SECONDHAND SMOKE, KIDS AND CARS

“You can protect yourself and your loved ones by making your home and car smoke-free.”
– U.S. Surgeon General

Recent action by several states and territories to prohibit smoking in privately owned vehicles while children are present has brought significant attention to the issue of the risks to children associated with exposure to secondhand smoke, particularly in vehicles. While the research specific to children, secondhand smoke, and vehicles is limited, there is overwhelming evidence of the harms associated with exposure to secondhand smoke that is specific to children and specific to enclosed environments.

Smoking in Cars with Children Legislation by State

<table>
<thead>
<tr>
<th>State/Commonwealth</th>
<th>Year of Implementation</th>
<th>Applicable Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkansas</td>
<td>2006; Revised 2011</td>
<td>Under age 14 (eff. 2011)</td>
</tr>
<tr>
<td>Louisiana</td>
<td>2006</td>
<td>Under age 13</td>
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<tr>
<td>Puerto Rico</td>
<td>2007</td>
<td>Under age 13</td>
</tr>
<tr>
<td>California</td>
<td>2008</td>
<td>Under age 18</td>
</tr>
<tr>
<td>Maine</td>
<td>2008</td>
<td>Under age 16</td>
</tr>
<tr>
<td>Utah</td>
<td>2013</td>
<td>Age 15 or younger</td>
</tr>
<tr>
<td>Oregon</td>
<td>2014</td>
<td>Under age 18</td>
</tr>
<tr>
<td>Vermont</td>
<td>2014</td>
<td>Under age 8</td>
</tr>
</tbody>
</table>

American Academy of Pediatrics Findings on Health Harms to Kids from SHS Exposure

The American Academy of Pediatrics has made the following conclusions regarding harms to children from exposure to secondhand smoke:

- “Results of epidemiologic studies provide evidence that exposure of children to environmental tobacco smoke is associated with increased rates of lower respiratory illness and increased rates of middle ear effusion, asthma, and sudden infant death syndrome.”

- “Exposure during childhood to environmental tobacco smoke may also be associated with development of cancer during adulthood.”

In 2007, the American Academy of Pediatrics adopted a resolution encouraging all its member state and local societies and chapters to “support and advocate for changes in existing state and local laws and policies that protect children from secondhand smoke exposure by prohibiting smoking in any vehicle while a legal minor (under 18 years of age) is in the vehicle.”

Harvard School of Public Health Study of Smoking in Cars with Kids
A 2006 study by researchers at the Harvard School of Public Health found “alarming” levels of secondhand smoke were generated in just five minutes in vehicles under various driving, ventilation, and smoking conditions. That study also made the following findings:

- The average levels of respirable particulate matter (the pollution inhaled from secondhand smoke) in the vehicles was actually higher than that found in similar studies of smoking in bars in several towns in eastern Massachusetts. In addition, the levels of particulate matter found in the vehicles exceeded those levels described by the U.S. Environmental Protection Agency as “unhealthy for sensitive groups” such as children and the elderly.

- The researchers found that the pollution levels detected “highlight the potentially serious threat to children’s health presented by secondhand smoke in private cars under normal driving conditions.”

- In addition to “alarming” increases of respirable particulate matter, the researchers also found a “significant increase” in levels of carbon monoxide. The researchers point out that carbon monoxide “is a poisonous gas, which may cause coma and death in large amounts, but among infants is known to induce lethargy and loss of alertness even in small quantities.”

Based on their analysis, the researchers concluded that “smoking in cars under typical driver and traffic conditions provides potentially unsafe secondhand smoke exposure.”

Studies Addressing Secondhand Smoke in Cars

- A 2012 study published in *Pediatrics* reported that despite a significant decrease in SHS exposure in cars among nonsmoking US middle and high school students between the years of 2000 and 2009, that in 2009, more than one-fifth of these students were still exposed to SHS in a car in the previous 7 days.

- A 2008 study examining secondhand smoke exposure in cars found that it reached unhealthy levels even under varying ventilation conditions. Smoking just one cigarette in a vehicle far exceeded fine particle exposure limits set by the Environmental Protection Agency (EPA) and raised secondhand smoke levels several times higher than levels found in smoky bars and restaurants.

- In 2006, researchers presented a study in which they found secondhand smoke in cars under all conditions tested reached unhealthy levels, even with ventilation. Extremely high levels of particulate matter were recorded in cars with tobacco smoke, putting all riders, particularly children, at an increased health risk.

- A study published by *The New Zealand Medical Journal* found that smoking in a car with the window open produced air quality five times worse than even on the poorest air quality days in Auckland. Furthermore, it found that air quality was up to 100 times worse with all car windows closed. The study suggests adopting laws to make cars smoke-free in order to protect children and non-smokers from air pollution resulting from smoking in cars.

- A study published in 2008 examined residual smoke pollution in used cars. The authors found significantly higher levels of nicotine in the air, dust, and surfaces of used cars that had been owned by smokers than in cars previously owned by nonsmokers who prohibited smoking in their vehicle.

- Researchers conducting a study in rural southwestern Georgia interviewed low income families on the establishment and enforcement of smoking rules in family cars. The researchers found a widespread inaccurate belief that secondhand smoke was not hazardous as long as the car windows were down.
In the video created by the California Tobacco Program, researchers at Stanford University show that smoking just half a cigarette in a car resulted in pollutant levels reaching ten times the hazardous limit designated by the EPA in both the front and back seats of a vehicle. Pollutant levels were found to be similarly hazardous when the windows were closed or open and when the car was parked or moving -- and especially dangerous for child passengers.11

Public Support for Legislation Prohibiting Smoking in Cars with Children Present

A survey released in July 2013 found that 82% of US adults favor prohibiting smoking in vehicles when children under age 13 are present. The survey found broad-based support for the policy, including support from a majority of current smokers (60%), former smokers (84%) and never smokers (87%).12

Campaign for Tobacco-Free Kids, June 2014

For more on this topic, including information on existing state and local laws addressing smoking in vehicles with children present, please visit the Americans for Nonsmokers' Rights webpage on smoke-free cars: http://www.no-smoke.org/learnmore.php?id=616.