

## Indicator: Asthma Hospitalizations

In 2005, nearly 4,000 Americans died of asthma. Asthma's impact on health, quality of life, and the economy remain substantial.

Asthma is a disease that affects the airways that carry oxygen in and out of the lungs. If you have asthma, the inside of these airways is irritated and swollen. This is called inflammation. The airways are sensitive and more likely to react strongly to infections, allergens (like pollen in the air) or irritants (like smoke and air pollution).

You can get asthma at any age. Asthma affects all races, ages and genders. More boys have asthma than girls; but in adulthood, more women have asthma than men. Although asthma affects people of all ages, it often starts in childhood and is more common in children than adults.

People who have asthma can experience asthma attacks. An asthma attack is a serious problem with breathing. When you have an asthma attack, it's hard to get enough air into and out of your lungs. Your chest feels tight. You may want to cough or wheeze.

An asthma attack can occur when you are exposed to things in the environment such as house dust mites and tobacco smoke. These are called asthma triggers. Other common asthma triggers include exercise, air pollution, allergens and pets. The most common triggers outdoors are pollen, exercise, pollution, ozone, diesel fuel, and pesticides.

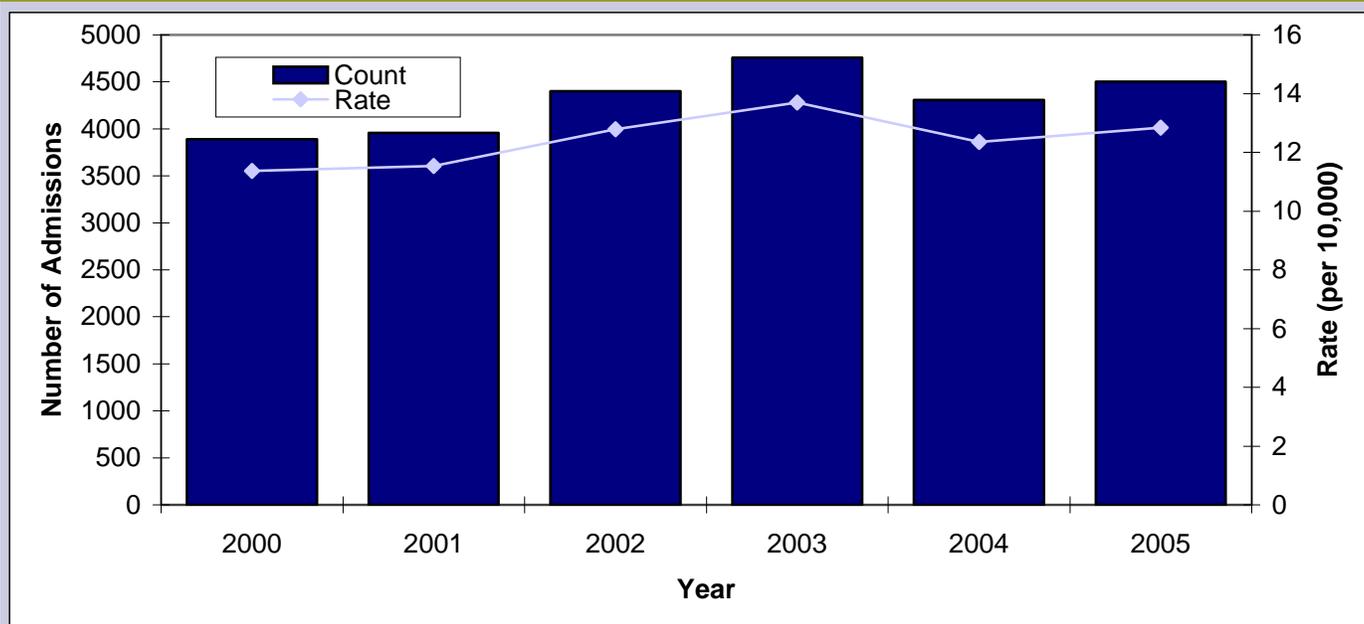
Air pollution can make asthma symptoms worse and trigger attacks. Two key air pollutants can affect asthma. One is *ozone* (found in smog). The other is *particle pollution* (found in haze, smoke, and dust). When ozone and particle pollution are in the air, adults and children with asthma are more likely to have symptoms. *Ozone* is often worst on hot summer days, especially in the afternoons and early evenings. *Particle pollution* can be bad any time of year, even in winter. It can be especially bad when the weather is calm, allowing air pollution to build up. Particle levels can also be high near busy roads, during rush hour, and around factories or when there is smoke in the air from wood stoves, fireplaces, or burning vegetation.

There is no cure for asthma, but there are ways to keep it under control. The majority of problems associated with asthma, including hospitalization, are preventable if asthma is managed according to established guidelines. Effective management includes control of exposure to factors that trigger exacerbations, adequate pharmacological management, continual monitoring of the disease, and patient education in asthma care.

### Limitations:

- Hospitalization data does not include asthma among individuals who are not hospitalized, including those who die in emergency rooms, in nursing homes, or at home without being admitted to the hospital or those individuals whose asthma is treated and managed in an outpatient setting.
- Differences in rates by time or area may reflect differences or changes in diagnostic techniques and criteria and coding of asthma or differences in sociodemographic characteristics and associated behaviors.
- When comparing rates across geographic areas, a variety of non-environmental factors, such as access to medical care and diet, can impact the likelihood of persons being hospitalized.

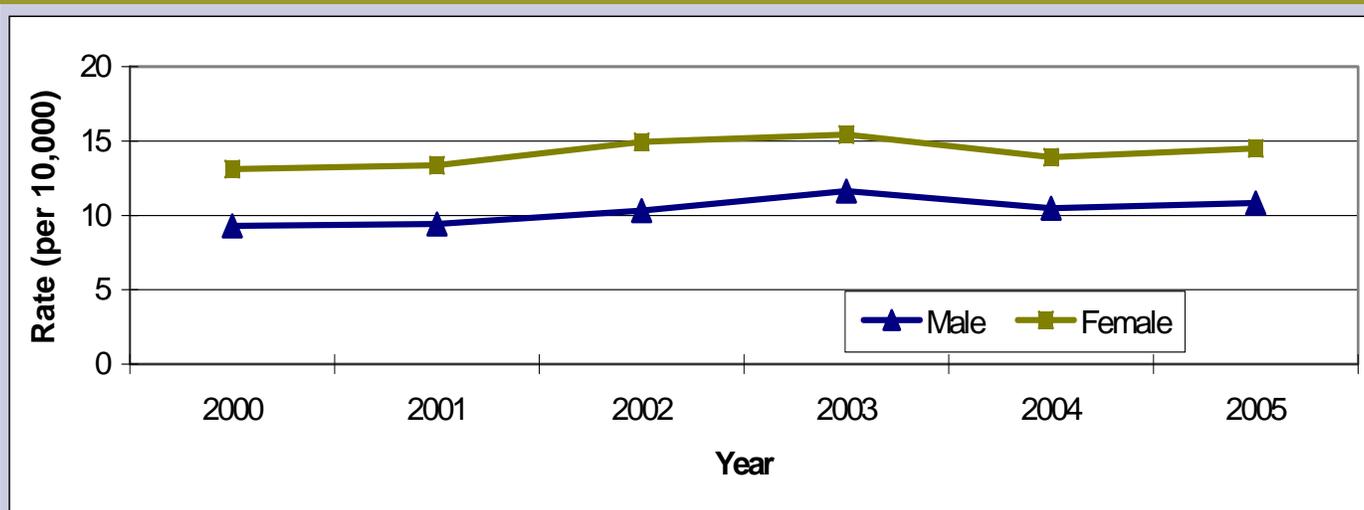
### Annual Counts and Age-adjusted Rates of Asthma Hospitalizations Connecticut 2000-2005



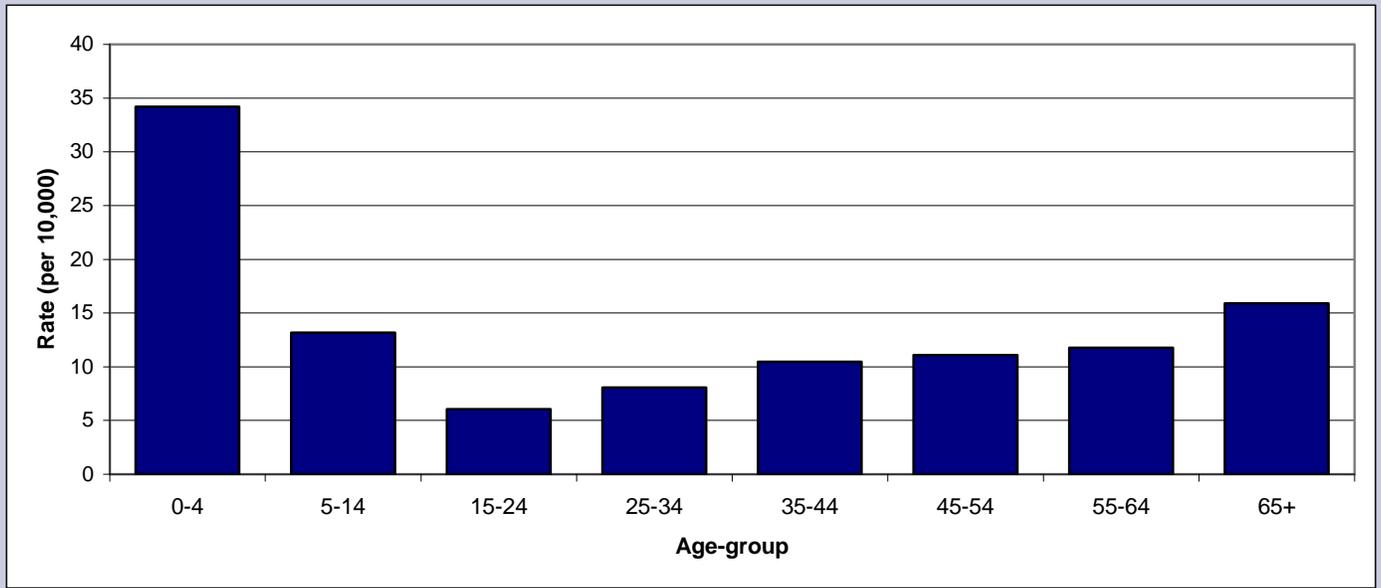
Each year in Connecticut, there are approximately 4,200 hospitalizations due to asthma among Connecticut residents. The rate remained relatively stable between 2000 and 2005.

Asthma hospitalization rates were consistently higher for females compared to males during this time period. The rates for each gender remained relatively stable over the six-year period.

### Annual Age-adjusted Asthma Hospitalization Rates, by Gender Connecticut 2000-2005



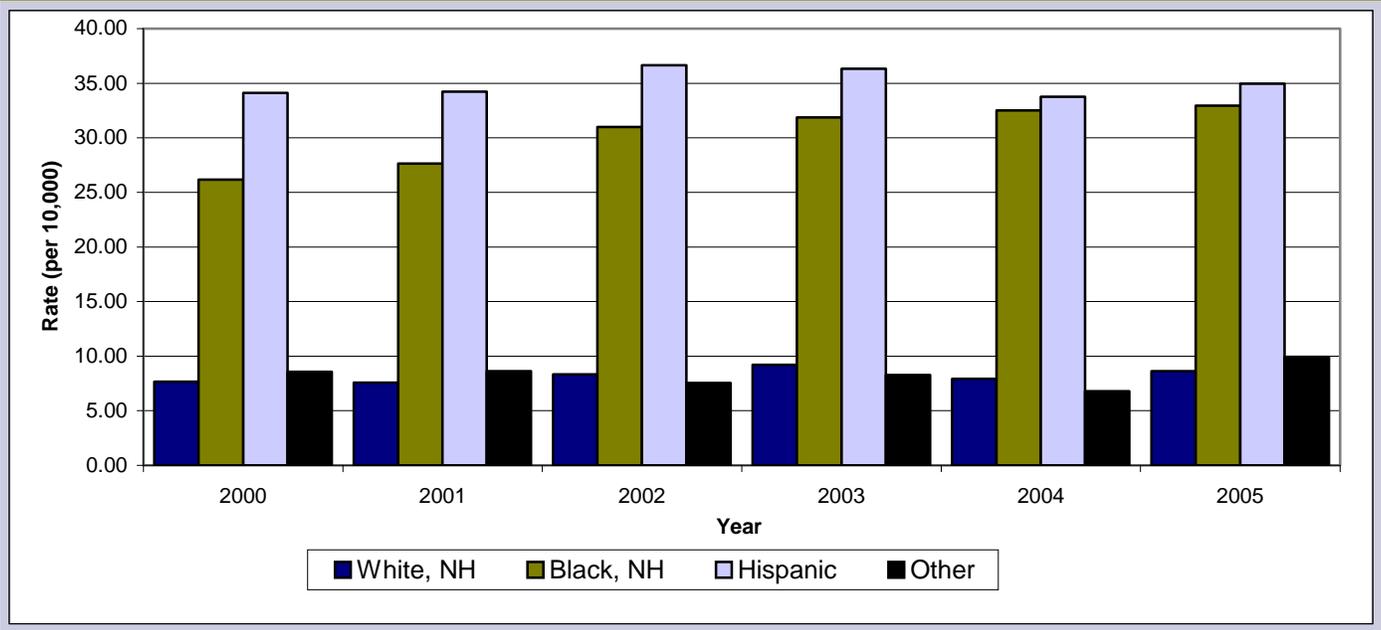
## Age-specific Asthma Hospitalization Rates, Connecticut 2000-2005



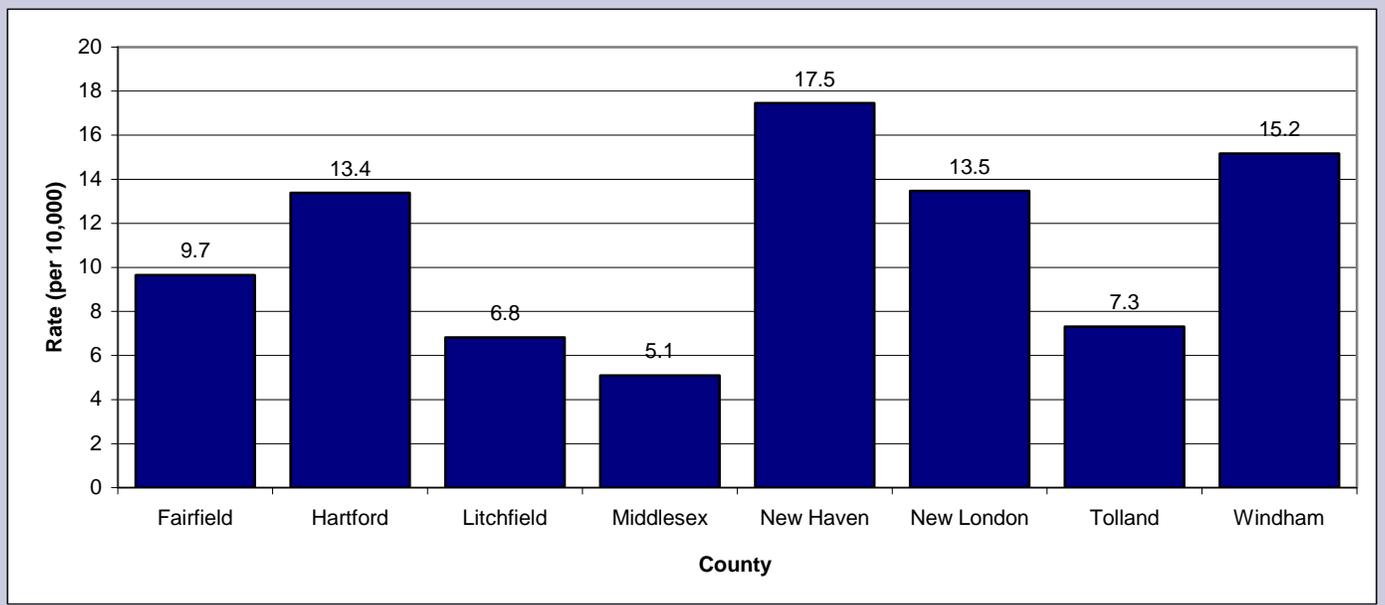
Asthma hospitalization rates were highest among Connecticut residents between the ages of 0 and 4 years. Hospitalization rates were very similar for all other age groups.

With respect to race and ethnicity, the highest rates of asthma hospitalization were seen among individuals of Hispanic ethnicity, followed by those identified as black, non-Hispanic. White, non-Hispanic residents had the lowest rates of asthma hospitalization.

## Age-adjusted Asthma Hospitalization Rates — by race/ethnicity, 2000-2005



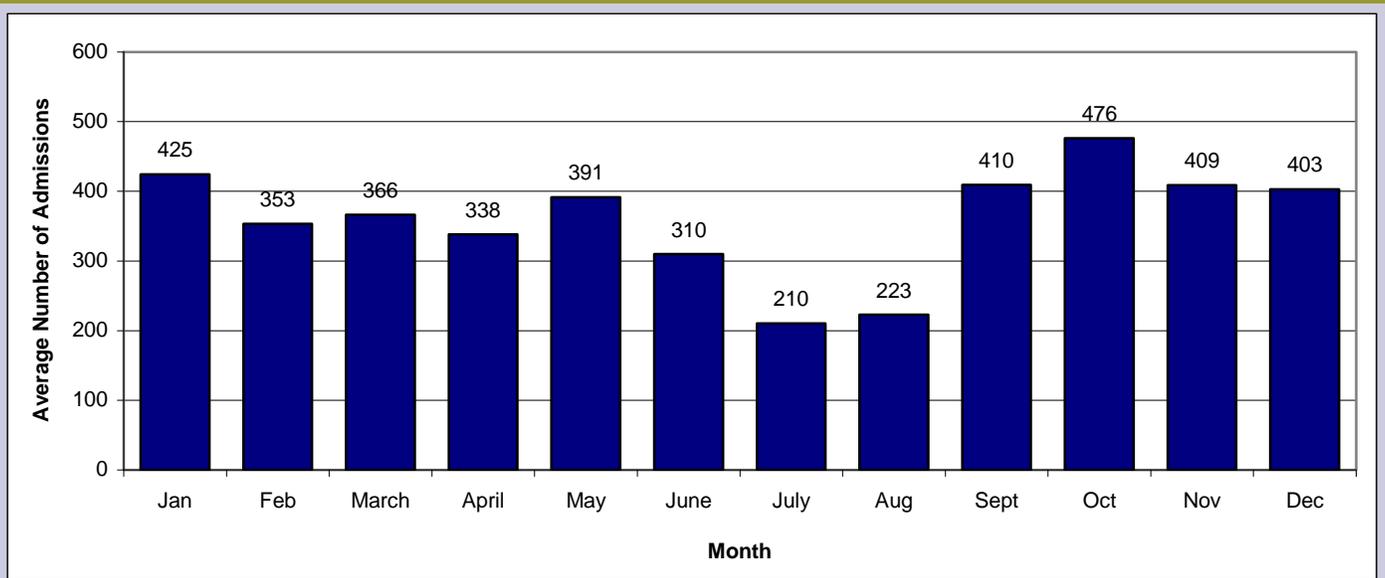
## Average Age-adjusted Asthma Hospitalizations Rates — by county, 2000-2005



Of the eight counties in Connecticut, residents of New Haven county showed the highest asthma hospitalization rates followed by Windham, New London, and Hartford counties. The lowest rates were seen in Middlesex and Litchfield counties.

Asthma hospitalization rates show a seasonal pattern with the highest rates in the late fall and winter. The lowest rates are seen in the summer months. The seasonal pattern seen for asthma hospitalizations is not as pronounced as the pattern for emergency department visits.

## Average Number of Asthma Hospitalizations — by month, 2000-2005



## DATA TABLES

### Annual age-adjusted rates & counts of asthma hospitalizations, Connecticut 2000-2005

	Male		Female		Total	
	Count	Rate*	Count	Rate*	Count	Rate*
<b>2000</b>	1540	9.29	2348	13.1	3888	11.37
<b>2001</b>	1558	9.41	2399	13.37	3957	11.53
<b>2002</b>	1716	10.33	2685	14.93	4401	12.79
<b>2003</b>	1930	11.64	2826	15.44	4756	13.7
<b>2004</b>	1739	10.47	2570	13.92	4309	12.36
<b>2005</b>	1784	10.85	2719	14.51	4503	12.84

\* Rate per 10,000 population

### Annual age-specific counts of asthma hospitalizations, Connecticut 2000-2005

	Year											
	2000		2001		2002		2003		2004		2005	
	Count	Rate										
<b>0-4</b>	663	<b>29.7</b>	766	<b>34.9</b>	826	<b>38.2</b>	810	<b>37.6</b>	699	<b>32.7</b>	674	<b>32.2</b>
<b>5-14</b>	604	<b>12.4</b>	582	<b>12.0</b>	654	<b>13.4</b>	690	<b>14.2</b>	670	<b>14.0</b>	612	<b>13.0</b>
<b>15-24</b>	253	<b>6.3</b>	232	<b>5.5</b>	304	<b>7.1</b>	300	<b>6.8</b>	247	<b>5.4</b>	240	<b>5.2</b>
<b>25-34</b>	371	<b>8.2</b>	335	<b>7.6</b>	382	<b>8.8</b>	364	<b>8.5</b>	302	<b>7.2</b>	334	<b>8.1</b>
<b>35-44</b>	582	<b>10.0</b>	590	<b>10.2</b>	614	<b>10.6</b>	689	<b>12.1</b>	548	<b>9.7</b>	562	<b>10.1</b>
<b>45-54</b>	503	<b>10.5</b>	536	<b>10.7</b>	546	<b>10.8</b>	622	<b>12.1</b>	568	<b>10.8</b>	628	<b>11.7</b>
<b>55-64</b>	319	<b>10.3</b>	335	<b>10.5</b>	408	<b>12.0</b>	442	<b>12.5</b>	435	<b>11.8</b>	494	<b>13.0</b>
<b>65+</b>	593	<b>12.6</b>	581	<b>12.4</b>	667	<b>14.2</b>	839	<b>17.8</b>	840	<b>17.9</b>	959	<b>20.4</b>

\* Rate per 10,000 population

### Annual age-adjusted counts & rates of asthma hospitalizations, by race—Connecticut 2000-2005

	White, non-Hispanic		Black, non-Hispanic		Hispanic		Other	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate
<b>2000</b>	2054	<b>7.66</b>	791	<b>26.17</b>	946	<b>34.11</b>	97	<b>8.56</b>
<b>2001</b>	2024	<b>7.57</b>	849	<b>27.66</b>	968	<b>34.24</b>	116	<b>8.62</b>
<b>2002</b>	2219	<b>8.34</b>	970	<b>31</b>	1098	<b>36.64</b>	114	<b>7.55</b>
<b>2003</b>	2492	<b>9.21</b>	1001	<b>31.88</b>	1141	<b>36.33</b>	122	<b>8.28</b>
<b>2004</b>	21559	<b>7.92</b>	1011	<b>32.5</b>	1042	<b>33.77</b>	97	<b>6.78</b>
<b>2005</b>	2277	<b>8.62</b>	1037	<b>32.96</b>	1043	<b>34.95</b>	146	<b>9.94</b>

\* Rate per 10,000 population

## DATA TABLES

### Annual asthma hospitalization counts and age-adjusted rates, by county, Connecticut 2000-2005

	2000		2001		2002		2003		2004		2005	
	Count	Rate										
<b>Fairfield</b>	832	9.20	833	9.16	929	10.28	921	10.05	884	9.70	872	9.53
<b>Hartford</b>	1038	12.09	1042	12.16	1175	13.56	1313	14.98	1172	13.28	1255	14.24
<b>Litchfield</b>	132	7.15	115	6.33	133	7.15	148	8.02	107	5.81	117	6.43
<b>Middlesex</b>	75	4.88	107	6.77	78	4.88	82	5.16	63	3.94	79	4.98
<b>New Haven</b>	1289	15.78	1281	15.62	1428	17.41	1597	19.37	1453	17.61	1574	18.93
<b>New London</b>	299	11.60	331	12.80	421	16.09	415	15.61	343	12.91	317	11.87
<b>Tolland</b>	99	7.71	79	6.11	75	5.68	104	8.00	105	8.07	114	8.26
<b>Windham</b>	124	11.68	169	15.57	162	15.06	176	16.44	182	16.81	175	15.45

\* Rate per 10,000 population

### Average number of asthma hospitalizations, by month— Connecticut 2000-2005

	Average # of Hospitalizations
<b>January</b>	425
<b>February</b>	353
<b>March</b>	366
<b>April</b>	338
<b>May</b>	391
<b>June</b>	310
<b>July</b>	210
<b>August</b>	223
<b>September</b>	410
<b>October</b>	476
<b>November</b>	409
<b>December</b>	403

## Useful Links

### **Asthma:**

Connecticut Department of Public Health Asthma Program  
[Www.ct.gov/dph](http://www.ct.gov/dph)

Centers for Disease Control and Prevention (CDC) Asthma Program  
[www.cdc.gov/asthma](http://www.cdc.gov/asthma)

CDC's National Center for Health Statistics  
<http://www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm>

EPA Asthma Information  
<http://www.epa.gov/iaq/asthma/about.html>

The American Lung Association  
<http://www.lungusa.org/site/c.dvLUK9O0E/b.33276/>

National Institutes of Health—National Heart Lung and Blood Institute  
<http://www.nhlbi.nih.gov/>

### **Air quality and health:**

EPA's AIRNow  
[Http://www.epa.gov/airnow](http://www.epa.gov/airnow)

### **Indoor air and asthma:**

EPA's asthma website at  
[Http://www.epa.gov/asthma/triggers](http://www.epa.gov/asthma/triggers)