iaq/asthma/triggers.html>.

Watch for the Air Quality Index during your local weather report. The index uses colors to show how

much pollution is in the air. Green and yellow mean air pollution levels are low. Orange, red, or purple mean pollution is at levels that may make asthma worse. (See Figure 2.)

State agencies use TV and radio to warn the public of ozone alerts. On Ozone Action Days, people with asthma should spend less time being active outdoors. Early mornings or late evenings are better times for outdoor activities when ozone is expected to be high.

Many communities have programs and resources to help families. Find a community asthma program near you by visiting the Communities in Action for Asthma-Friendly Environments Network at <http://www.asthmacommunitynetwork.org>. If you work with a community asthma program, join the Network to have access to information, tools, and proven strategies for improving the health of people with asthma.

Get involved with groups that promote policies to improve air quality. For example, some groups work to prohibit smoking in public places. Others work with local governments to help improve air quality.

An example of a successful community organization is Detroiters Working for Environmental Justice (DWEJ). They convinced the city

Figure 2: US EPA's Air Quality Index color codes.

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQI is in this range:</i>	<i>...air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

SOURCE: US EPA's AirNow website <http://airnow.gov/index.cfm?action=static.aqi>

to buy new vehicles for its fleet that run on “clean” fuels instead of diesel. The new vehicles improve air quality. DWEJ accomplished this through a number of activities. They presented local air quality data at city council meetings. They held community meetings around Detroit and invited state and city officials. They helped citizens write comments to the Metropolitan Planning Organization. And they helped citizens get appointed to the Detroit Department of Transportation community board. For more information on DWEJ visit <http://www.dwej.org/> or call 313-833-DWEJ (3935).

Join the Health and Environment Action Network (HEAN). HEAN is a national pollution monitoring program created by the National Alliance for Hispanic Health and Environmental Countdown. HEAN provides people with equipment to track local sources of pollution. The equipment includes pollution sensors, GPS devices and video cameras. For more information visit <http://hean.environmentalcountdown.com>.

What's Being Done?

Here are some examples of efforts by Federal governmental agencies, local and national organizations to childhood asthma.

EPA's Asthma Initiative supports research, education, and public outreach to help people with asthma. Learn more at www.epa.gov/asthma. Para más la información acerca del programa del asma de EPA visita www.epa.gov/espanol/saludhispana/asma.htm.

EPA's Indoor Air Quality Tools for Schools Program helps schools identify and prevent environmental asthma triggers. It also promotes



healthy school environments. For more information visit <http://epa.gov/iaq/schools>.

EPA's Asthma Home Environment Checklist gives explains how to conduct home environmental assessments. This checklist can help identify asthma triggers in the home. For a copy of the checklist visit http://www.epa.gov/asthma/pdfs/home_environment_checklist.pdf. Para más la información visita http://www.epa.gov/asthma/pdfs/asthma_trifold_span.pdf

The Children's RESPIRA Education Program provides bilingual medical services, asthma education, and home environmental assessments for Latino families in the Newark area. For more information about RESPIRA visit <http://www.programsforparents.com/respira/index.html> or call (973) 972-8801.

The Community Asthma Education Prevention Program (CAPP) of Philadelphia provides asthma education classes to patients and their families, child care providers, and school personnel. CAPP also provides in home environmental assessments to eligible

Studies show that childhood asthma is more common among Puerto Ricans than any other Hispanic group.

patients. For more information please email CAPP at cap@email.chop.edu or call (215) 590-5621.

Allies Against Asthma (AAA) helps community groups concerned about asthma in children. AAA also provides lists of asthma education programs across the US. For more information about asthma programs in your area visit: <http://www.asthma.umich.edu/index.html> or call 734-615-3312.

The New England Asthma Regional Council promotes healthy housing, healthy schools, and home assessments to identify and reduce asthma triggers. In addition, the Council is building an asthma tracking system across New England which links health data with environment data. For more information visit: <http://www.asthmaregionalcouncil.org> or call 617-451-0049 x504.

Asthma



RESOURCES:

For more information on children's environmental health, visit the EPA's Office of Children's Health Protection and Environmental Education at <http://yosemite.epa.gov/oceph/ochpweb.nsf/content/homepage.htm>. You can also call the office at (202) 564-2188.

- America's Children and the Environment data/indicators, <http://www.epa.gov/envirohealth/children/index.htm>
- Office of Minority Health, Centers for Disease Control and Prevention, <http://www.cdc.gov/omh/>
- Pediatric Environmental Health Specialty Units, www.aoc.org/PEHSU.htm or call toll free 1-888-347-2632

- Environmental Management of Pediatric Asthma: Guidelines for Health Care Providers <http://www.neefusa.org/health/asthma/asthmaguidelines.htm>
- National Center on Minority Health and Health Disparities, National Institutes of Health, <http://ncmhd.nih.gov/>
- National Alliance for Hispanic Health, <http://www.hispanichealth.org/>
- National Council of La Raza, <http://www.nclr.org/>
- Kaiser Family Foundation Health Disparities Report: A Weekly Look at Race, Ethnicity and Health/ http://kaisernetwork.org/daily_reports/rep_disparities.cfm.

- DiversityData, Harvard School of Public Health website on indicators of how people of different racial/ethnic backgrounds live includes comparative data about housing, neighborhood conditions, residential integration, and education, www.DiversityData.org
- Unnatural Causes, a TV documentary series and public outreach campaign on the causes of socioeconomic racial/ethnic inequities in health, <http://www.unnaturalcauses.org/>