

SECOND HAND SMOKE

Second hand smoke (SHS) is composed of side stream smoke (the smoke released from the burning end of a cigarette)¹ and exhaled mainstream smoke (the smoke exhaled by the smoker).² Tobacco smoke contains a deadly mixture of more than 7,000 chemicals, many are toxic. About 70 of these chemicals can cause cancer³ including formaldehyde,⁴ which is used to embalm dead bodies and benzene found in gasoline.

Exposure to SHS causes an estimated 41,000 deaths among non-smoking adults and 400 deaths among infants annually in the United States.⁵ Nonsmokers:

- Who breathe SHS experience immediate harmful effects on the cardiovascular system that can increase the risk for heart attack.⁶
- Who already have heart disease and are exposed to SHS are at especially high risk for death.⁷
- Exposed to SHS at home or work increase their lung cancer risk by 20–30%.⁸

In children SHS causes:⁹

- Ear infections
- More frequent and severe asthma attacks
- Respiratory symptoms (e.g., coughing, sneezing, shortness of breath)
- Respiratory infections (i.e., bronchitis, pneumonia)
- A greater risk for sudden infant death syndrome

Many nonsmokers also continue to be exposed to SHS:¹⁰

- An estimated 88 million nonsmokers in the United States were exposed to SHS in 2007–2008.
- Children are at particular risk for exposure to SHS: 53.6% of young children (aged 3–11 years) were exposed to secondhand smoke in 2007–2008.
- While only 5.4% of adult nonsmokers in the United States lived with someone who smoked inside their home, 18.2% of children (aged 3–11 years) lived with someone who smoked inside their home in 2007–2008.

Over the past four years many Hawai'i working high school students reported being exposed to SHS. That proportion has remained unchanged from 2007 through 2011:

- In 2007, 44.2% reported being exposed to SHS within the past week.
- In 2011 that percentage was 45.7%.¹¹



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Hawaii Tobacco Facts





95% of Hawai'i residents surveyed reported no smoking in indoor areas at their workplace.¹² Yet nearly a quarter of those surveyed also reported that smoking was sometimes or always allowed in work outdoor areas.¹³

Third hand smoke

Third hand smoke describes the particles and gases that linger after a cigarette is extinguished. These particles land and remain on virtually any surface - clothes, hair, furniture and flooring.¹⁴ A 2010 study found that third-hand smoke reacts with nitrous acid, a common component of indoor air - to form the hazardous carcinogens.¹⁵ Curious children crawling on the floor, pressing their faces against walls and tables, and putting objects into their mouths are at increased risk of coming into contact with these third hand toxins.¹⁶

Smoke-free housing

Because people spend much of their time in their homes, private residences remain a major source of SHS exposure.¹⁷ This is particularly true for young children, who tend to spend large amounts of time at home.¹⁸ While apartment residents may wish their homes to be smoke-free, they can experience SHS seeping in from adjoining units or common areas.¹⁹ Because a large portion of Hawai'i residents live in multiunit housing (38.8% compared with 25.9% nationally²⁰) a larger proportion of Hawai'i apartment dwellers face this risk.

Throughout the state more and more market-rate residential buildings are planning to go smoke-free. Low income apartment residents will also be protected. All Hawai'i Public Housing Authority public housing units encompassing 85 properties are smoke free.

While most Hawai'i homes are smoke free – 80.6% of households did not allow in 2012²¹ - the rates vary according to education level. In 2012:

- 16.2% of those with less than a high school education reported someone smoking in their home during the past week.²²
- Only 3.2% of those with some college reported smoking during that same period.²³

Smoke free homes are also easier to resell. According to a mainland realty company quoted in the New York Times, "A smoker's house may sell but not in the shortest time, and not at the optimum price."²⁴ In a survey of 340 California landlords researchers found it can also cost twice as much to clean units in buildings where smoking is allowed than to clean units in non-smoking buildings.²⁵

Smoke-free recreational areas

Between 1993 to 2011 smoking bans were enacted in 843 parks and 150 beaches across the U.S.²⁶ These laws not only reduce and prevent SHS but also discourage cigarette butt litter which can be a hazard to children and animals.²⁷





The states abundance of beaches and recreational areas prompted several smoke-free initiatives over the past few decades:

- In 1993 Oahu's Hanauma Bay Nature Preserve, recognized as one of America's top beaches,²⁸ was the first beach in the nation to go smoke-free.²⁹
- In 2008 Hawai'i County passed the state's first county wide ban on smoking in parks gymnasiums and recreation facilities.³⁰
- In 2013 the Honolulu City Council banned smoking at all Oahu bus stops, city parks, beaches, athletic fields and facilities.³¹
- In 2014 the Maui County Council made all Maui county beaches and parks tobacco free.

Smoke-free vehicles

Passengers in a smoke-filled car can be exposed to concentrations of toxins 23 times greater than that found in a smoky bar.³²

- A 2008 study examining SHS exposure in cars found that its severity reached unhealthy levels even under varying ventilation conditions.³³
- In 2011 nearly a third (27.4%) of Hawai'i high school students reported being exposed to SHS in a car in the past week.³⁴
- Currently only Hawai'i County bans smoking in vehicles with passengers under 18 years of age,³⁵ other counties are also considering this measure.



¹ National Toxicology Program. Report on Carcinogens, Twelfth Edition. Research Triangle Park (NC): U.S. Department of Health and Human Sciences, National Institute of Environmental Health Sciences, National Toxicology Program, 2011.

² Ibid.

³ U.S. Department of Health and Human Services. A Report of the Surgeon General: How Tobacco Smoke Causes Disease: What It Means to You. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010 [accessed 2013 June 10].

⁴ U.S. Environmental Protection Agency. 2003. "Formaldehyde: Hazard Summary"

⁵ Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report, (64) Feb. 3, 2015

⁶ U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006

⁷ U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General

⁸ U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General

⁹ U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General

¹⁰ Centers for Disease Control and Prevention. Vital Signs: Nonsmokers' Exposure to Secondhand Smoke—United States, 1999–2008. Morbidity and Mortality Weekly Report 2010;59(35):1141–6 [accessed 2013 June 10].

¹¹ Secondhand Smoke in the Workplace (Currently Working) by School Type, State, Gender, Grade Level, DOH Race-Ethnicity, for the year(s) - 2007, 2009, 2011



- ¹² [Secondhand Smoke in the Workplace \(Currently Working\) by School Type, State, Gender, Grade Level, DOH Race-Ethnicity, for the year\(s\) - 2007, 2009, 2011](#)
- ¹³ [Secondhand Smoke in the Workplace \(Currently Working\) by School Type, State, Gender, Grade Level, DOH Race-Ethnicity, for the year\(s\) - 2007, 2009, 2011](#)
- ¹⁴ Learn More; Americans for Nonsmokers' Rights, <http://www.no-smoke.org/learnmore.php?id=671>
- ¹⁵ Mohamad Sleiman, Lara A. Gundel, James F. Pankow, Peyton Jacob, III, Brett C. Singer, Hugo Destailats and Barbara J. Finlayson-Pitts [Proceedings of the National Academy of Sciences of the United States of America Vol. 107, No. 15 \(April 13, 2010\), pp. 6576-6581](#)
- ¹⁶ [Thirdhand smoke' exposure another threat to children](#)., Caitlin O. Smith, American Academy of Pediatric News 2009;30; DOI: 10.1542/aapnews.20093011-8a.
- ¹⁷ Centers for Disease Control and Prevention, National Center for Environmental Health - Division of Emergency and Environmental Health Services - Healthy Homes and Lead Poisoning Prevention Branch
- ¹⁸ Centers for Disease Control and Prevention, National Center for Environmental Health - Division of Emergency and Environmental Health Services - Healthy Homes and Lead Poisoning Prevention Branch
- ¹⁹ Centers for Disease Control and Prevention, National Center for Environmental Health - Division of Emergency and Environmental Health Services - Healthy Homes and Lead Poisoning Prevention Branch
- ²⁰ US Census Bureau, Hawaii People QuickFacts; <http://quickfacts.census.gov/qfd/states/15000.html>
- ²¹ [The Hawaii Behavioral Risk Factor Surveillance System, 2012.](#)
- ²² [The Hawaii Behavioral Risk Factor Surveillance System, 2012.](#)
- ²³ [The Hawaii Behavioral Risk Factor Surveillance System, 2012.](#)
- ²⁴ [On Tobacco Road, It's a Tougher Sell.](#) New York Times, Feb. 04, 2004.
- ²⁵ Going Smoke-free; Adopting a non smoking plan can attract more prospective tenants. Rental Housing, June 2013.
- ²⁶ Bayer R, Bachynski KE. [Banning Smoking in Parks and Beaches: Science, Policy and the Politics of Denormalization.](#) Health Affairs. 2013.
- ²⁷ [Tobacco and cigarette butt consumption in humans and animals.](#) Thomas E Novotny, Sarah N Hardin, Lynn R Hovda, Dale J Novotny, Mary Kay McLean, Safdar Khan. Tobacco Control. 2011 May; 20(Suppl_1): i17-i20. doi: 10.1136/tc.2011.043489
- ²⁸ [Hanauma Bay; Best U.S. Beach.](#) Honolulu Star-Bulletin. May 28, 2004.
- ²⁹ Ariza, E. and Leatherman, S.P., 2012. [No-smoking policies and their outcomes on U.S. beaches.](#) Journal of Coastal Research, 28(1A), 143-147.
- ³⁰ Hawai'i County Code, [Section 14-21 \(12\), Ordinance No. 10-33](#)
- ³¹ Honolulu Revised Ordinance [41-21.2.](#)
- ³² Ediriweera Desapriya, PhD, corresponding author Kate Turcotte, MPH, Sayed Subzwari, MD, MPH, and Ian Pike, PhD. [Smoking Inside Vehicles Should Be Banned Globally.](#) Am J Public Health. 2009 July; 99(7): 1158-1159.
- ³³ [Secondhand tobacco smoke concentrations in motor vehicles.](#) Jones, Mirand R., Navas-Acien, Ana, Breyse, Patrick N. *Tob Control* doi:10.1136/tc.2009.029942
- ³⁴ [Secondhand Smoke Exposure in the Past 7 Days by School Type, State, Gender, Grade Level, DOH Race-Ethnicity, for the Year\(s\) - 2000, 2003, 2005, 2007, 2009, 2011.](#) Hawaii Youth Tobacco Survey.
- ³⁵ Hawaii County Code, Section [14-21 \(12\), Ordinance No. 10-33](#)



Secondhand smoke and the **harmful** chemicals in it are known causes of **Sudden Infant Death Syndrome, RESPIRATORY INFECTIONS, ear infections,** and **asthma attacks** in infants and children.

They are also known causes of **HEART DISEASE, stroke,** and **lung cancer** in adult nonsmokers.