



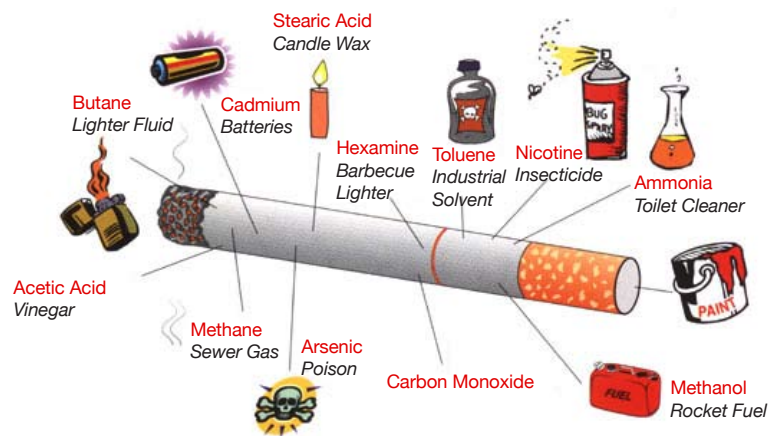
## Secondhand Smoke, or the tobacco smoke that non-smokers are exposed to is a known HEALTH HAZARD.

Secondhand Smoke, or the tobacco smoke that non-smokers are exposed to when others smoke around them is a known health hazard.

### CONTAINS MORE THAN 4,000 CHEMICAL COMPOUNDS.

It contains more than 4,000 chemical compounds, many of the same chemicals that are present in the smoke inhaled by smokers.<sup>1</sup> Secondhand smoke is composed of two different parts, mainstream smoke (the smoke that a smoker breathes in and exhales) and sidestream smoke (the smoke that comes off the burning end of a cigarette). Because sidestream smoke is generated at lower temperatures and under different conditions than mainstream smoke, it contains higher concentrations of many of the toxins found in cigarette smoke.<sup>1</sup> In addition, sidestream smoke does not pass through filters, unlike some mainstream smoke, depending on the type of cigarette. Nearly 85% of the smoke in a room results from sidestream smoke.<sup>4,5</sup>

- The National Toxicology Program estimates that at least 250 chemicals in secondhand smoke are known to be toxic or carcinogenic.<sup>1</sup>
- According to a November 2001 report issued by the National Cancer Institute, there are 69 known or probable carcinogens in cigarette smoke.<sup>2</sup>
- Secondhand smoke has been designated as a **known human carcinogen** (cancer-causing agent) by the U.S. Environmental Protection Agency, the National Toxicology Program, and the International Agency for Research on Cancer, and an occupational carcinogen by the National Institute for Occupational Safety and Health.<sup>1</sup>



### So what do you inhale when you are exposed to secondhand smoke?

**When nonsmokers are exposed to secondhand smoke, they inhale many of the same cancer-causing chemicals that smokers inhale.**

## CHEMICALS IN SECONDHAND SMOKE.<sup>3</sup>

Chemical	Use
1,1-Dimethylhydrazine	Used in Rocket Fuel.
1,3-Butadiene	Used in the manufacture of synthetic rubber
2,6-Dimethylaniline	
2-Naphthylamine	It is used to make azo dyes, suspected to be contributory to the development of bladder cancer. <sup>[1]</sup>
2-Nitropropane	Used coatings (vinyl, epoxy, nitrocellulose, and chlorinated rubber), printing inks, and adhesives
4-(N-Nitrosomethylamino)-1-(3-Pyridyl)-1-Butanone	
4-Aminobiphenyl	It is used to manufacture azo dyes
Acetaldehyde	Used in the manufacture of a range of plastics, synthetic rubber and some fuel compounds. Also used in the manufacture of disinfectants, drugs, perfumes, explosives, lacquers and varnishes, and photographic chemicals.
Acetamide	Used as a solvent, plasticizer, and a wetting and penetrating agent
Acrylamide	Used in sewage and waste treatment as well as oil recovery
Ammonia	Household cleaners
Arsenic	Heavy Metal toxin commonly used in rat poison
Benzene	A flammable liquid obtained from coal tar used to make everything from pesticides to detergent to gasoline.
Beryllium	A hardening agent in alloys
Butane	Used in lighter fluid and one of the key ingredients in gasoline.
Cadmium	Used in batteries. This toxic metal causes damage to the liver, kidneys and the brain; and stays in your body for years.
Caffeic acid	
Carbon Monoxide	Found in car exhaust
Catechol	Used in the production of pesticides
Chromium	Used to make steel
Chromium (only hexavalent)	Used for the production of stainless steel and textile dyes, same chemical as from the movie Erin Brockovich
Cobalt	Used in batteries, alloys and color pigments
DDE	A breakdown product of the pesticide DDT
DDT	A pesticide banned in the United States
Dibenz(a,h)acridine	
Dibenz(a,j)acridine	
Dibenzo(c,g)carbazole	
Ethyl carbamate	
Ethylene oxide	Used as an sterilizing agent due to its ability to kill bacteria, mold, and fungi.

Chemical	Use
Formaldehyde	Used to embalm dead bodies.
Furan	Toxic
Heterocyclic amines	
Hydrazine	Used as rocket fuel and to prepare the gas precursors used in air bags
Hydrogen Cyanide	Used in Chemical weapons
Indeno(1,2,3-cd)pyrene	
Isoprene	Used in the production of synthetic rubber.
Lead	Formally in paint and gasoline, especially harmful to children.
MeAaC (2-amino-3-methyl-9-H-pyrido[2,3-b]indole	
Methyleugenol	
Nickel	Used in batteries
Nitrobenzene	Used in shoe and floor polishes, leather dressings, paint solvents, and other materials to mask unpleasant odors
Nitromethane	Used in chemical for dry cleaning, semiconductor processing, and degreasing.
N-Nitrosodiethanolamine	
N-Nitrosodiethylamine	Used in Rubber products and Pesticides
N-Nitrosodimethylamine	Waste product of several industrial processes including the production of rocket fuel.
N-Nitrosodi-n-Butylamine	
N-Nitrosodi-n-Propylamine	
N-Nitrosoethylmethylamine	
N-Nitrososnornicotine	
N-Nitrosopiperidine	
N-Nitrosopyrrolidine	
o-Toluidine	Used in the production of dyes.
Polonium-210	Radioactive
Polycyclic aromatic hydrocarbon	Occur in oil, coal, and tar deposits, and are produced as by-products of fuel burning.
Propylene oxide	Used in making polyurethane plastics
Quinoline	Industrial uses of quinoline include dyes, catalysts, insecticides, herbicides, corrosion inhibitors and to preserve anatomical specimens
Styrene	Used in rubber, plastic, insulation, fiberglass, pipes, automobile and boat parts, food containers, and carpet backing.
Toluene	Used to manufacture paint, paint thinners, nail varnish and adhesives.
Vinyl chloride	Used to make pipes

1. The Health Consequences of Tobacco Smoke, A Report of the Surgeon General, 2006
2. National Cancer Institute. Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine. Smoking and Tobacco Control Monograph No. 13. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, NIH Pub. No. 02-5074, October 2001.
3. What is in Secondhand Smoke. Factsheet. Campaign for Tobacco Free Kids. Available online at <http://tobaccofreekids.org/research/factsheets/pdf/0253.pdf>
4. Fielding, JE and Phenow, KJ. New England J. of Medicine 1988; 319: 1452-60.
5. Schick, S. and S. Glantz. Philip Morris toxicological experiments with fresh sidestream smoke: more toxic than mainstream *SMOKE*. Tobacco Control 2005; 14:396-404. available online at [http://tobaccocontrol.bmj.com/cgi/content/abstract/14/6/369?ijkey=93457dff11619d6b63bd77b740ec8ecfd868c37f&keytype2=tf\\_ipsecsha](http://tobaccocontrol.bmj.com/cgi/content/abstract/14/6/369?ijkey=93457dff11619d6b63bd77b740ec8ecfd868c37f&keytype2=tf_ipsecsha)