LITERATURE SEARCH RESULTS FOR THE
SYSTEMATIC REVIEW OF TRAFFIC-RELATED AIR POLLUTION AND HYPERTENSIVE DISORDERS OF PREGNANCY

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Office of Health Assessment and Translation
Division of the National Toxicology Program
National Institute of Environmental Health Sciences
National Institutes of Health
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
LITERATURE SEARCH RESULTS

Literature Search

Literature search strategies were developed to identify all relevant published evidence on traffic-related air pollution associated with hypertensive disorders of pregnancy through 1) review of PubMed’s Medical Subject Headings (MeSH) for relevant and appropriate terms, 2) extraction of key terminology from relevant reviews and a set of previously identified primary data studies that are known to be relevant to the topic (“test set”), and 3) review of search strategies presented in other reviews. The search strategy was run, and the results were assessed to ensure that 100% of the previously identified relevant primary studies were retrieved. Three databases were searched through January 28, 2019 using a strategy customized for each database: PubMed, Scopus, and Web of Science. The search strategy is reported in Appendix 1. No publication year limits or language restrictions were imposed. The literature search was developed in collaboration with a librarian trained in systematic review methodology.


Databases Searched

- PubMed
- Scopus
- Web of Science

Searching Other Resources

The reference lists of all included studies, relevant reviews, commentaries, and other non-research articles identified during the initial search were searched manually to find additional studies that were not identified through the electronic searches. Studies were evaluated using the same inclusion and exclusion criteria that were used for screening records retrieved from the electronic search. Relevant studies identified through these steps were marked as “provided from other sources” in the study selection flow diagram.

Literature Search Results

The electronic database searches retrieved 344 individual references. From the total references retrieved, 246 were excluded during the title and abstract screening and 79 studies were excluded during the full text review for not satisfying the PECO criteria. The screening results are outlined in the study selection diagram with reasons for exclusion documented at the full text review level (Figure 1). After full text review, 19 studies were considered relevant, which included 18 human studies and 1 animal study. One human study evaluated 2 distinct populations, so there were 19 human datasets within the 18 human studies. The list of included references is provided below.
Figure 1. Study Selection Diagram

References identified through other sources (n=0) → References identified through database searches (n=566) → References after duplicate removal title-abstract screened for relevance and eligibility (n=344) → Title-abstract articles excluded (n=246)
  - Not relevant to PECO (n=246)

Full-text articles assessed for relevance and eligibility (n=98) → Full-text articles excluded (n=79)
  - Outcome not relevant (n=9)
  - Exposure not relevant (n=12)
  - Review/commentary/conference abstract (n=18)
  - Other (n=40)

Included studies relevant to human health effects (n=19) → Included studies relevant to human health effects
  - Human studies (n=18)
  - Non-human mammal studies (n=1)
REFERENCES INCLUDED AFTER FULL-TEXT REVIEW

List of Included Studies

Studies in Humans


**Study in Non-human Animals**

Appendix 1. Literature Search Strategy

The search terms and databases searched are provided below.

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<th>Database</th>
<th>Search Terms</th>
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<tr>
<th>Database</th>
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<td>Scopus</td>
<td>(((&quot;air pollution&quot; OR &quot;air pollutant&quot; OR &quot;air pollutants&quot;) AND NOT (indoor* OR household)) OR &quot;particulate matter&quot; OR PM2.5 OR &quot;PM(2.5)&quot; OR PM10 OR &quot;PM(10)&quot;&quot;) OR smog OR soot OR &quot;carbon black&quot; OR &quot;black carbon&quot; OR &quot;elemental carbon&quot; OR ((air OR airborne OR coarse OR ultrafine OR fine) AND (particle* OR particulate*)) OR ((vehicle OR vehicles OR vehicular OR auto OR automobile OR bus OR buses OR car OR truck* OR engine OR transport) AND (emissions OR exhaust OR fume*)) OR (traffic AND NOT (safety OR accident* OR injur* OR collision* OR crash*)) OR ((proximity OR near) AND (road* OR highway* OR freeway* OR motorway*)) OR ((air OR outdoor OR ambient OR pollut* OR emissions OR exhaust*) AND (&quot;sulfur dioxide&quot; OR SO2 OR ozone OR O3 OR &quot;hydrogen sulfide&quot; OR H2S OR &quot;carbon monoxide&quot; OR &quot;nitric oxide&quot; OR &quot;nitrogen oxide&quot; OR &quot;nitrogen oxides&quot; OR &quot;nitrogen dioxide&quot; OR NOx OR &quot;NO(x) OR NO2&quot;) OR &quot;volatile organic&quot; OR &quot;fossil fuel&quot; OR &quot;fossil fuels&quot; OR gasoline* OR diesel OR petrol* OR &quot;polycyclic aromatic hydrocarbons&quot; OR &quot;benzopyrene&quot; OR &quot;benzo a pyrene&quot; OR &quot;3,4-benzopyrene&quot; OR benzene AND &quot;Gestational Hypertension&quot; OR &quot;pregnancy-induced hypertension&quot; OR (pregnan* near/8 hypertens*) OR pre-eclampsia OR preeclampsia OR (pregnan* near/8 toxemia*)</td>
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