"The Most Challenging Places to Live with Asthma"

The Asthma Capitals™ is an annual research project of the Asthma and Allergy Foundation of America® (AAFA) to identify "the most challenging places to live with asthma." This report provides a summary of factors used to compare and rank the 100 largest U.S. metro areas. Visit us online to learn how to manage your asthma better no matter where you live. Go to www.AsthmaCapitals.com, call 1-800-7-ASTHMA or write to info@aafa.org for more information. This year's report is made possible by a grant from Boston Scientific.

- ● Worse than Average
- ◖ Average*
- ○ Better than Average

					Prevalence Factors			Risk Factors						Medical Factors			
2014 rank		*Rank last year*	Total score	Metro area	Estimated asthma prev-alence	Self-reported asthma prev-alence	Crude death rate for asthma	Annual pollen score ▲	Air quality	"100%" public smoke-free laws △	Poverty rate	Un-insured rate	School inhaler access law ▼	ER visits for asthma ◤	Use of quick relief meds	Use of control meds	Number of special-ists
1	●	*1*	100.00	Richmond, VA	◖	◖	●	●	◖	●	●	●	○	●	○	◖	○
2	●	*3*	93.65	Memphis, TN	○	○	●	●	◖	●	●	◖	○	●	●	●	○
3	●	*8*	92.85	McAllen, TX	○	○	○	●	○	●	●	●	○	○	●	●	●
4	●	*5*	91.47	Oklahoma City, OK	●	●	◖	●	◖	●	◖	●	○	●	●	●	◖
5	●	*4*	90.57	Philadelphia, PA	●	●	●	◖	●	◖	●	◖	○	●	●	●	◖
6	●	*2*	90.48	Chattanooga, TN	○	○	◖	●	◖	●	○	◖	○	●	●	●	○
7	●	*20*	87.52	Fresno, CA	◖	◖	●	◖	●	○	●	●	○	●	●	●	◖
8	●	*15*	86.54	Tulsa, OK	●	●	◖	●	◖	●	◖	●	○	◖	●	●	●
9	●	*17*	85.48	Chicago, IL	◖	◖	●	◖	●	○	◖	●	○	●	●	●	◖
10	●	*6*	85.34	Detroit, MI	●	●	●	◖	●	○	●	◖	○	○	●	◖	●
11	●	*12*	85.26	New Haven, CT	●	●	○	●	●	◖	○	○	○	●	●	●	○
12	●	*11*	85.24	Allentown, PA	●	●	○	◖	●	●	○	◖	○	●	◖	●	●
13	●	*9*	83.70	Atlanta, GA	●	◖	●	○	◖	●	●	●	○	◖	◖	○	●
14	●	*13*	82.66	Augusta, GA	●	◖	●	○	○	●	●	●	○	●	◖	◖	○
15	●	*16*	82.65	Pittsburgh, PA	◖	●	◖	●	●	●	○	○	○	◖	◖	◖	○
16	●	*19*	82.35	Louisville, KY	●	●	◖	●	●	○	◖	◖	○	●	◖	●	○

					Prevalence Factors			Risk Factors						Medical Factors			
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17	●	*30*	81.62	Bakersfield, CA	◖	◖	◖	●	●	○	●	●	○	◖	●	◖	●
18	●	*14*	81.61	Springfield, MA	●	●	●	○	◖	○	●	○	○	●	●	●	●
19	●	*22*	80.91	Milwaukee, WI	◖	◖	●	◖	●	○	●	○	○	●	●	●	○
20	●	*48*	80.70	Jacksonville, FL	◖	◖	●	●	◖	◖	◖	●	○	●	●	●	○
21	●	*7*	80.00	Dayton, OH	●	●	◖	●	◖	○	●	◖	○	●	●	●	◖
22	●	*24*	79.96	New Orleans, LA	○	○	●	●	○	○	●	●	○	●	●	●	○
23	●	*18*	79.92	Cleveland, OH	●	●	◖	●	●	○	●	◖	○	●	◖	○	○
24	●	*40*	79.81	Stockton, CA	◖	◖	●	○	●	○	●	●	○	●	◖	○	●
25	●	*25*	79.47	Toledo, OH	●	●	●	●	◖	○	●	◖	○	●	◖	◖	◖
26	●	*55*	79.20	St. Louis, MO	◖	●	◖	●	◖	◖	○	○	○	●	●	●	○
27	●	*31*	79.19	Little Rock, AR	●	◖	●	●	◖	●	●	◖	○	◖	◖	◖	○
28	●	*33*	79.17	Bridgeport, CT	●	●	○	●	●	◖	○	○	○	●	◖	●	○
29	●	*38*	78.66	Riverside, CA	◖	◖	○	●	●	○	◖	●	○	○	○	○	●
30	●	*45*	78.55	El Paso, TX	○	○	○	●	●	○	●	●	○	○	●	●	◖
31	●	*21*	78.55	Akron, OH	●	●	◖	●	●	○	◖	○	○	●	◖	○	●
32	●	*34*	78.49	Indianapolis, IN	●	◖	●	○	●	○	●	●	○	◖	◖	○	○
33	●	*41*	78.39	Providence, RI	●	●	○	●	◖	○	◖	◖	○	●	◖	◖	●
34	●	*29*	78.06	Cincinnati, OH	●	●	●	○	●	○	●	○	○	◖	◖	◖	◖
35	●	*36*	77.81	Wichita, KS	◖	◖	●	●	◖	○	◖	◖	○	●	●	◖	◖
36	●	*26*	77.66	Virginia Beach, VA	◖	◖	○	◖	○	●	○	○	○	●	◖	◖	●
37	●	*27*	77.20	Harrisburg, PA	●	●	○	○	●	●	○	○	○	○	◖	◖	◖
38	●	*32*	76.68	Nashville, TN	○	○	●	○	○	●	●	●	○	◖	●	●	○
39	●	*37*	76.20	Hartford, CT	●	●	◖	●	◖	◖	○	○	○	●	●	●	●
40	●	*56*	75.63	Phoenix, AZ	●	◖	○	◖	●	○	◖	●	○	○	◖	◖	●
41	●	*10*	75.54	Knoxville, TN	○	○	○	●	◖	●	◖	◖	○	○	●	●	○
42	●	*47*	75.54	Jackson, MS	◖	◖	●	●	○	○	●	●	○	●	◖	●	○
43	●	*49*	75.42	Dallas, TX	○	○	◖	●	◖	○	●	●	○	○	●	●	●
44	●	*46*	75.19	Los Angeles, CA	◖	◖	●	●	●	○	●	●	○	○	○	○	●
45	●	*39*	75.08	Youngstown, OH	●	●	◖	●	◖	○	●	○	○	●	◖	◖	●
46	●	*54*	74.61	Columbus, OH	●	●	◖	●	◖	○	◖	◖	○	○	◖	◖	◖
47	●	*28*	74.28	Scranton, PA	◖	●	●	○	○	●	○	○	○	●	◖	●	●
48	●	*23*	74.15	Birmingham, AL	◖	◖	●	◖	◖	○	●	◖	○	●	●	●	○
49	●	*62*	74.08	Orlando, FL	○	◖	○	○	○	◖	◖	●	○	●	●	●	●
50	●	*57*	73.49	Tampa, FL	○	◖	◖	○	◖	◖	●	●	○	◖	●	●	●

					Prevalence Factors			Risk Factors						Medical Factors			
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51	●	*43*	73.12	Washington, DC	●	●	●	○	●	○	●	○	○	○	○	○	●
52	●	*52*	72.51	Salt Lake City, UT	◖	◖	●	◖	●	○	○	◖	○	○	○	○	○
53	●	*80*	71.75	Baltimore, MD	◖	◖	◖	○	●	○	●	◖	○	○	●	●	○
54	●	*59*	71.69	Las Vegas, NV	○	○	○	◖	◖	◖	◖	●	○	○	●	●	●
55	●	*60*	71.63	Lakeland, FL	○	◖	◖	○	○	◖	◖	●	○	●	●	●	●
56	●	*65*	71.57	Sacramento, CA	◖	◖	●	○	●	○	●	◖	○	○	○	○	◖
57	●	*66*	71.34	San Antonio, TX	○	○	○	●	◖	○	●	●	○	◖	●	●	○
58	●	*64*	70.77	Miami, FL	○	◖	○	◖	○	◖	●	●	○	○	●	●	●
59	●	*61*	70.09	Kansas City, MO	◖	●	●	○	◖	○	●	●	○	◖	●	◖	●
60	●	*72*	69.73	Columbia, SC	◖	◖	◖	●	◖	○	◖	◖	○	●	◖	◖	◖
61	●	*51*	69.50	New York, NY	●	●	●	○	◖	○	◖	○	○	○	◖	●	●
62	●	*50*	69.07	Greensboro, NC	◖	○	◖	◖	○	◖	◖	●	○	◖	◖	◖	●
63	●	*74*	69.06	Houston, TX	○	○	○	◖	◖	○	●	●	○	○	●	●	○
64	●	*76*	69.04	Daytona Beach, FL	○	◖	◖	○	○	◖	●	●	○	●	◖	◖	●
65	●	*79*	69.04	Baton Rouge, LA	○	○	○	●	◖	○	●	◖	○	○	●	●	○
66	●	*53*	68.38	Ogden, UT	◖	◖	●	◖	●	○	○	◖	○	○	○	○	●
67	●	*73*	67.78	San Diego, CA	◖	◖	○	○	●	○	○	●	○	○	○	○	○
68	●	*71*	67.66	Charleston, SC	◖	◖	◖	◖	○	◖	◖	●	○	◖	◖	◖	○
69	●	*89*	67.50	Greenville, SC	◖	◖	●	◖	◖	○	◖	●	○	●	○	○	◖
70	●	*68*	67.37	Grand Rapids, MI	●	●	○	●	○	○	◖	○	○	○	○	○	●
71	●	*69*	67.08	Boston, MA	●	●	●	○	○	○	●	○	○	◖	○	○	◖
72	●	*82*	66.37	Minneapolis, MN	○	◖	●	●	◖	○	○	○	○	○	●	◖	◖
73	●	*58*	65.98	Buffalo, NY	●	●	○	●	○	○	○	○	○	◖	◖	◖	◖
74	●	*NR*	65.97	Abilene, TX	○	○	◖	●	◖	○	●	●	○	○	○	○	●
75	●	*87*	65.71	Sarasota, FL	○	◖	○	○	○	◖	○	●	○	●	●	●	○
76	●	*97*	65.70	Palm Bay, FL	○	◖	○	○	○	◖	○	●	○	●	●	●	●
77	●	*83*	65.53	Worcester, MA	●	●	○	○	◖	○	○	○	○	◖	○	○	◖
78	○	*75*	65.39	Syracuse, NY	●	●	○	●	○	○	○	○	○	○	◖	◖	◖
79	○	*77*	65.33	Tucson, AZ	●	◖	●	●	○	○	●	●	○	○	◖	◖	○
80	○	*NR*	65.19	Winston-Salem, NC	◖	○	○	◖	◖	◖	●	●	○	○	○	○	○
81	○	*91*	65.17	Raleigh, NC	◖	○	○	○	○	◖	●	●	○	◖	◖	◖	◖
82	○	*95*	64.95	Cape Coral, FL	○	◖	○	○	○	◖	○	●	○	◖	●	●	◖
83	○	*63*	64.84	Omaha, NE	○	○	●	◖	○	○	○	○	○	○	●	●	○
84	○	*88*	64.77	San Jose, CA	◖	◖	◖	◖	●	○	○	○	○	○	○	○	◖

					Prevalence Factors			Risk Factors						Medical Factors			
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85	○	*94*	64.49	Albuquerque, NM	●	◖	○	◖	◖	○	◖	●	○	○	◖	○	○
86	○	*90*	64.05	Oxnard, CA	◖	◖	●	●	◖	○	○	●	○	○	○	○	●
87	○	*86*	64.03	Charlotte, NC	◖	○	◖	○	◖	◖	◖	●	○	○	○	○	●
88	○	*93*	63.78	Austin, TX	○	○	○	◖	○	○	◖	●	○	○	●	●	◖
89	○	*85*	63.68	Colorado Springs, CO	◖	◖	◖	◖	○	◖	○	◖	○	◖	○	○	◖
90	○	*84*	63.40	Denver, CO	◖	◖	●	◖	○	◖	●	●	○	○	○	○	○
91	○	*81*	62.45	Madison, WI	◖	◖	◖	●	◖	○	○	○	○	○	◖	◖	○
92	○	*96*	62.30	Portland, OR	●	●	●	○	○	○	◖	◖	○	○	○	○	◖
93	○	*92*	60.50	Des Moines, IA	○	◖	○	●	○	○	○	○	○	○	●	●	○
94	○	*NR*	60.35	Provo, UT	◖	◖	○	◖	◖	○	○	◖	○	○	○	○	●
95	○	*67*	59.89	Albany, NY	●	●	○	●	○	○	○	○	○	◖	○	◖	◖
96	○	*78*	59.35	Rochester, NY	●	●	○	◖	○	○	○	○	○	◖	○	◖	○
97	○	*NR*	58.67	Spokane, WA	◖	●	●	○	○	○	◖	◖	○	○	○	○	◖
98	○	*98*	56.58	Boise, ID	◖	◖	○	○	○	○	○	◖	○	○	○	○	◖
99	○	*99*	56.27	Seattle, WA	◖	●	○	○	○	○	○	◖	○	○	○	○	◖
100	○	*100*	55.71	San Francisco, CA	◖	◖	●	◖	○	○	○	○	○	○	○	○	◖

	Prevalence Factors			Risk Factors						Medical Factors			
	Estimated asthma prev-alence	Self-reported asthma prev-alence	Crude death rate for asthma	Annual pollen score ▲	Air quality	"100%" public smoke-free laws △	Poverty rate	Un-insured rate	School inhaler access law ▼	ER visits for asthma ◤	Use of quick relief meds	Use of control meds	Number of special-ists
* *2014 LIST AVERAGES*	8.78%	8.70%	1.28 per 100,000 deaths	13.38% pollen-affected population	Avg. C- on A to F scale	Avg. 2.39 on 0 to 4 scale	17.76%	17.12%	All states have an access law	141.32 ER visits per 10,000 est. Patients	2.15 Rx per est. patient	2.27 Rx per est. patient	4.86 spcl per 10,000 est. patients
Last Year's List Averages	8.71%	8.70%	1.27 per 100,000 deaths	13.76% pollen-affected population	C- on A to F scale	2.42 on 0 to 4 scale	17.40%	17.60%	All states had an access law	155.23 ER visits per 10,000 est. Patients	2.22 Rx per est. patient	2.31 Rx per est. patient	4.77 spcl per 10,000 est. patients

2014 Asthma Capitals™ Methodology

The U.S. Asthma Capitals™ research and ranking is reported annually by the Asthma and Allergy Foundation of America® (AAFA). The ranking is based on analysis of data from the 100 most-populated Consolidated Metropolitan Statistical Areas (MSAs) in the U.S. including 13 individual factors grouped into three primary areas: (I) Prevalence Factors, (II) Risk Factors and (III) Medical Factors. Weights are applied to each set of data in each factor group by researchers and medical specialists, reflecting each factor's relative effect on the quality of life for people with asthma. Factors are not equally weighted. Total scores are calculated as a composite of all factors, and cities are ranked from highest total score (city rank #1) to lowest total score (city rank #100).

(I) PREVALENCE FACTORS – Quantitative data including morbidity statistics from the most recently available sources of estimated asthma prevalence, self-reported prevalence and crude death rates for asthma.

*Estimated Prevalence for Asthma – predicted population with asthma (adult and pediatric)
*Self-Reported Prevalence for Asthma – self-reported population with asthma (adult, state-level only)
*Crude Death Rate from Asthma – recorded metro area death rates from asthma (adult and pediatric)

(II) RISK FACTORS – Qualitative and quantitative data from the most recently available sources of comprehensive annual pollen measurements, average length of peak pollen seasons, outdoor air quality (including number of ozone days and annual levels of pollution particulate matter [pm]), poverty rates, uninsured rates, state school inhaler access laws and primary MSA city/county/state laws prohibiting smoking in public places (including workplaces, restaurants, bars and/or cars with minors).

*Annual Pollen Score – reported "Pollen Score" for each metro area ▲
*Annual Air Quality – pollution levels and number of unhealthy outdoor ozone days, scored on a scale of: A (best) to F (worst)
*Public Smoking Laws – number of "100% smoke-free" public smoking bans (bars, restaurants, workplaces and/or cars with minors) △
*Poverty Rate – reported percent of metro area population in poverty
*Uninsured Rate – reported percent of metro area population without health insurance
*School Inhaler Access Laws – state laws ensuring student access to inhalers ▼

(III) MEDICAL FACTORS – Quantitative data from the most recently available sources in the 100 most populated U.S. cities for the number of ER visits for asthma per 10,000 patients, number of asthma rescue and controller medication prescriptions per patient, and the number of adult and pediatric specialists per 10,000 patients with their primary Board Certification in allergy & immunology and/or pulmonary medicine.

*ER Visits for Asthma – number of out-patient plus in-patient Medicare and non-Medicare emergency room visits for asthma per patient ◤
*Rescue Medication Use – number of rescue medication prescriptions per patient prevalence
*Controller Medication Use – number of controller medication prescriptions per patient prevalence
*Number of Asthma Specialists – number of Board Certified adult/pediatric allergists/immunologists and pulmonologists per patient

▲*Pollen Score provided by IMS Health is a comprehensive index of the population at risk of being affected by airborne allergenic pollen ("pollen-affected population") derived from actual pollen counts, allergy prevalence for each pollen type and related factors.* △*Public smoke-free laws recognized by this report are "100%" public bans only; partial public smoking bans or bans with exceptions are not included.* ▼*State school inhaler access laws recognized by this report are for state-wide policies allowing students to carry and access asthma medications.* ◤*Note: Maryland ER data is non-Medicare visits only.*

Sources: Most Current Available Local-Level Data Used for the 2014 Asthma Capitals™

Decennial U.S. Census 2000, U.S. Department of Commerce, Census Bureau, and 2013 Population Estimate Updates
National Annual Pollen Index Measurements and Reports, IMS Health Inc., Pollen.com Database, 2013
Local Tobacco Control Ordinance Database, American Nonsmokers' Rights Foundation, 2014
AAFA's Annual State Honor Roll of Asthma and Allergy School Policies, 2013
National Prescription Tracking Database, IMS Health Inc., 2013
National Medical Specialist Database, American Board of Medical Specialties, 2014
Small Area Income & Poverty Estimates, U.S. Department of Commerce, Economics and Statistics Administration, 2012
Small Area Health Insurance Estimates, U.S. Department of Commerce, Economics and Statistics Administration, 2012
Mortality Statistics Database, U.S. Centers for Disease Control and Prevention, CDC Wonder, 1999-2012
National Health Interview Survey (NHIS), U.S. Centers for Disease Control and Prevention, 2012
National Center for Health Statistics, Behavioral Risk Factor Surveillance System (BRFSS), "Adult Self-Reported Current Asthma Prevalence Rate," 2011
Air Quality System (AQS) Air Quality and Ozone Data, U.S. Environmental Protection Agency, 2009-2011
CMS Hospital Outpatient Prospective Payment System (OPPS) and Provider of Service Files, 2012
CMS MEDPAR Hospital (National), 2012
Thompson Reuters Medicare Database, 2012
American Hospital Association Annual Survey Database, 2011

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