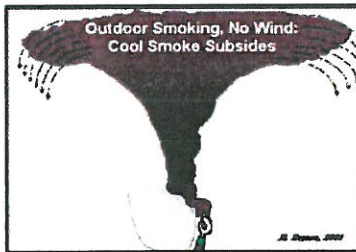


# Secondhand Smoke: Outside

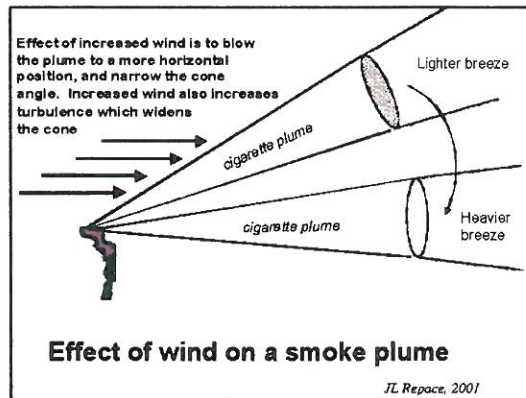
The amount of science showing that secondhand smoke causes serious illness has grown so much, that the Surgeon General called it *massive, conclusive* and *indisputable*. As a result, more and more smoke-free policies are being adopted to protect people's health. Most of these policies cover indoor spaces, but smoke-free policies are also being adopted for outdoor settings.

## **Tobacco smoke is the same indoors and outdoors.**

- Tobacco smoke contains over 4,000 chemicals, including 172 toxic chemicals and over 60 that have been proven to cause cancer.<sup>1</sup>
- If a person smells tobacco smoke, they are inhaling cancer-causing and toxic chemicals.<sup>1</sup>



When there is no wind, cigarette smoke (in the shape of a cone) rises to a certain height, and the drops back down. It can settle in areas like patios and stadium seating areas.<sup>4</sup>



In higher winds, the cone of smoke will be wider and closer to the ground.<sup>4</sup>

## **Tobacco smoke doesn't just blow away.**

- While someone is smoking, the level of tobacco smoke outside can be as high as indoor places where smoking is allowed.<sup>1, 2, 3</sup>
- Tobacco smoke is actually heavier than air, but rises because it is hot. When the smoke cools off, it drops back down.<sup>4</sup>
- Outdoor tobacco smoke can be smelled 23 feet away.<sup>4</sup>
- Irritation from outdoor tobacco smoke starts 13 feet away.<sup>4</sup>

## **Tobacco smoke can reach high levels – even outside.**

- Outdoor cafés can have 5-20 times the pollution as sidewalks polluted by busy streets.<sup>5</sup>
- Despite the strong breeze, outdoor smoking areas on a cruise ship had triple the amount of cancer-causing chemicals than other areas of the ship.<sup>6</sup>
- In a 2006 study, the amount of pollution from tobacco smoke was measured on outdoor patios of restaurants and bars. The Environmental Protection Agency (EPA) air quality index classifies the peak level of pollution measured on one patio as “very hazardous” and the average level of pollution as “unhealthy for sensitive groups.”<sup>7</sup>

1 Repace, J. “Fact Sheet: Outdoor Air Pollution from Secondhand Smoke.” [www.repace.com](http://www.repace.com). 2007

2 “Technical Support Document for the Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant: Part A.” California Environmental Protection Agency, California Air Resources Board, Chapter 5, pp. V6 – v19. 2003.

3 Klepeis NE, et al. “Real-Time Measurements of Outdoor Tobacco Smoke Particles.” *Journal of Air & Waste Management Association*. 5/2007.

4 Repace, J. “Measurements of Outdoor Air Pollution from Secondhand Smoke on the UMBC Campus.” 2005

5 Repace JL and Rupprecht AA. “Outdoor Air Pollution from Secondhand Smoke.” 2006.

6 Repace J. “Indoor and Outdoor Carcinogen Pollution on a Cruise Ship in the Presence and Absence of Tobacco Smoking” 2005.

7 Kennedy RD, et al. “Tobacco Smoke Pollution in Outdoor Hospitality Settings.” University of Waterloo, Canada. 2006.

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