



## **ADDITIONAL MATERIALS AVAILABLE ON THE HEI WEBSITE**

### **Special Report 23**

#### **Systematic Review and Meta-analysis of Selected Health Effects of Long-Term Exposure to Traffic-Related Air Pollution**

##### **HEI Panel on the Health Effects of Long-Term Exposure to Traffic-Related Air Pollution**

### **Chapter 7: Literature Search Results**

These Additional Materials were not formatted or edited by HEI. This document was part of the HEI Panel's review process.

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Correspondence concerning the Special Report may be addressed to Dr. Hanna Boogaard at Health Effects Institute, 75 Federal Street, Suite 1400, Boston, Massachusetts, 02110; email: [jboogaard@healtheffects.org](mailto:jboogaard@healtheffects.org).

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## **Chapter 7: Literature Search Results**

### **Additional Materials**

#### **Additional Materials:**

- 7.1 List of Included Studies ( $N = 353$ )
- 7.2 List of Reviews and Other Documents Searched for Additional References ( $N = 127$ )
- 7.3 List of Excluded Studies with Reason ( $N = 536$ )

## 7.1 List of Included Studies (N = 353)

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### 7.3 Table of Excluded Studies with Reason (*N* = 536)

	Reference	Exclusion rationale	Outcome <sup>1</sup>
1	Abbey, 1993, Chronic disease associated with long-term concentrations of nitrogen dioxide	No quantitative measure of association	A and B
2	Abbey, 1995, Long-term ambient concentrations of particulates and oxidants and development of chronic disease in a cohort of nonsmoking California residents	PM monitoring or satellite data	A
3	Abbey, 1998, Long-term particulate and other air pollutants and lung function in nonsmokers	PM monitoring or satellite data	B
4	Abbey, 1999, Long-term inhalable particles and other air pollutants related to mortality in nonsmokers	Spatial scale	A
5	Ackermann-Lieblich, 1997, Lung function and long term exposure to air pollutants in Switzerland. Study on Air Pollution and Lung Diseases in Adults (SAPALDIA) team	No within-area or spatial contrast exploited	B
6	Adar, 2013, Fine particulate air pollution and the progression of carotid intima-medial thickness: A prospective cohort study from the Multi-Ethnic Study of Atherosclerosis and air pollution	Spatial scale	B
7	Aguilera, 2010, Prenatal exposure to traffic-related air pollution and ultrasound measures of fetal growth in the INMA Sabadell cohort	Health outcome	A
8	Ai, 2019, Long-term exposure to ambient fine particles associated with asthma: A cross-sectional study among older adults in six low- and middle-income countries	Nationwide/statewide study with no or insufficient area-specific adjustments	A
9	Ailshire, 2014, Fine particulate matter air pollution and cognitive function among older US adults	PM monitoring or satellite data	B
10	Al-Hamdan, 2018, Investigating the effects of environmental factors on autism spectrum disorder in the USA using remotely sensed data	Spatial scale	B
11	Alcala, 2019, Cumulative impact of environmental pollution and population vulnerability on pediatric asthma hospitalizations: a multilevel analysis of CalEnviroScreen	Spatial scale	A
12	Alvarez-Pedrerol, 2017, Impact of commuting exposure to traffic-related air pollution on cognitive development in children walking to school	No quantitative measure of association	B

<sup>1</sup> The selection of health outcomes and prioritization of the review was discussed extensively because initial literature searches identified a large number of studies. The Panel decided to focus efforts on reviewing the evidence for a selected number of clinical outcomes (List A) very well and did not further consider the outcomes in List B, except for neurologic outcomes.

	Reference	Exclusion rationale	Outcome <sup>1</sup>
13	Andersen, 2015, A study of the combined effects of physical activity and air pollution on mortality in elderly urban residents: The Danish Diet, Cancer, and Health cohort	No quantitative measure of association	A and B
14	Anderson, 2018, HIV induced nitric oxide and lipid peroxidation, influences neonatal birthweight in a South African population	Health outcome	A
15	Andersson, 2018, Road traffic noise, air pollution, and risk of dementia - Results from the Betula project	Review, methodological, HIA, or similar paper (no primary data)	B
16	Annesi-Maesano, 2007, Residential proximity fine particles related to allergic sensitisation and asthma in primary school children	Study design	A
17	Arnetz, 2019, Neighborhood air pollution and household environmental health as it relates to respiratory health and healthcare utilization among elderly persons with asthma	PM monitoring or satellite data	A
18	Avol, 2001, Respiratory effects of relocating to areas of differing air pollution levels	Nationwide/statewide study with no or insufficient area-specific adjustments	A
19	Awasthi, 2012, Environmental risk factors for persistent asthma in Lucknow	Self-reported exposure	A
20	Badyda, 2015, Traffic-related air pollution and respiratory tract efficiency	No quantitative measure of association	B
21	Badyda, 2016, Pulmonary function and incidence of selected respiratory diseases depending on the exposure to ambient PM	Spatial scale	B
22	Balluz, 2007, Ischemic heart disease and ambient air pollution of particulate matter 2.5 in 51 counties in the US	PM monitoring or satellite data	B
23	Barnett, 2011, Increased traffic exposure and negative birth outcomes: A prospective cohort in Australia	No quantitative measure of association	A
24	Basu, 2014, Effects of fine particulate matter and its constituents on low birth weight among full-term infants in California	No within-area or spatial contrast exploited	A
25	Basu, 2017, Association between PM <sub>2.5</sub> and PM <sub>2.5</sub> constituents and preterm delivery in California, 2000-2006	No within-area or spatial contrast exploited	A
26	Bateson, 2004, Who is sensitive to the effects of particulate air pollution on mortality? A case-crossover analysis of effect modifiers	Study design	A
27	Baumgartner, 2014, Highway proximity and black carbon from cookstoves as a risk factor for higher blood pressure in rural China	No quantitative measure of association	B

	Reference	Exclusion rationale	Outcome <sup>1</sup>
28	Baxter, 2013, Examining the effects of air pollution composition on within region differences in PM <sub>2.5</sub> mortality risk estimates	Review, methodological, HIA, or similar paper (no primary data)	A
29	Bayer-Oglesby, 2005, Decline of ambient air pollution levels and improved respiratory health in Swiss children	No within-area or spatial contrast exploited	A
30	Beckerman, 2012, The association between chronic exposure to traffic-related air pollution and ischemic heart disease	Very selective subgroup	A
31	Behrens, 2004, Different methods to calculate effect estimates in cross-sectional studies. A comparison between prevalence odds ratio and prevalence ratio	Self-reported exposure	A
32	Behrens, 2004, Self-reported traffic density and atopic disease in children. Results of the ISAAC Phase III survey in Muenster, Germany	Self-reported exposure	A
33	Bell, 2010, Prenatal exposure to fine particulate matter and birth weight: Variations by particulate constituents and sources	No within-area or spatial contrast exploited	A
34	Bell, 2012, Relationship between birth weight and exposure to airborne fine particulate potassium and titanium during gestation	No within-area or spatial contrast exploited	A
35	Benmarhnia, 2017, Decomposition analysis of black-white disparities in birth outcomes: The relative contribution of air pollution and social factors in California	Nationwide/statewide study with no or insufficient area-specific adjustments	A
36	Benmerad, 2017, Chronic effects of air pollution on lung function after lung transplantation in the Systems Prediction of Chronic Lung Allograft Dysfunction (SysCLAD) study	Very selective subgroup	B
37	Bennett, 2007, Associations between ambient pm2.5 concentrations and respiratory symptoms in Melbourne, 1998-2005	Study design	A
38	Bentayeb, 2015, Association between long-term exposure to air pollution and mortality in France: A 25-year follow-up study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
39	Bergen, 2013, A national prediction model for PM <sub>2.5</sub> component exposures and measurement error-corrected health effect inference	Review, methodological, HIA, or similar paper (no primary data)	B
40	Berhane, 2016, Association of changes in air quality with bronchitic symptoms in children in California, 1993-2012	No within-area or spatial contrast exploited	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
41	Bernstein, 2012, Diesel exhaust exposure, wheezing and sneezing	Review, methodological, HIA, or similar paper (no primary data)	A
42	Bernstein, 2012, Traffic-related pollutants and wheezing in children	Review, methodological, HIA, or similar paper (no primary data)	A
43	Bertin, 2015, Association between prenatal exposure to traffic-related air pollution and preterm birth in the PELAGIE mother-child cohort, Brittany, France. Does the urban-rural context matter?	Nationwide/statewide study with no or insufficient area-specific adjustments	A
44	Bertin, 2015, Sex-specific differences in fetal growth in newborns exposed prenatally to traffic-related air pollution in the PELAGIE mother-child cohort (Brittany, France)	Nationwide/statewide study with no or insufficient area-specific adjustments	A
45	Beverland, 2012, A comparison of short-term and long-term air pollution exposure associations with mortality in two cohorts in Scotland	Review, methodological, HIA, or similar paper (no primary data)	A
46	Bidoli, 2016, Residential proximity to major roadways and lung cancer mortality. Italy, 1990-2010: An observational study	Study design	A
47	Bijnens, 2016, Small for gestational age and exposure to particulate air pollution in the early-life environment of twins	PM monitoring or satellite data	A
48	Blount, 2017, Traffic-related air pollution and all-cause mortality during tuberculosis treatment in California	Very selective subgroup	A
49	Bobak, 2000, Outdoor air pollution, low birth weight, and prematurity	Spatial scale	A
50	Bose, 2018, Prenatal nitrate air pollution exposure and reduced child lung function: Timing and fetal sex effects	No quantitative measure of association	B
51	Bowe, 2018, The 2016 global and national burden of diabetes mellitus attributable to PM air pollution	PM monitoring or satellite data	A
52	Brauer, 2007, Air pollution and development of asthma, allergy and infections in a birth cohort	Nationwide/statewide study with no or insufficient area-specific adjustments	A
53	Bräuner, 2010, Is there any interaction between domestic radon exposure and air pollution from traffic in relation to childhood leukemia risk?	No quantitative measure of association	B
54	Breton, 2012, Childhood air pollutant exposure and carotid artery intima-media thickness in young adults	Spatial scale	B

	Reference	Exclusion rationale	Outcome <sup>1</sup>
55	Breton, 2016, Prenatal air pollution exposure and early cardiovascular phenotypes in young adults	Nationwide/statewide study with no or insufficient area-specific adjustments	B
56	Brook, 2008, The relationship between diabetes mellitus and traffic-related air pollution	Very selective subgroup	A
57	Brugge, 2011, Methodological lessons and pilot data on the effect of proximity of homes and schools to highways on pediatric asthma and lung function	Self-reported exposure	A
58	Bui, 2013, Ambient wood smoke, traffic pollution and adult asthma prevalence and severity	Self-reported exposure	A
59	Burra, 2009, Social disadvantage, air pollution, and asthma physician visits in Toronto, Canada	No within-area or spatial contrast exploited	A
60	Burstyn, 2005, Polycyclic aromatic hydrocarbons and fatal ischemic heart disease	Occupational study	A
61	Cai, 2014, Cross-sectional associations between air pollution and chronic bronchitis: An ESCAPE meta-analysis across five cohorts	Health outcome	A
62	Cai, 2018, Road traffic noise, air pollution and incident cardiovascular disease: A joint analysis of the HUNT, EPIC-Oxford and UK Biobank cohorts	Nationwide/statewide study with no or insufficient area-specific adjustments	A
63	Cakmak, 2016, Ozone exposure and cardiovascular-related mortality in the Canadian Census Health and Environment Cohort (CanCHEC) by spatial synoptic classification zone	PM monitoring or satellite data	A
64	Cakmak, 2018, Associations between long-term pm and ozone exposure and mortality in the Canadian Census Health and Environment Cohort (CanCHEC), by spatial synoptic classification zone	Spatial scale	A
65	Calderón-Garcidueñas, 2003, Respiratory damage in children exposed to urban pollution	Study design	B
66	Cao, 2011, Association between long-term exposure to outdoor air pollution and mortality in China: A cohort study	Spatial scale	A
67	Capobussi, 2016, Air pollution impact on pregnancy outcomes in Como, Italy	No within-area or spatial contrast exploited	A
68	Carbajal-Arroyo, 2007, Impact of traffic flow on the asthma prevalence among school children in Lima, Peru	Self-reported exposure	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
69	Cesaroni, 2012, Nitrogen dioxide levels estimated from land use regression models several years apart and association with mortality in a large cohort study	Review, methodological, HIA, or similar paper (no primary data)	A
70	Chan, 2015, Long-term air pollution exposure and blood pressure in the Sister study	Spatial scale	B
71	Chang, 2014, Increased risk of dementia in patients exposed to nitrogen dioxide and carbon monoxide: A population-based retrospective cohort study	Spatial scale	B
72	Chang, 2015, Assessment of critical exposure and outcome windows in time-to-event analysis with application to air pollution and preterm birth study	PM monitoring or satellite data	A
73	Chang, 2018, Residential ambient traffic in relation to childhood pneumonia among urban children in Shandong, China: A cross-sectional study	Self-reported exposure	A
74	Chatterjee, 2015, Association of ambient air quality with male's pulmonary function in Kolkata City, India	No quantitative measure of association	B
75	Chen, 2002, Air pollution and birth weight in Northern Nevada, 1991-1999	Spatial scale	A
76	Chen, 2005, The association between fatal coronary heart disease and ambient particulate air pollution: Are females at greater risk?	Spatial scale	A
77	Chen, 2008, Chronic traffic-related air pollution and stress interact to predict biologic and clinical outcomes in asthma	Health outcome	A
78	Chen, 2014, Spatial association between ambient fine particulate matter and incident hypertension	Spatial scale	B
79	Chen, 2016, Ambient fine particulate matter and mortality among survivors of myocardial infarction: Population-based cohort study	PM monitoring or satellite data	A
80	Chen, 2018, Changes in the relationship between childhood asthma and ambient air pollution in Taiwan: Results from a nationwide survey repeated 5 years apart	Nationwide/statewide study with no or insufficient area-specific adjustments	A
81	Chen, 2019, Long-term exposure to air pollution and survival after ischemic stroke	Spatial scale	A
82	Chi, 2016, Individual and neighborhood socioeconomic status and the association between air pollution and cardiovascular disease	Nationwide/statewide study with no or insufficient area-specific adjustments	A
83	Cho, 2018, Trends in the prevalence of childhood asthma in Seoul metropolitan City, Korea: The Seoul atopy · Asthma-friendly School Project	PM monitoring or satellite data	A
84	Choi, 2007, Seasonal variation of effect of air pollution on blood pressure	Study design	B



	Reference	Exclusion rationale	Outcome <sup>1</sup>
85	Choi, 2018, Greater susceptibility of girls to airborne benzo[a]pyrene for obesity-associated childhood asthma	No relevant exposure metric	A
86	Chuang, 2011, Long-term air pollution exposure and risk factors for cardiovascular diseases among the elderly in Taiwan	No within-area or spatial contrast exploited	A and B
87	Ciccone, 1998, Road traffic and adverse respiratory effects in children. SIDRIA collaborative group	Self-reported exposure	A
88	Cilluffo, 2018, Associations of greenness, greyness and air pollution exposure with children's health: a cross-sectional study in Southern Italy	Health outcome	A
89	Cleary, 2018, Association of low-level ozone with cognitive decline in older adults	Spatial scale	B
90	Clemens, 2017, Maternal exposure to ambient air pollution and fetal growth in North-east Scotland: A population-based study using routine ultrasound scans	Nationwide/statewide study with no or insufficient area-specific adjustments	A
91	Cohen, 2017, Long-term exposure to traffic-related air pollution and cancer among survivors of myocardial infarction: A 20-year follow-up study	Health outcome	A
92	Coker, 2016, Multi-pollutant exposure profiles associated with term low birth weight in Los Angeles County	No quantitative measure of association	A
93	Coogan, 2016, PM <sub>2.5</sub> and diabetes and hypertension incidence in the Black Women's Health Study	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
94	Cossi, 2015, Role of infant sex in the association between air pollution and preterm birth	Insufficient information in either the paper or the accompanying exposure paper	A
95	Crichton, 2016, Associations between exhaust and non-exhaust particulate matter and stroke incidence by stroke subtype in South London	Study design	A
96	Crouse, 2015, Ambient PM <sub>2.5</sub> , O <sub>3</sub> , and NO <sub>2</sub> exposures and associations with mortality over 16 years of follow-up in the Canadian Census Health and Environment Cohort (CanCHEC)	Nationwide/statewide study with no or insufficient area-specific adjustments	A
97	Crouse, 2016, A new method to jointly estimate the mortality risk of long-term exposure to fine particulate matter and its components	Review, methodological, HIA, or similar paper (no primary data)	A
98	Crouse, 2019, Complex relationships between greenness, air pollution, and mortality in a population-based Canadian cohort.	PM monitoring or satellite data	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
99	Cullen, 2018, Cross-sectional and longitudinal analyses of outdoor air pollution exposure and cognitive function in UK Biobank	Nationwide/statewide study with no or insufficient area-specific adjustments	B
100	Dabrowiecki, 2015, Assessment of air pollution effects on the respiratory system based on pulmonary function tests performed during spirometry days	No quantitative measure of association	B
101	Dadvand, 2014, Air pollution and preterm premature rupture of membranes: A spatiotemporal analysis	Health outcome	A
102	Dales, 2009, The influence of neighborhood roadways on respiratory symptoms among elementary schoolchildren	No relevant exposure metric	A
103	Darrow, 2011, Ambient air pollution and birth weight in full-term infants in Atlanta, 1994-2004	No within-area or spatial contrast exploited	A
104	de Kluizenaar, 2013, Road traffic noise, air pollution components and cardiovascular events	Health outcome	A and B
105	Deguen, 2018, Using a clustering approach to investigate socio-environmental inequality in preterm birth - A study conducted at fine spatial scale in Paris (France)	Study design	A
106	Dehbi, 2017, Air pollution and cardiovascular mortality with over 25 years follow-up: a combined analysis of two British cohorts	Nationwide/statewide study with no or insufficient area-specific adjustments	A
107	Delamater, 2012, An analysis of asthma hospitalizations, air pollution, and weather conditions in Los Angeles County, California	Study design	A
108	Deng, 2016, Exposure to outdoor air pollution during trimesters of pregnancy and childhood asthma, allergic rhinitis, and eczema	Same population, outcome and exposure studied as in Deng, 2015 and Deng, 2016	A
109	Deng, 2019, Understanding the importance of key risk factors in predicting chronic bronchitic symptoms using a machine learning approach	No quantitative measure of association	A
110	Di, 2017, Air pollution and mortality in the Medicare population	Spatial scale	A
111	Dibben, 2015, Place of work and residential exposure to ambient air pollution and birth outcomes in Scotland, using geographically fine pollution climate mapping estimates	Nationwide/statewide study with no or insufficient area-specific adjustments	A
112	Dockery, 1993, An association between air pollution and mortality in six US cities	No within-area or spatial contrast exploited	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
113	Doiron, 2019, Air pollution, lung function and COPD: Results from the population-based UK Biobank study	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
114	Domínguez-Berjón, 2016, Lung cancer and urbanization level in a region of Southern Europe: Influence of socio-economic and environmental factors	Study design	A
115	Dominici, 2005, Revised analyses of the National Morbidity, Mortality, and Air Pollution Study: Mortality among residents of 90 cities	Study design	A
116	Dong, 2012, Long-term exposure to ambient air pollution and respiratory disease mortality in Shenyang, China: A 12-year population-based retrospective cohort study	No within-area or spatial contrast exploited	A
117	Dong, 2013a, Obesity enhanced respiratory health effects of ambient air pollution in Chinese children: The seven Northeastern Cities Study	Stratified analysis of population also studied in Liu, 2013 and Liu, 2014	A
118	Dong, 2013b, Residential characteristics and household risk factors and respiratory diseases in Chinese women: The Seven NorthEast Cities (SNEC) Study	Self-reported exposure	A
119	Downward, 2018, Long-term exposure to ultrafine particles and incidence of cardiovascular and cerebrovascular disease in a prospective study of a Dutch cohort	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
120	Dratva, 2012, Transportation noise and blood pressure in a population-based sample of adults	No quantitative measure of association	B
121	Dzhambov, 2019, Associations of residential greenness, traffic noise, and air pollution with birth outcomes across alpine areas	Exposure was assessed 10 years after birth	A
122	de Kluizenaar, 2007, Hypertension and road traffic noise exposure	No quantitative measure of association	B
123	de Marco, 2002, The impact of climate and traffic-related no2 on the prevalence of asthma and allergic rhinitis in Italy	Nationwide/statewide study with no or insufficient area-specific adjustments	A
124	Ebisu, 2012, Airborne PM <sub>2.5</sub> chemical components and low birth weight in the Northeastern and Mid-Atlantic regions of the United States	No within-area or spatial contrast exploited	A
125	Eckel, 2012, Modification of the association between ambient air pollution and lung function by frailty status among older adults in the cardiovascular health study	PM monitoring or satellite data	B
126	Eckel, 2016, Air pollution affects lung cancer survival	Very selective subgroup	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
127	Eenhuizen, 2013, Traffic-related air pollution is related to interrupter resistance in 4-year-old children	Health outcome	B
128	Elliott, 2007, Long-term associations of outdoor air pollution with mortality in Great Britain	Study design	A
129	Emerson, 2019, Risk of exposure to air pollution among British children with and without intellectual disabilities	Nationwide/statewide study with no or insufficient area-specific adjustments	B
130	Erqou, 2018, Particulate matter air pollution and racial differences in cardiovascular disease risk	Health outcome	A and B
131	Esposito, 2014, Impact of air pollution on respiratory diseases in children with recurrent wheezing or asthma	Study design	A
132	Euler, 1988, Chronic obstructive pulmonary disease symptom effects of long-term cumulative exposure to ambient levels of total oxidants and nitrogen dioxide in California Seventh-Day Adventist residents	Health outcome	A
133	Eum, 2019, Long-term no exposures and cause-specific mortality in American older adults.	Spatial scale	A
134	Feychting, 1998, Exposure to motor vehicle exhaust and childhood cancer	Insufficient information in either the paper or the accompanying exposure paper	A
135	Filleul, 2005, Twenty five year mortality and air pollution: Results from the French PAARC survey	Nationwide/statewide study with no or insufficient area-specific adjustments	A
136	Finke, 2018, Air pollution and airway resistance at age 8 years - The PIAMA birth cohort study	Health outcome	B
137	Fischer, 2015, Air pollution and mortality in seven million adults: The Dutch Environmental Longitudinal Study (DUELS)	Nationwide/statewide study with no or insufficient area-specific adjustments	A
138	Fong, 2019, Relative toxicities of major particulate matter constituents on birthweight in Massachusetts.	Nationwide/statewide study with no or insufficient area-specific adjustments	A
139	Forbes, 2009, Chronic exposure to outdoor air pollution and lung function in adults	Nationwide/statewide study with no or insufficient area-specific adjustments	B

	Reference	Exclusion rationale	Outcome <sup>1</sup>
140	Forsberg, 1997, Prevalence of respiratory and hyperreactivity symptoms in relation to levels of criteria air pollutants in Sweden	Nationwide/statewide study with no or insufficient area-specific adjustments	A
141	Fritz, 2001, Pulmonary function and urban air pollution in preschool children	No quantitative measure of association	A
142	Frye, 2003, Association of lung function with declining ambient air pollution	Spatial scale	A
143	Fsadni, 2018, Impact of school air quality on children's respiratory health	No quantitative measure of association	A
144	Gandini, 2018, Long term effect of air pollution on incident hospital admissions: Results from the Italian Longitudinal Study within LIFE MED HISS Project	Spatial scale	A and B
145	Gao, 2013, Chronic effects of ambient air pollution on lung function among Chinese children	No quantitative measure of association	B
146	Gao, 2014, Chronic effects of ambient air pollution on respiratory morbidities among Chinese children: A cross-sectional study in Hong Kong	No quantitative measure of association	A
147	Garcia, 2016, Association of long-term PM <sub>2.5</sub> exposure with mortality using different air pollution exposure models: impacts in rural and urban California	PM monitoring or satellite data	A
148	Garcia, 2019, Association of changes in air quality with incident asthma in children in California, 1993-2014	No within-area or spatial contrast exploited	A
149	Gatto, 2014, Components of air pollution and cognitive function in middle-aged and older adults in Los Angeles	Spatial scale	B
150	Gauderman, 2000, Association between air pollution and lung function growth in Southern California children	Spatial scale	B
151	Gauderman, 2002, Association between air pollution and lung function growth in Southern California children: Results from a second cohort	No within-area or spatial contrast exploited	A
152	Gauderman, 2004, The effect of air pollution on lung development from 10 to 18 years of age	Spatial scale	A
153	Gauderman, 2015, Association of improved air quality with lung development in children	No within-area or spatial contrast exploited	B
154	Gehring, 2002, Traffic-related air pollution and respiratory health during the first 2 yrs of life	Review, methodological, HIA, or similar paper (no primary data)	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
155	Gehring, 2015, Particulate matter composition and respiratory health: The PIAMA birth cohort study	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
156	Gent, 2015, Asthma medication use during pregnancy, wheeze and estimated exposure to ambient nitrogen dioxide	Study design	A
157	Götschi, 2008, Air pollution and lung function in the European Community Respiratory Health Survey	No within-area or spatial contrast exploited	B
158	Gouveia, 2004, Association between ambient air pollution and birth weight in Sao Paulo, Brazil	No within-area or spatial contrast exploited	A
159	Gray, 2014, Assessing the impact of race, social factors and air pollution on birth outcomes: A population-based study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
160	Greenberg, 2016, Different effects of long-term exposures to SO <sub>2</sub> and NO <sub>2</sub> air pollutants on asthma severity in young adults	Spatial scale	A
161	Greenberg, 2017, Modeling long-term effects attributed to nitrogen dioxide (NO <sub>2</sub> ) and sulfur dioxide (SO <sub>2</sub> ) exposure on asthma morbidity in a nationwide cohort in Israel	Spatial scale	A
162	Greven, 2011, An approach to the estimation of chronic air pollution effects using spatio-temporal information	Review, methodological, HIA, or similar paper (no primary data)	A
163	Grineski, 2010, Children's asthma hospitalizations and relative risk due to nitrogen dioxide (NO <sub>2</sub> ): effect modification by race, ethnicity, and insurance status	Study design	A
164	Gundersen, 2012, Low traffic and respiratory symptoms among smoking females: The Hordaland Health Study	Spatial scale	A
165	Guo, 1999, Climate, traffic-related air pollutants, and asthma prevalence in middle-school children in Taiwan	Nationwide/statewide study with no or insufficient area-specific adjustments	A
166	Guo, 2018, Effect of long-term exposure to fine particulate matter on lung function decline and risk of chronic obstructive pulmonary disease in Taiwan: A longitudinal, cohort study	PM monitoring or satellite data	A and B
167	Habermann, 2012, Motor vehicle traffic and cardiovascular mortality in male adults	Spatial scale	A
168	Hales, 2012, Air pollution and mortality in New Zealand: Cohort study	Nationwide/statewide study with no or insufficient area-specific adjustments	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
169	Halonen, 2015, Road traffic noise is associated with increased cardiovascular morbidity and mortality and all-cause mortality in London	No quantitative measure of association	A and B
170	Halonen, 2016, Is long-term exposure to traffic pollution associated with mortality? A small-area study in London	Study design	A
171	Hamano, 2012, Effect of environmental and lifestyle factors on hypertension: Shimane COHRE study	No quantitative measure of association	B
172	Han, 2015, Effect of seasonal and monthly variation in weather and air pollution factors on stroke incidence in Seoul, Korea	Insufficient information in either the paper or the accompanying exposure paper	A
173	Han, 2018, Maternal air pollution exposure and preterm birth in Wuxi, China: Effect modification by maternal age	PM monitoring or satellite data	A
174	Hannam, 2014, Air pollution exposure and adverse pregnancy outcomes in a large UK birth cohort: Use of a novel spatio-temporal modelling technique	Nationwide/statewide study with no or insufficient area-specific adjustments	A
175	Hansen, 2006, Maternal exposure to low levels of ambient air pollution and preterm birth in Brisbane, Australia	No within-area or spatial contrast exploited	A
176	Hansen, 2007, Low levels of ambient air pollution during pregnancy and fetal growth among term neonates in Brisbane, Australia	Spatial scale	A
177	Hansen, 2016, Long-term exposure to fine particulate matter and incidence of diabetes in the Danish Nurse Cohort	Nationwide/statewide study with no or insufficient area-specific adjustments	A
178	Hao, 2016, Geographic variation in the association between ambient fine particulate matter (PM <sub>2.5</sub> ) and term low birth weight in the United States	Spatial scale	A
179	Hart, 2011, Long-term ambient multipollutant exposures and mortality	Nationwide/statewide study with no or insufficient area-specific adjustments	A
180	Hart, 2015, Effect modification of long-term air pollution exposures and the risk of incident cardiovascular disease in US women	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
181	Hart, 2015, The association of long-term exposure to PM <sub>2.5</sub> on all-cause mortality in the Nurses' Health Study and the impact of measurement-error correction	Nationwide/statewide study with no or insufficient area-specific adjustments	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
182	Hartiala, 2016, Ambient air pollution is associated with the severity of coronary atherosclerosis and incident myocardial infarction in patients undergoing elective cardiac evaluation	Spatial scale	A and B
183	Hasunuma, 2014, Decline of ambient air pollution levels due to measures to control automobile emissions and effects on the prevalence of respiratory and allergic disorders among children in Japan	Nationwide/statewide study with no or insufficient area-specific adjustments	A
184	Hayes, 2019, PM <sub>2.5</sub> air pollution and cause-specific cardiovascular disease mortality	Nationwide/statewide study with no or insufficient area-specific adjustments	A
185	Hazlehurst, 2018, Individual and neighborhood stressors, air pollution and cardiovascular disease	Spatial scale	A
186	He, 2010, Effects of ambient air pollution on lung function growth in Chinese schoolchildren	No quantitative measure of association	B
187	He, 2018, Ambient air pollution, H19/DMR methylation in cord blood and newborn size: A pilot study in Zhengzhou City, China	Health outcome	A
188	Heck, 2014, Risk of leukemia in relation to exposure to ambient air toxics in pregnancy and early childhood	Nationwide/statewide study with no or insufficient area-specific adjustments	B
189	Heidemann, 2014, Residential traffic and incidence of type 2 diabetes: The German Health Interview and Examination Surveys	Self-reported exposure	A
190	Heinrich, 2005, Traffic at residential address, respiratory health, and atopy in adults: The National German Health Survey 1998	Self-reported exposure	A
191	Hellack, 2017, Land use regression modeling of oxidative potential of fine particles, NO <sub>2</sub> , PM <sub>2.5</sub> mass and association to type two diabetes mellitus	Review, methodological, HIA, or similar paper (no primary data)	A
192	Héritier, 2018, A systematic analysis of mutual effects of transportation noise and air pollution exposure on myocardial infarction mortality: A nationwide cohort study in Switzerland	Nationwide/statewide study with no or insufficient area-specific adjustments	A
193	Hicken, 2013, Do psychosocial stress and social disadvantage modify the association between air pollution and blood pressure? The Multi-Ethnic Study of Atherosclerosis	Study design	B
194	Hirsch, 2002, NO <sub>2</sub> background levels at the address of residence are more strongly associated with respiratory symptoms than exposure estimates reflecting traffic counts	Insufficient information in either the paper or the accompanying exposure paper	A



	Reference	Exclusion rationale	Outcome <sup>1</sup>
195	Ho, 2019, Chronic obstructive pulmonary disease patients have a higher risk of occurrence of pneumonia by air pollution.	Insufficient information in either the paper or the accompanying exposure paper	A
196	Hoek, 2002, Association between mortality and indicators of traffic-related air pollution in the Netherlands: A cohort study	Pilot study; complete results in Beelen, 2008	A
197	Hoffmann, 2009, Childhood social position and associations between environmental exposures and health outcomes	PM monitoring or satellite data	A
198	Holm, 2007, Remission of asthma: a prospective longitudinal study from Northern Europe (RHINE study)	No relevant exposure metric	A
199	Honda, 2018, Associations of long-term fine particulate matter exposure with prevalent hypertension and increased blood pressure in older Americans	Spatial scale	B
200	Hooper, 2018, Ambient air pollution and chronic bronchitis in a cohort of US women	Nationwide/statewide study with no or insufficient area-specific adjustments	A
201	Horak, 2002, Particulate matter and lung function growth in children: a 3-yr follow-up study in Austrian schoolchildren	Spatial scale	B
202	Hrubá, 2001, Childhood respiratory symptoms, hospital admissions, and long-term exposure to airborne particulate matter	No relevant exposure metric	A
203	Hsu, 2015, Prenatal particulate air pollution and asthma onset in urban children. Identifying sensitive windows and sex differences	No quantitative measure of association	A
204	Hu, 2008, Linking stroke mortality with air pollution, income, and greenness in Northwest Florida: An ecological geographical study	Study design	A
205	Hu, 2015, Association of atmospheric particulate matter and ozone with gestational diabetes mellitus	Spatial scale	B
206	Hu, 2016, Living near a major road in Beijing: association with lower lung function, airway acidification, and chronic cough	No quantitative measure of association	A and B
207	Huang, 2019, Long-term exposure to fine particulate matter and hypertension incidence in China	Spatial scale	B
208	Hüls, 2018, The role of air pollution and lung function in cognitive impairment	Review, methodological, HIA, or similar paper (no primary data)	B
209	Humphrey, 2019, Social and environmental neighborhood typologies and lung function in a low-income, urban population	No quantitative measure of association	B

	Reference	Exclusion rationale	Outcome <sup>1</sup>
210	Hwang, 2015, Relationship between exposure to fine particulates and ozone and reduced lung function in children	No within-area or spatial contrast exploited	B
211	Idris, 2016, Environmental air pollutants as risk factors for asthma among children seen in pediatric clinics in Ukmmc, Kuala Lumpur	Self-reported exposure	A
212	Iniguez, 2012, Prenatal exposure to traffic-related air pollution and fetal growth in a cohort of pregnant women	Health outcome	A
213	Iniguez, 2016, Prenatal exposure to no2 and ultrasound measures of fetal growth in the Spanish INMA cohort	Health outcome	A
214	Iodice, 2018, Particulate air pollution, blood mitochondrial DNA copy number, and telomere length in mothers in the first trimester of pregnancy: effects on fetal growth	Spatial scale	A
215	Ising, 2003, Respiratory and dermatological diseases in children with long-term exposure to road traffic immissions	Self-reported exposure	A
216	Islam, 2007, Relationship between air pollution, lung function and asthma in adolescents	No within-area or spatial contrast exploited	A and B
217	Iwai, 2005, Correlation between suspended particles in the environmental air and causes of disease among inhabitants: cross-sectional studies using the vital statistics and air pollution data in Japan	No within-area or spatial contrast exploited	A
218	Jalaludin, 2004, Acute effects of urban ambient air pollution on respiratory symptoms, asthma medication use, and doctor visits for asthma in a cohort of Australian children	Study design	A
219	Janitz, 2017, Benzene and childhood acute leukemia in Oklahoma	Spatial scale	B
220	Jedrychowski, 2007, Pre-pregnancy dietary vitamin a intake may alleviate the adverse birth outcomes associated with prenatal pollutant exposure: Epidemiologic cohort study in Poland	PM monitoring or satellite data	A
221	Jedrychowski, 2009, Early wheezing phenotypes and severity of respiratory illness in very early childhood: study on intrauterine exposure to fine particle matter	PM monitoring or satellite data	A
222	Jedrychowski, 2015, Long term effects of prenatal and postnatal airborne PAH exposures on ventilatory lung function of non-asthmatic preadolescent children. Prospective birth cohort study in Krakow	Study design	B
223	Jerrett, 2005, Spatial analysis of air pollution and mortality in Los Angeles	Spatial scale	A
224	Jerrett, 2009, Long-term ozone exposure and mortality	No within-area or spatial contrast exploited	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
225	Jerrett, 2013, Spatial analysis of air pollution and mortality in California	Nationwide/statewide study with no or insufficient area-specific adjustments	A
226	Jiang, 2018, Outdoor particulate air pollution and indoor renovation associated with childhood pneumonia in China	Spatial scale	A
227	Johannson, 2018, Air pollution exposure is associated with lower lung function, but not changes in lung function, in patients with idiopathic pulmonary fibrosis	Very selective subgroup	B
228	Jørgensen, 2019, Long-term exposure to road traffic noise and incidence of diabetes in the Danish Nurse Cohort	Nationwide/statewide study with no or insufficient area-specific adjustments	A
229	Jung, 2019, Fine particulate matter exposure during pregnancy and infancy and incident asthma	Spatial scale	A
230	Kahr, 2016, Preterm birth and its associations with residence and ambient vehicular traffic exposure	Spatial scale	A
231	Kalkbrenner, 2010, Perinatal exposure to hazardous air pollutants and autism spectrum disorders at age 8	Nationwide/statewide study with no or insufficient area-specific adjustments	B
232	Kalkbrenner, 2018, Air toxics in relation to autism diagnosis, phenotype, and severity in a US family-based study	Spatial scale	B
233	Kara, 2013, Ambient air quality and asthma cases in Niğde, Turkey	PM monitoring or satellite data	A
234	Karr, 2007, Effects of subchronic and chronic exposure to ambient air pollutants on infant bronchiolitis	Spatial scale	A
235	Kasamatsu, 2006, Effects of winter air pollution on pulmonary function of school children in Shenyang, China	PM monitoring or satellite data	A
236	Kashima, 2010, Effects of traffic-related outdoor air pollution on respiratory illness and mortality in children, taking into account indoor air pollution, in Indonesia	Spatial scale	A
237	Kasznia-Kocot, 2010, Environmental risk factors for respiratory symptoms and childhood asthma	Self-reported exposure	A
238	Katanoda, 2011, An association between long-term exposure to ambient air pollution and mortality from lung cancer and respiratory diseases in Japan	No within-area or spatial contrast exploited	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
239	Keil, 1996, The international study of asthma and allergies in childhood (ISAAC): objectives and methods; results from German ISAAC centres concerning traffic density and wheezing and allergic rhinitis	Review, methodological, HIA, or similar paper (no primary data)	A
240	Kerin, 2018, Association between air pollution exposure, cognitive and adaptive function, and ASD severity among children with autism spectrum disorder	Very selective population	B
241	Khafaie, 2017, Air pollution and respiratory health among diabetic and non-diabetic subjects in Pune, India-Results from the Wellcome Trust Genetic Study	Insufficient information in either the paper or the accompanying exposure paper	A and B
242	Kim, 2009, Health effects of long-term air pollution: influence of exposure prediction methods	Review, methodological, HIA, or similar paper (no primary data)	A
243	Kim, 2013, Air pollution interacts with past episodes of bronchiolitis in the development of asthma	Nationwide/statewide study with no or insufficient area-specific adjustments	A
244	Kim, 2013, Analysis of the association between air pollution and allergic diseases exposure from nearby sources of ambient air pollution within elementary school zones in four Korean cities	Short-term measurements	A
245	Kim, 2014, Prenatal exposure to pm <sub>10</sub> and no <sub>2</sub> and children's neurodevelopment from birth to 24 months of age: Mothers and Children's Environmental Health (MOCEH) study	Nationwide/statewide study with no or insufficient area-specific adjustments	B
246	Kim, 2014, Traffic-related air pollution is associated with airway hyperresponsiveness	Review, methodological, HIA, or similar paper (no primary data)	A and B
247	Kim, 2016, Near-road exposure and impact of air pollution on allergic diseases in elementary school children: A cross-sectional study	Short-term measurements	A
248	Kim, 2017, Abdominal adiposity intensifies the negative effects of ambient air pollution on lung function in Korean men	Insufficient information in either the paper or the accompanying exposure paper	B
249	Kim, 2017, Association between long-term exposure to particulate matter air pollution and mortality in a South Korean national cohort: comparison across different exposure assessment approaches	Nationwide/statewide study with no or insufficient area-specific adjustments	A
250	Kim, 2017, Cardiovascular effects of long-term exposure to air pollution: A population-based study with 900,845 person-years of follow-up	Analytical error	A and B

	Reference	Exclusion rationale	Outcome <sup>1</sup>
251	Kim, 2018, Perinatal factors and the development of childhood asthma	Self-reported exposure	A
252	Kim, 2019, Effects of abdominal visceral fat compared with those of subcutaneous fat on the association between pm and hypertension in Korean men: A cross-sectional study.	Insufficient information in either the paper or the accompanying exposure paper	B
253	Kloog, 2012, Acute and chronic effects of particles on hospital admissions in New-England	Spatial scale	A
254	Knox, 1997, Hazard proximities of childhood cancers in Great Britain from 1953-80	Study design	B
255	Knox, 2005, Childhood cancers and atmospheric carcinogens	No relevant exposure metric	B
256	Kuehni, 2006, Association between reported exposure to road traffic and respiratory symptoms in children: Evidence of bias	Self-reported exposure	A
257	Kumar, 2018, Maternal residential proximity to major roadways and pediatric embryonal tumors in offspring	Health outcome	B
258	Künzli, 2005, Ambient air pollution and atherosclerosis in Los Angeles	PM monitoring or satellite data	B
259	Lambert, 1994, Nitrogen dioxide and respiratory illness in children. Part III: Quality assurance in an epidemiologic study	Review, methodological, HIA, or similar paper (no primary data)	A
260	Lanari, 2016, Exposure to vehicular traffic is associated to a higher risk of hospitalization for bronchiolitis during the first year of life	Self-reported exposure	A
261	Lao, 2019, Long-term exposure to ambient fine particulate matter (PM <sub>2.5</sub> ) and incident type 2 diabetes: A longitudinal cohort study	PM monitoring or satellite data	A
262	Latzin, 2009, Air pollution during pregnancy and lung function in newborns: A birth cohort study	Health outcome	B
263	Le, 2012, Air pollutant exposure and preterm and term small-for-gestational-age births in Detroit, Michigan: Long-term trends and associations	No within-area or spatial contrast exploited	A
264	Lee, 2003, Exposure to air pollution during different gestational phases contributes to risks of low birth weight	No within-area or spatial contrast exploited	A
265	Lee, 2003, Indoor and outdoor environmental exposures, parental atopy, and physician-diagnosed asthma in Taiwanese schoolchildren	Nationwide/statewide study with no or insufficient area-specific adjustments	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
266	Lee, 2011, Effects of ambient air pollution on pulmonary function among schoolchildren	Insufficient information in either the paper or the accompanying exposure paper	B
267	Lee, 2013, First trimester exposure to ambient air pollution, pregnancy complications and adverse birth outcomes in Allegheny County, PA	PM monitoring or satellite data	A and B
268	Lee, 2016, Association between long-term exposure to air pollutants and prevalence of cardiovascular disease in 108 South Korean communities in 2008-2010: A cross-sectional study	Study design	A and B
269	Lee, 2016, Traffic-related air pollution increased the risk of Parkinson's disease in Taiwan: A nationwide study	Spatial scale	B
270	Lee, 2018, Prenatal fine particulate exposure associated with reduced childhood lung function and nasal epithelia GSTP1 hypermethylation: Sex-specific effects	Health outcome	B
271	Lee, 2019, Fine particulate matter and incidence of metabolic syndrome in non-CVD patients: A nationwide population-based cohort study.	Nationwide/statewide study with no or insufficient area-specific adjustments	B
272	LeMasters, 2015, Secondhand smoke and traffic exhaust confer opposing risks for asthma in normal and overweight children	Review, methodological, HIA, or similar paper (no primary data)	A
273	Li, 2018, All-cause mortality risk associated with long-term exposure to ambient PM in China: A cohort study.	PM monitoring or satellite data	A
274	Li, 2018, Effect of airborne particulate matter of 2.5 µm or less on preterm birth: A national birth cohort study in China.	Spatial scale	A
275	Li, 2019, Air pollution exposures and blood pressure variation in type-2 diabetes mellitus patients: A retrospective cohort study in China	Very selective subgroup	B
276	Li, 2019, Association of ambient air pollutants and birth weight in Ningbo, 2015-2017	Spatial scale	A
277	Li, 2019, Associations of long-term exposure to ambient pm with hypertension and blood pressure in rural Chinese population: The Henan rural cohort study	Spatial scale	B
278	Li, 2019, Onset of respiratory symptoms among Chinese students: Associations with dampness and redecoration, PM <sub>10</sub> , NO <sub>2</sub> , SO <sub>2</sub> and inadequate ventilation in the school	Short-term measurements	A
279	Li, 2019, Term birth weight and ambient air pollutant concentrations during pregnancy, among women living in Monroe County, New York	Study design	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
280	Liang, 2018, Satellite-based short- and long-term exposure to pm and adult mortality in urban Beijing, China	PM monitoring or satellite data	A
281	Liang, 2019, Long-term exposure to ambient fine particulate matter and incidence of diabetes in China: A cohort study	Spatial scale	A
282	Liebhart, 2007, Prevalence and risk factors for asthma in Poland: Results from the PMSEAD study	Spatial scale	A
283	Lim, 2017, Vascular and cardiac autonomic function and PM constituents among the elderly: A longitudinal study	No within-area or spatial contrast exploited	B
284	Lim, 2018, Association between long-term exposure to ambient air pollution and diabetes mortality in the US	Nationwide/statewide study with no or insufficient area-specific adjustments	B
285	Lim, 2019, Long-term exposure to ozone and cause-specific mortality risk in the US	Nationwide/statewide study with no or insufficient area-specific adjustments	A
286	Lim, 2019, Mediterranean diet and the association between air pollution and cardiovascular disease mortality risk	Nationwide/statewide study with no or insufficient area-specific adjustments	A
287	Lin, 2004, Association between maternal exposure to elevated ambient sulfur dioxide during pregnancy and term low birth weight	Nationwide/statewide study with no or insufficient area-specific adjustments	A
288	Lin, 2008, Self-reported home environmental risk factors for childhood asthma: A cross-sectional study of children in Buffalo, New York	Self-reported exposure	A
289	Lin, 2014, Multilevel analysis of air pollution and early childhood neurobehavioral development	No within-area or spatial contrast exploited	B
290	Lin, 2017, Long-term effects of ambient pm on hypertension and blood pressure and attributable risk among older Chinese adults	Spatial scale	B
291	Lin, 2018, The attributable risk of chronic obstructive pulmonary disease due to ambient fine particulate pollution among older adults	Review, methodological, HIA, or similar paper (no primary data)	A
292	Lipfert, 2002, Temporal and spatial relations between age specific mortality and ambient air quality in the United States: regression results for counties, 1960-97	Study design	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
293	Lipfert, 2006, PM <sub>2.5</sub> constituents and related air quality variables as predictors of survival in a cohort of US military veterans	Nationwide/statewide study with no or insufficient area-specific adjustments	A
294	Lipfert, 2006, Traffic density as a surrogate measure of environmental exposures in studies of air pollution health effects: long-term mortality in a cohort of US veterans	Spatial scale	A
295	Lipfert, 2008, Vehicular traffic effects on survival within the Washington university-EPRI veterans cohort: New estimates and sensitivity studies	Spatial scale	A
296	Lipfert, 2009, Air pollution and survival within the Washington university-EPRI veterans cohort: Risks based on modeled estimates of ambient levels of hazardous and criteria air pollutants	Spatial scale	A
297	Lipsett, 2011, Long-term exposure to air pollution and cardiorespiratory disease in the California Teachers Study cohort	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
298	Liu, 2003, Association between gaseous ambient air pollutants and adverse pregnancy outcomes in Vancouver, Canada	Spatial scale	A
299	Liu, 2007, Association between maternal exposure to ambient air pollutants during pregnancy and fetal growth restriction	Spatial scale	A
300	Liu, 2008, Ambient exposure to criteria air pollutants and female lung cancer in Taiwan	Spatial scale	A
301	Liu, 2016, Ambient air pollution exposures and risk of Parkinson disease	Nationwide/statewide study with no or insufficient area-specific adjustments	B
302	Liu, 2016, Associations between long-term exposure to ambient particulate air pollution and type 2 diabetes prevalence, blood glucose and glycosylated hemoglobin levels in China	Spatial scale	A
303	Liu, 2016, The association of annual air pollution exposure with blood pressure among patients with sleep-disordered breathing	Very selective subgroup	B
304	Liu, 2019, Gut microbiota partially mediates the effects of fine particulate matter on type 2 diabetes: Evidence from a population-based epidemiological study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
305	Ljungman, 2018, Long- and short-term air pollution exposure and measures of arterial stiffness in the Framingham Heart Study	Health outcome	B
306	Loop, 2018, Fine particulate matter and incident coronary heart disease in the REGARDS cohort	Spatial scale	A



	Reference	Exclusion rationale	Outcome <sup>1</sup>
307	Lwebuga-Mukasa, 2004, Association between traffic volume and health care use for asthma among residents at a US-Canadian border crossing point	No quantitative measure of association	A
308	Lwebuga-Mukasa, 2005, Local ecological factors, ultrafine particulate concentrations, and asthma prevalence rates in Buffalo, New York, neighborhoods	No quantitative measure of association	A
309	Ma, 2008, Effects of airborne particulate matter on respiratory morbidity in asthmatic children	Study design	A
310	Maeda, 1991, Exposure to nitrogen oxides and other air pollutants from automobiles	No quantitative measure of association	A and B
311	Maheswaran, 2003, Stroke mortality associated with living near main roads in England and Wales: A geographical study	Study design	A
312	Maheswaran, 2006, Outdoor NO <sub>x</sub> and stroke mortality: adjusting for small area level smoking prevalence using a Bayesian approach	Study design	A
313	Mainolfi, 2013, Low-level exposure to air pollution and risk of adverse birth outcomes in Hillsborough County, Florida	Spatial scale	A
314	Maisonet, 2001, Relation between ambient air pollution and low birth weight in the Northeastern United States	No within-area or spatial contrast exploited	A
315	Makar, 2017, Estimating the causal effect of low levels of fine particulate matter on death and hospitalization: are levels below the safety standards harmful?	Nationwide/statewide study with no or insufficient area-specific adjustments	A
316	Malagoli, 2015, Increased incidence of childhood leukemia in urban areas: A population-based case-control study	No quantitative measure of association	B
317	Malecki, 2018, Neighborhood perceptions and cumulative impacts of low level chronic exposure to fine particulate matter (PM <sub>2.5</sub> ) on cardiopulmonary health	Nationwide/statewide study with no or insufficient area-specific adjustments	B
318	Malik, 2019, Association of long-term exposure to particulate matter and ozone with health status and mortality in patients after myocardial infarction.	Nationwide/statewide study with no or insufficient area-specific adjustments	A
319	Markevych, 2018, Outdoor air pollution, greenspace, and incidence of ADHD: A semi-individual study	Spatial scale	B
320	Martens, 2018, Modeled and perceived RF-EMF, noise and air pollution and symptoms in a population cohort. Is perception key in predicting symptoms?	Health outcome	A
321	McConnell, 2003, Prospective study of air pollution and bronchitic symptoms in children with asthma	Spatial scale	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
322	McDonnell, 2000, Relationships of mortality with the fine and coarse fractions of long-term ambient PM <sub>10</sub> concentrations in nonsmokers	Spatial scale	A
323	Melén, 2008, Interactions between Glutathione S-Transferase P1, Tumor Necrosis Factor, and traffic-related air pollution for development of childhood allergic disease	Health outcome	A
324	Mendola, 2016, Air pollution exposure and preeclampsia among US women with and without asthma	No within-area or spatial contrast exploited	B
325	Mendola, 2016, Preterm birth and air pollution: critical windows of exposure for women with asthma	No within-area or spatial contrast exploited	A
326	Mendy, 2019, Synergistic association of house endotoxin exposure and ambient air pollution with asthma outcomes	Spatial scale	A
327	Meng, 2006, Living near heavy traffic increases asthma severity	Review, methodological, HIA, or similar paper (no primary data)	A
328	Meo, 2015, Effect of environmental air pollution on type 2 diabetes mellitus	Review, methodological, HIA, or similar paper (no primary data)	A
329	Midouhas, 2018, Outdoor and indoor air quality and cognitive ability in young children	Nationwide/statewide study with no or insufficient area-specific adjustments	B
330	Migliaretti, 2004, Urban air pollution and asthma in children	Study design	A
331	Migliaretti, 2005, Traffic air pollution and hospital admission for asthma: A case-control approach in a Turin (Italy) population	Study design	A
332	Migliore, 2009, Respiratory symptoms in children living near busy roads and their relationship to vehicular traffic: Results of an Italian multicenter study (SIDRIA 2)	Self-reported exposure	A
333	Miller, 2007, Long-term exposure to air pollution and incidence of cardiovascular events in women	PM monitoring or satellite data	A
334	Millstein, 2004, Effects of ambient air pollutants on asthma medication use and wheezing among fourth-grade school children from 12 Southern California communities enrolled in the Children's Health Study	Study design	A
335	Min, 2017, Exposure to ambient PM and NO <sub>2</sub> and the incidence of attention-deficit hyperactivity disorder in childhood	Spatial scale	B

	Reference	Exclusion rationale	Outcome <sup>1</sup>
336	Mobasher, 2013, Associations between ambient air pollution and hypertensive disorders of pregnancy	Spatial scale	B
337	Montnémy, 2001, Prevalence of obstructive lung diseases and respiratory symptoms in relation to living environment and socio-economic group	Self-reported exposure	A
338	Morello-Frosch, 2010, Ambient air pollution exposure and full-term birth weight in California	Spatial scale	A
339	Mortimer, 2008, Air pollution and pulmonary function in asthmatic children: Effects of prenatal and lifetime exposures	Insufficient information in either the paper or the accompanying exposure paper	B
340	Murakami, 1990, Health problems of residents along heavy-traffic roads	Review, methodological, HIA, or similar paper (no primary data)	A
341	Mustapha, 2011, Traffic air pollution and other risk factors for respiratory illness in schoolchildren in the Niger-delta region of Nigeria	Short-term measurements	A
342	Nachman, 2012, Exposures to fine particulate air pollution and respiratory outcomes in adults using two national datasets: A cross-sectional study	PM monitoring or satellite data	A
343	Nascimento, 2017, Are there differences in birth weight according to sex and associations with maternal exposure to air pollutants? A cohort study	No within-area or spatial contrast exploited	A
344	Nawrot, 2011, The impact of traffic air pollution on bronchiolitis obliterans syndrome and mortality after lung transplantation	Very selective subgroup	A
345	Neophytou, 2016, Air pollution and lung function in minority youth with asthma in the GALA II (Genes-Environments and Admixture in Latino Americans) and SAGE II (Study of African Americans, Asthma, Genes, and Environments) Studies	Spatial scale	B
346	Neuberger, 1995, Combined effects of outdoor and indoor air pollution on lung functions of school children	No quantitative measure of association	B
347	Neuberger, 2002, Declining ambient air pollution and lung function improvement in Austrian children	No quantitative measure of association	B
348	Newcomb, 2008, Predicting admissions for childhood asthma based on proximity to major roadways	Inappropriate selection of controls	A
349	Ng, 2017, Source apportionment of fine particulate matter and risk of term low birth weight in California: Exploring modification by region and maternal characteristics	Spatial scale	A
350	Nirel, 2015, Respiratory hospitalizations of children and residential exposure to traffic air pollution in Jerusalem	Health outcome	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
351	Nishimura, 2013, Early-life air pollution and asthma risk in minority children. The GALA II and SAGE II studies	Spatial scale	A
352	Nobles, 2019, Differential effect of ambient air pollution exposure on risk of gestational hypertension and preeclampsia	Spatial scale	B
353	Norbäck, 2019, Onset and remission of childhood wheeze and rhinitis across China - Associations with early life indoor and outdoor air pollution	Spatial scale	A
354	Nordlinder, 1997, Environmental exposure to gasoline and leukemia in children and young adults--An ecology study	Study design	B
355	Ohyama, 2018, Association between indoor nitrous acid, outdoor nitrogen dioxide, and asthma attacks: Results of a pilot study	Study design	A
356	Olsson, 2012, Temporal variation in air pollution concentrations and preterm birth - A population based epidemiological study	No within-area or spatial contrast exploited	A
357	Orioli, 2018, Association between PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> , O <sub>3</sub> and self-reported diabetes in Italy: A cross-sectional, ecological study	Spatial scale	A
358	Oyana, 2004, Spatial relationships among asthma prevalence, health care utilization, and pollution sources in neighborhoods of Buffalo, New York	No quantitative measure of association	A
359	Oyana, 2019, Effects of childhood exposure to PM in a Memphis pediatric asthma cohort	No quantitative measure of association	A
360	Padhi, 2008, Assessment of intra-urban variability in outdoor air quality and its health risks	Analytical error	A and B
361	Padula, 2019, Prenatal exposure to air pollution, maternal diabetes and preterm birth	Review, methodological, HIA, or similar paper (no primary data)	A and B
362	Palacios, 2014, A prospective analysis of airborne metal exposures and risk of Parkinson disease in the Nurses' Health Study cohort	No relevant exposure metric	B
363	Palacios, 2014, Particulate matter and risk of Parkinson disease in a large prospective study of women	Nationwide/statewide study with no or insufficient area-specific adjustments	B
364	Palacios, 2017, Air pollution and risk of Parkinson's disease in a large prospective study of men	Nationwide/statewide study with no or insufficient area-specific adjustments	B
365	Pan, 2014, Comparison of the effects of air pollution on outpatient and inpatient visits for asthma: A population-based study in Taiwan	Spatial scale	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
366	Pan, 2017, Gestational diabetes mellitus was related to ambient air pollutant nitric oxide during early gestation	Nationwide/statewide study with no or insufficient area-specific adjustments	B
367	Pattenden, 2006, NO <sub>2</sub> and children's respiratory symptoms in the PATY study	Spatial scale	A
368	Pedersen, 2017, Gestational diabetes mellitus and exposure to ambient air pollution and road traffic noise: A cohort study	Nationwide/statewide study with no or insufficient area-specific adjustments	B
369	Pedersen, 2017, Impact of road traffic pollution on pre-eclampsia and pregnancy-induced hypertensive disorders	Nationwide/statewide study with no or insufficient area-specific adjustments	B
370	Pénard-Morand, 2005, Long-term exposure to background air pollution related to respiratory and allergic health in schoolchildren	Nationwide/statewide study with no or insufficient area-specific adjustments	A
371	Peng, 2018, Residential proximity to major roadways at birth, DNA methylation at birth and midchildhood, and childhood cognitive test scores: project VIVA (Massachusetts, USA)	Health outcome	B
372	Pereira, 2011, Traffic emissions are associated with reduced fetal growth in areas of Perth, Western Australia: An application of the AusRoads dispersion model	Health outcome	A
373	Pereira, 2014, Sources of fine particulate matter and risk of preterm birth in Connecticut, 2000-2006: A longitudinal study	Spatial scale	A
374	Peters, 1999, A study of twelve Southern California communities with differing levels and types of air pollution. II. Effects on pulmonary function	No within-area or spatial contrast exploited	B
375	Peterson, 2015, Effects of prenatal exposure to air pollutants (polycyclic aromatic hydrocarbons) on the development of brain white matter, cognition, and behavior in later childhood	Study design	B
376	Pinault, 2016, Risk estimates of mortality attributed to low concentrations of ambient fine particulate matter in the Canadian Community Health Survey cohort	PM monitoring or satellite data	A
377	Pinault, 2017, Associations between fine particulate matter and mortality in the 2001 Canadian Census Health and Environment Cohort	PM monitoring or satellite data	A
378	Pinault, 2018, Diabetes status and susceptibility to the effects of PM <sub>2.5</sub> exposure on cardiovascular mortality in a National Canadian Cohort	PM monitoring or satellite data	A
379	Ponce, 2005, Preterm birth: the interaction of traffic-related air pollution with economic hardship in Los Angeles neighborhoods	No quantitative measure of association	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
380	Pope, 2002, Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution	No within-area or spatial contrast exploited	A
381	Pope, 2009, Cardiovascular mortality and exposure to airborne fine particulate matter and cigarette smoke: Shape of the exposure-response relationship	PM monitoring or satellite data	A
382	Pope, 2015, Relationships between fine particulate air pollution, cardiometabolic disorders, and cardiovascular mortality	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
383	Pope, 2019, Mortality risk and fine particulate air pollution in a large, representative cohort of US adults	PM monitoring or satellite data	A
384	Porebski, 2014, Residential proximity to major roadways is associated with increased prevalence of allergic respiratory symptoms in children	Self-reported exposure	A
385	Portnov, 2012, High prevalence of childhood asthma in Northern Israel is linked to air pollution by particulate matter: Evidence from GIS analysis and Bayesian model averaging	PM monitoring or satellite data	A
386	Price, 2012, Risk of childhood asthma prevalence attributable to residential proximity to major roads in Montreal, Canada	Review, methodological, HIA, or similar paper (no primary data)	A
387	Puett, 2008, Chronic particulate exposure, mortality, and coronary heart disease in the Nurses' Health Study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
388	Puett, 2009, Chronic fine and coarse particulate exposure, mortality, and coronary heart disease in the Nurses' Health Study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
389	Puett, 2011, Particulate matter exposures, mortality, and cardiovascular disease in the Health Professionals follow-up study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
390	Pun, 2017, Long-term PM <sub>2.5</sub> exposure and respiratory, cancer, and cardiovascular mortality in older US adults	PM monitoring or satellite data	A
391	Qian, 2000, Effects of air pollution on children's respiratory health in three Chinese cities	No within-area or spatial contrast exploited	A
392	Qian, 2004, Using air pollution based community clusters to explore air pollution health effects in children	No within-area or spatial contrast exploited	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
393	Qian, 2005, Lung function and long-term exposure to air pollutants in middle-aged American adults	PM monitoring or satellite data	B
394	Qian, 2016, Ambient air pollution and adverse pregnancy outcomes in Wuhan, China	Analytical error	A
395	Qian, 2016, Ambient air pollution and preterm birth: a prospective birth cohort study in Wuhan, China	Analytical error	A
396	Qiu, 2017, Fine particulate matter exposure and incidence of stroke: a cohort study in Hong Kong	PM monitoring or satellite data	A
397	Qiu, 2018, Long-term exposure to fine particulate matter air pollution and type 2 diabetes mellitus in elderly: A cohort study in Hong Kong	PM monitoring or satellite data	A
398	Ramadour, 2000, Prevalence of asthma and rhinitis in relation to long-term exposure to gaseous air pollutants	Spatial scale	A
399	Rancière, 2017, Early exposure to traffic-related air pollution, respiratory symptoms at 4 years of age, and potential effect modification by parental allergy, stressful family events, and sex: A prospective follow-up study of the PARIS birth cohort	No quantitative measure of association	A
400	Raz, 2015, Autism spectrum disorder and particulate matter air pollution before, during, and after pregnancy: A nested case-control analysis within the Nurses' Health Study II cohort	Nationwide/statewide study with no or insufficient area-specific adjustments	B
401	Requia, 2017, Association of pm with diabetes, asthma, and high blood pressure incidence in Canada: A spatiotemporal analysis of the impacts of the energy generation and fuel sales	Spatial scale	A and B
402	Reynolds, 2002, Traffic patterns and childhood cancer incidence rates in California, United States	Study design	B
403	Ribeiro, 2018, Incidence and mortality risk for respiratory tract cancer in the city of São Paulo, Brazil: Bayesian analysis of the association with traffic density	Study design	A
404	Ribeiro, 2019, Bayesian modeling of hematologic cancer and vehicular air pollution among young people in the city of São Paulo, Brazil	Study design	B
405	Ribeiro, 2019, Incidence and mortality for respiratory cancer and traffic-related air pollution in São Paulo, Brazil	Study design	A
406	Rice, 2018, Exposure to traffic emissions and fine particulate matter and computed tomography measures of the lung and airways	Health outcome	A
407	Ring, 1999, Environmental risk factors for respiratory and skin atopy: results from epidemiological studies in former East and West Germany	Health outcome	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
408	Ritz, 2000, Effect of air pollution on preterm birth among children born in Southern California between 1989 and 1993	No within-area or spatial contrast exploited	A
409	Roberts, 2013, Perinatal air pollutant exposures and autism spectrum disorder in the children of Nurses' Health Study II participants	Nationwide/statewide study with no or insufficient area-specific adjustments	B
410	Rodosthenous, 2018, Extracellular vesicle-enriched microRNAs interact in the association between long-term particulate matter and blood pressure in elderly men	Health outcome	B
411	Rodrigues, 2017, Risk factors in cardiovascular disease mortality associated with high exposure to vehicular traffic	Study design	A
412	Rosa, 2017, Prenatal particulate matter exposure and wheeze in Mexican children: Effect modification by prenatal psychosocial stress	No quantitative measure of association	A
413	Rosenlund, 2008, Traffic-related air pollution in relation to incidence and prognosis of coronary heart disease	Spatial scale	A
414	Roux, 2008, Long-term exposure to ambient particulate matter and prevalence of subclinical atherosclerosis in the Multi-Ethnic Study of Atherosclerosis	Spatial scale	B
415	Rudra, 2011, Ambient carbon monoxide and fine particulate matter in relation to preeclampsia and preterm delivery in Western Washington state	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
416	Rumana, 2014, A retrospective approach to assess human health risks associated with growing air pollution in urbanized area of Thar desert, Western Rajasthan, India	Spatial scale	A
417	Ruttens, 2017, An association of particulate air pollution and traffic exposure with mortality after lung transplantation in Europe	Very selective subgroup	A
418	Salam, 2004, Early-life environmental risk factors for asthma: Findings from the Children's Health Study	Self-reported exposure	A
419	Salam, 2005, Birth outcomes and prenatal exposure to ozone, carbon monoxide, and particulate matter: Results from the Children's Health Study	No within-area or spatial contrast exploited	A
420	Salameh, 2012, Exposure to outdoor air pollution and chronic bronchitis in adults: A case-control study	Self-reported exposure	A
421	Salinas-Rodríguez, 2018, Exposure to ambient pm concentrations and cognitive function among older Mexican adults	Spatial scale	B
422	Samoli, 2003, Investigating the dose-response relation between air pollution and total mortality in the APHEA-2 multicity project	Study design	A



	Reference	Exclusion rationale	Outcome <sup>1</sup>
423	Samoli, 2005, Estimating the exposure-response relationships between particulate matter and mortality within the APHEA multicity project	Study design	A
424	Sanyal, 2018, Long-term effect of outdoor air pollution on mortality and morbidity: A 12-year follow-up study for metropolitan France.	Study design	A
425	Sbihi, 2017, Asthma trajectories in a population-based birth cohort. Impacts of air pollution and greenness	Health outcome	A
426	Schikowski, 2008, Contribution of smoking and air pollution exposure in urban areas to social differences in respiratory health	No quantitative measure of association	A
427	Schikowski, 2010, Decline in air pollution and change in prevalence in respiratory symptoms and chronic obstructive pulmonary disease in elderly women	Spatial scale	A
428	Schulz, 2015, Effects of particulate matter and antioxidant dietary intake on blood pressure	PM monitoring or satellite data	B
429	Schwartz, 1989, Lung function and chronic exposure to air pollution: a cross-sectional analysis of NHANES II	Spatial scale	B
430	Schwartz, 2018, Estimating the effects of pm on life expectancy using causal modeling methods	Spatial scale	A
431	Scoggins, 2004, Spatial analysis of annual air pollution exposure and mortality	Study design	A
432	Seifi, 2019, Exposure to ambient air pollution and risk of childhood cancers: A population-based study in Tehran, Iran	No quantitative measure of association	B
433	Selander, 2009, Long-term exposure to road traffic noise and myocardial infarction	No quantitative measure of association	A
434	Selander, 2013, Joint effects of job strain and road-traffic and occupational noise on myocardial infarction	No quantitative measure of association	A
435	Seo, 2010, Population-attributable risk of low birthweight related to PM <sub>10</sub> pollution in seven Korean cities	No quantitative measure of association	A
436	Shankardass, 2009, Parental stress increases the effect of traffic-related air pollution on childhood asthma incidence	Review, methodological, HIA, or similar paper (no primary data)	A
437	Shen, 2017, Maternal exposure to air pollutants and risk of gestational diabetes mellitus in Taiwan	Spatial scale	B
438	Sheridan, 2019, Ambient fine particulate matter and preterm birth in California: Identification of critical exposure windows	PM monitoring or satellite data	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
439	Shima, 2000, Effect of outdoor and indoor nitrogen dioxide on respiratory symptoms in schoolchildren	No within-area or spatial contrast exploited	A
440	Shima, 2002, Effects of air pollution on the prevalence and incidence of asthma in children	No within-area or spatial contrast exploited	A
441	Shin, 2019, Association between long-term exposure of ambient air pollutants and cardiometabolic diseases: a 2012 Korean Community Health Survey	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
442	Siddika, 2019, Synergistic effects of prenatal exposure to fine particulate matter (PM <sub>2.5</sub> ) and ozone (O <sub>3</sub> ) on the risk of preterm birth: A population-based cohort study	Spatial scale	A
443	Silveira, 2018, Green spaces and mortality due to cardiovascular diseases in the city of Rio de Janeiro	Study design	A
444	Singh, 2016, Prevalence and severity of asthma among Indian school children aged between 6 and 14 years: Associations with parental smoking and traffic pollution	Self-reported exposure	A
445	Škarková, 2015, Refining of asthma prevalence spatial distribution and visualization of outdoor environment factors using GIS and its application for identification of mutual associations	Study design	A
446	Slama, 2007, Traffic-related atmospheric pollutants levels during pregnancy and offspring's term birth weight: A study relying on a land-use regression exposure model	Health outcome	A
447	Smargiassi, 2006, Traffic intensity, dwelling value, and hospital admissions for respiratory disease among the elderly in Montreal (Canada): A case-control analysis	Health outcome	A
448	Sofianopoulou, 2019, Traffic exposures, air pollution and outcomes in pulmonary arterial hypertension: A UK cohort study analysis.	Health outcome	B
449	Soh, 2018, Pregnancy trimester-specific exposure to ambient air pollution and child respiratory health outcomes in the first 2 years of life: Effect modification by maternal pre-pregnancy BMI	PM monitoring or satellite data	A
450	Solé, 2007, Prevalence of symptoms of asthma, rhinitis, and atopic eczema in Brazilian adolescents related to exposure to gaseous air pollutants and socioeconomic status	No within-area or spatial contrast exploited	A
451	Son, 2011, Survival analysis of long-term exposure to different sizes of airborne particulate matter and risk of infant mortality using a birth cohort in Seoul, Korea	PM monitoring or satellite data	A
452	Son, 2015, Does urban land-use increase risk of asthma symptoms?	Spatial scale	A
453	Sørensen, 2012, Road traffic noise and incident myocardial infarction: A prospective cohort study	No quantitative measure of association	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
454	Sørensen, 2013, Long-term exposure to road traffic noise and incident diabetes: A cohort study	No relevant exposure metric	A
455	Stanković, 2016, Long-term ambient air pollution exposure and risk of high blood pressure among citizens in Nis, Serbia	Spatial scale	B
456	Steffen, 2004, Acute childhood leukaemia and environmental exposure to potential sources of benzene and other hydrocarbons; A case-control study	Self-reported exposure	B
457	Stelmach, 2014, Risk factors for the development of atopic dermatitis and early wheeze	No quantitative measure of association	A
458	Sternthal, 2011, Associations among maternal childhood socioeconomic status, cord blood IgE levels, and repeated wheeze in urban children	No quantitative measure of association	A
459	Stieb, 2016, A national study of the association between traffic-related air pollution and adverse pregnancy outcomes in Canada, 1999-2008	Nationwide/statewide study with no or insufficient area-specific adjustments	A
460	Stieb, 2016, Associations of pregnancy outcomes and PM <sub>2.5</sub> in a National Canadian Study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
461	Strak, 2017, Long-term exposure to particulate matter, NO <sub>2</sub> and the oxidative potential of particulates and diabetes prevalence in a large national health survey	Nationwide/statewide study with no or insufficient area-specific adjustments	A
462	Studnicka, 1997, Traffic-related NO <sub>2</sub> and the prevalence of asthma and respiratory symptoms in seven year olds	No within-area or spatial contrast exploited	A
463	Sunyer, 2001, Particles, and not gases, are associated with the risk of death in patients with chronic obstructive pulmonary disease	Study design	A
464	Sunyer, 2006, Chronic bronchitis and urban air pollution in an international study	Health outcome	A
465	Suwa, 2002, Particulate air pollution induces progression of atherosclerosis	Study design	B
466	Tallon, 2017, Cognitive impacts of ambient air pollution in the National Social Health and Aging Project (NSHAP) cohort	Nationwide/statewide study with no or insufficient area-specific adjustments	B
467	Theophanides, 2007, Mortality and pollution in several Greek cities	Study design	A
468	Thurston, 2016, Ambient particulate matter air pollution exposure and mortality in the NIH-AARP Diet and Health Cohort	Spatial scale	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
469	Thurston, 2016, Ischemic heart disease mortality and long-term exposure to source-related components of US fine particle air pollution	Spatial scale	A
470	Tolbert, 2000, Air quality and pediatric emergency room visits for asthma in Atlanta, Georgia, USA	Study design	A
471	Tonne, 2008, Air pollution and mortality benefits of the London congestion charge: Spatial and socioeconomic inequalities	Review, methodological, HIA, or similar paper (no primary data)	A
472	Tran, 2018, Impact of air pollution on cause-specific mortality in Korea: results from Bayesian model averaging and principal component regression approaches	No quantitative measure of association	A
473	Trupin, 2010, An integrated model of environmental factors in adult asthma lung function and disease severity: A cross-sectional study	No quantitative measure of association	A and B
474	Tsui, 2018, Lifetime exposure to particulate air pollutants is negatively associated with lung function in non-asthmatic children	Study design	B
475	Tu, 2016, Spatial variations in the associations of term birth weight with ambient air pollution in Georgia, USA	No quantitative measure of association	A
476	Turner, 2014, Interactions between cigarette smoking and fine particulate matter in the Risk of Lung Cancer Mortality in Cancer Prevention Study II	Nationwide/statewide study with no or insufficient area-specific adjustments	A
477	Turner, 2016, Long-term ozone exposure and mortality in a large prospective study	Nationwide/statewide study with no or insufficient area-specific adjustments	A
478	Turner, 2017, Interactions between cigarette smoking and ambient PM for cardiovascular mortality	Spatial scale	A
479	Tzivian, 2017, Associations of long-term exposure to air pollution and road traffic noise with cognitive function - An analysis of effect measure modification	Review, methodological, HIA, or similar paper (no primary data)	B
480	Van Roosbroeck, 2008, Traffic-related outdoor air pollution and respiratory symptoms in children: the impact of adjustment for exposure measurement error	Review, methodological, HIA, or similar paper (no primary data)	A
481	Vandentorren, 2003, Long-term mortality among adults with or without asthma in the PAARC study	No relevant exposure metric	A
482	Vanos, 2013, Synoptic weather typing applied to air pollution mortality among the elderly in 10 Canadian cities	Study design	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
483	Vigeh, 2011, Environmental carbon monoxide related to pregnancy hypertension	Insufficient information in either the paper or the accompanying exposure paper	B
484	Villeneuve, 2015, Long-term exposure to fine particulate matter air pollution and mortality among Canadian women	Spatial scale	A
485	Vineis, 2007, Lung cancers attributable to environmental tobacco smoke and air pollution in non-smokers in different European countries: A prospective study	Health outcome	A
486	Visser, 2004, Residential traffic density and cancer incidence in Amsterdam, 1989-1997	Health outcome	B
487	Vörös, 2019, The influence of air pollution on respiratory allergies, asthma and wheeze in childhood in Hungary	No full text and unlikely this study would be included	A
488	Wang, 2009, Association of traffic-related air pollution with children's neurobehavioral functions in Quanzhou, China	No quantitative measure of association	B
489	Wang, 2009, Long-term exposure to gaseous air pollutants and cardio-respiratory mortality in Brisbane, Australia	Study design	A
490	Wang, 2018, Association of long-term exposure to airborne particulate matter of 1 $\mu\text{m}$ or less with preterm birth in China	Spatial scale	A
491	Wang, 2018, Effects of prenatal exposure to air pollution on preeclampsia in Shenzhen, China	No within-area or spatial contrast exploited	B
492	Wang, 2019, Association of estimated long-term exposure to air pollution and traffic proximity with a marker for coronary atherosclerosis in a nationwide study in China	Very selective subgroup	B
493	Wang, 2019, Association of school residential pm with childhood high blood pressure: results from an observational study in 6 cities in China	PM monitoring or satellite data	B
494	Ward-Caviness, 2018, Associations between residential proximity to traffic and vascular disease in a Cardiac Catheterization Cohort	Very selective subgroup	A and B
495	Weaver, 2019, Neighborhood sociodemographic effects on the associations between long-term PM exposure and cardiovascular outcomes and diabetes	Very selective subgroup	A and B
496	Weichenthal, 2016, Oxidative burden of fine particulate air pollution and risk of cause-specific mortality in the Canadian Census Health and Environment Cohort (CanCHEC)	PM monitoring or satellite data	A
497	Weichenthal, 2017, Impact of oxidant gases on the relationship between outdoor fine particulate air pollution and nonaccidental, cardiovascular, and respiratory mortality	Nationwide/statewide study with no or insufficient area-specific adjustments	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
498	Wen, 2012, Air pollution shortens life expectancy and health expectancy for older adults: The case of China	No relevant exposure metric	A
499	Weng, 2008, Childhood leukemia development and correlation with traffic air pollution in Taiwan using nitrogen dioxide as an air pollutant marker	Spatial scale	B
500	Weuve, 2012, Exposure to particulate air pollution and cognitive decline in older women	Nationwide/statewide study with no or insufficient area-specific adjustments	B
501	Wheeler, 2005, Environmental equity, air quality, socioeconomic status, and respiratory health: A linkage analysis of routine data from the health survey for England	No quantitative measure of association	A and B
502	Wong, 2015, Satellite-based estimates of long-term exposure to fine particles and association with mortality in elderly Hong Kong residents	PM monitoring or satellite data	A
503	Wong, 2016, Cancer mortality risks from long-term exposure to ambient fine particle	PM monitoring or satellite data	A
504	Woodruff, 2006, Fine particulate matter (PM <sub>2.5</sub> ) air pollution and selected causes of postneonatal infant mortality in California	PM monitoring or satellite data	A
505	Woodruff, 2008, Air pollution and postneonatal infant mortality in the United States, 1999-2002	Spatial scale	A
506	Wu, 2015, Association between air pollutants and dementia risk in the elderly	PM monitoring or satellite data	B
507	Wu, 2016, Age of asthma onset and vulnerability to ambient air pollution: An observational population-based study of adults from Southern Taiwan	Spatial scale	A
508	Wu, 2017, Inverse relationship between urban green space and childhood autism in California elementary school districts	Study design	B
509	Wurth, 2018, Fine particle sources and cognitive function in an older Puerto Rican cohort in greater Boston	No within-area or spatial contrast exploited	B
510	Xiao, 2018, Associations between birth outcomes and maternal PM exposure in Shanghai: a comparison of three exposure assessment approaches	PM monitoring or satellite data	A
511	Xie, 2018, Long-term effects of ambient particulate matter (with an aerodynamic diameter $\leq 2.5 \mu\text{m}$ ) on hypertension and blood pressure and attributable risk among reproductive-age adults in China	Spatial scale	B
512	Xu, 2013, Health effects of air pollution on length of respiratory cancer survival	PM monitoring or satellite data	A

	Reference	Exclusion rationale	Outcome <sup>1</sup>
513	Xu, 2014, Ambient air pollution and hypertensive disorder of pregnancy	Spatial scale	B
514	Yamazaki, 2014, Association between traffic-related air pollution and development of asthma in school children: Cohort study in Japan	Study design	A
515	Yang, 2016, Children's respiratory health and oxidative potential of PM <sub>2.5</sub> : The PIAMA birth cohort study	Nationwide/statewide study with no or insufficient area-specific adjustments	A and B
516	Yang, 2018, Ambient fine particulate pollution associated with diabetes mellitus among the elderly aged 50 years and older in China	No within-area or spatial contrast exploited	A
517	Yang, 2018, Is smaller worse? new insights about associations of PM and respiratory health in children and adolescents	Spatial scale	A
518	Yitshak-Sade, 2017, Do air pollution and neighborhood greenness exposures improve the predicted cardiovascular risk?	Very selective subgroup	A
519	Yorifuji, 2016, Prenatal exposure to traffic-related air pollution and child behavioral development milestone delays in Japan	Spatial scale	B
520	Young, 2014, Ambient air pollution exposure and incident adult asthma in a nationwide cohort of US women	Nationwide/statewide study with no or insufficient area-specific adjustments	A
521	Yu, 2005, The relationship of air pollution to the prevalence of allergic diseases in Taichung and Chu-Shan in 2002	No within-area or spatial contrast exploited	A
522	Zemp, 1999, Long-term ambient air pollution and respiratory symptoms in adults (SAPALDIA study). The SAPALDIA team	No within-area or spatial contrast exploited	A
523	Zeng, 2016, Long-term ambient air pollution and lung function impairment in Chinese children from a high air pollution range area: The Seven NorthEastern Cities (SNEC) study	No quantitative measure of association	B
524	Zhang, 2011, Long-term exposure to ambient air pollution and mortality due to cardiovascular disease and cerebrovascular disease in Shenyang, China	Analytical error	A
525	Zhang, 2016, Long-term exposure to particulate matter and self-reported hypertension: A prospective analysis in the nurses' health study	Nationwide/statewide study with no or insufficient area-specific adjustments	B
526	Zhang, 2018, Long-term exposure to fine particulate matter, blood pressure, and incident hypertension in Taiwanese adults	PM monitoring or satellite data	B

	Reference	Exclusion rationale	Outcome <sup>1</sup>
527	Zhang, 2019, Association of breastfeeding and air pollution exposure with lung function in Chinese children	Spatial scale	B
528	Zhang, 2019, Exposure to ambient particulate matter air pollution, blood pressure and hypertension in children and adolescents: a national cross-sectional study in China	Spatial scale	B
529	Zhao, 2008, Asthmatic symptoms among pupils in relation to winter indoor and outdoor air pollution in schools in Taiyuan, China	Short-term measurements	A
530	Zhao, 2013, Does obesity amplify the association between ambient air pollution and increased blood pressure and hypertension in adults? Findings from the 33 Communities Chinese Health Study	Review, methodological, HIA, or similar paper (no primary data)	B
531	Zhou, 2013, Modifiable exposures to air pollutants related to asthma phenotypes in the first year of life in children of the EDEN mother-child cohort study	No quantitative measure of association	A
532	Zhu, 2017, Ambient air pollution and risk of gestational hypertension	Spatial scale	B
533	Zieliński, 2018, Influence of particulate matter air pollution on exacerbation of chronic obstructive pulmonary disease depending on aerodynamic diameter and the time of exposure in the selected population with coexistent cardiovascular diseases	PM monitoring or satellite data	A
534	Zijlema, 2016, Road traffic noise, blood pressure and heart rate: Pooled analyses of harmonized data from 88,336 participants	No quantitative measure of association	B
535	Zora, 2013, Associations between urban air pollution and pediatric asthma control in El Paso, Texas	Study design	A
536	Zúñiga, 2016, Assessment of the possible association of air pollutants PM <sub>10</sub> , O <sub>3</sub> , NO <sub>2</sub> with an increase in cardiovascular, respiratory, and diabetes mortality in Panama City: A 2003 to 2013 data analysis	No within-area or spatial contrast exploited	A