SECONDHAND SMOKE

News You Should Know

30,000 to 60,000 adults die each year from heart disease caused by secondhand smoke and an additional 3,000 non-smokers die from lung cancer

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HEALTH CONSEQUENSES OF

Involuntary Exposure to Tobacco Smoke

A Report of the Surgeon General, U.S. Department of Health and Human Services

Smoking is the single greatest avoidable cause of disease and death. In this report, The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General, the Surgeon General has concluded that:

1 Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces despite substantial progress in tobacco control.

Supporting Evidence

◆ Levels of a chemical called cotinine, a biomarker of secondhand smoke exposure, fell by 70 percent from 1988-91 to 2001-02. In national surveys, however, 43 percent of U.S. non-smokers still have detectable levels of cotinine.

◆ Almost 60 percent of U.S. children aged 3-11 years — or almost 22 million children — are exposed to secondhand smoke.

◆ Approximately 30 percent of indoor workers in the United States are not covered by smoke-free workplace policies.

2 Secondhand smoke exposure causes disease and premature death in children and adults who do not smoke.

Supporting Evidence

◆ Secondhand smoke contains hundreds of chemicals known to be toxic or carcinogenic (cancer-causing), including formaldehyde, benzene, vinyl chloride, arsenic, ammonia, and hydrogen cyanide.

◆ Secondhand smoke has been designated as a known human carcinogen (cancer-causing agent) by the U.S. Environmental Protection Agency, National Toxicology Program and the International Agency for Research on Cancer (IARC). The National Institute for Occupational Safety and Health has concluded that secondhand smoke is an occupational carcinogen.

3 Children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.

Supporting Evidence

◆ Children who are exposed to secondhand smoke are inhaling many of the same cancer-causing substances and poisons as smokers. Because their bodies are developing, infants and young children are especially vulnerable to the poisons in secondhand smoke.

◆ Both babies whose mothers smoke while pregnant and babies who are exposed to secondhand smoke after birth are more likely to die from sudden infant death syndrome (SIDS) than babies who are not exposed to cigarette smoke.

◆ Babies whose mothers smoke while pregnant or who are exposed to secondhand smoke after birth have weaker lungs than unexposed babies, which increases the risk for many health problems.

◆ Among infants and children, secondhand smoke cause bronchitis and pneumonia, and increases the risk of ear infections.

◆ Secondhand smoke exposure can cause children who already have asthma to experience more frequent and severe attacks.

4 Exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.

Supporting Evidence

◆ Concentrations of many cancer-causing and toxic chemicals are higher in secondhand smoke than in the smoke inhaled by smokers.

◆ Breathing secondhand smoke for even a short time can have immediate adverse effects on the cardiovascular system and interferes with the normal functioning of the heart, blood, and vascular systems in ways that increase the risk of a heart attack.

◆ Nonsmokers who are exposed to secondhand smoke at home or at work increase their risk of developing heart disease by 25 - 30 percent.

◆ Nonsmokers who are exposed to secondhand smoke at home or at work increase their risk of developing lung cancer by 20 - 30 percent.

5 The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke.

Supporting Evidence

◆ Short exposures to secondhand smoke can cause blood platelets to become stickier, damage the lining of blood vessels, decrease coronary flow velocity reserves, and reduce heart rate variability, potentially increasing the risk of a heart attack.

◆ Secondhand smoke contains many chemicals that can quickly irritate and damage the lining of the airways. Even brief exposure can result in upper airway changes in healthy persons and can lead to more frequent and more asthma attacks in children who already have asthma.

6 Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposures of nonsmokers to secondhand smoke.

Supporting Evidence

◆ Conventional air cleaning systems can remove large particles, but not the smaller particles or the gases found in secondhand smoke.

◆ Routine operation of a heating, ventilating, and air conditioning system can distribute secondhand smoke throughout a building.

◆ The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the preeminent U.S. body on ventilation issues, has concluded that ventilation technology cannot be relied on to control health risks from secondhand smoke exposure.

6 major conclusions of the Surgeon General Report

The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General was prepared by the Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC). The Report was written by 22 national experts who were selected as primary authors. The Report chapters were reviewed by 40 peer reviewers, and the entire Report was reviewed by 30 independent scientists and by lead scientists within the Centers for Disease Control and Prevention and the Department of Health and Human Services. Throughout the review process, the Report was revised to address reviewers' comments.

{Citation}

U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. 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, 2006.

Thirdhand Smoke

If their parents use tobacco, that curiosity may expose babies to what some doctors are calling "thirdhand" smoke — particles and gases given off by cigarettes that cling to walls, clothes and even hair and skin. Up to 90% of the nicotine in cigarette smoke sticks to nearby surfaces, says Georg Matt, a professor at San Diego State University.

Preliminary research by Matt and others suggests the same chemicals that leave a stale cigarette odor on clothes and upholstery also can be swallowed, inhaled or absorbed through the skin of non-smokers. Smoke residue may linger for hours, days or months, depending on the ventilation and the level of contamination. In some cases, contaminants may need to be removed by rigorously cleaning or replacing wallpaper, rugs and drapes, Matt says.

Matt cautions that his research needs to be confirmed by other studies. But his work suggests that babies may take in nicotine and other chemicals just by hugging their mothers — even if their mothers never light up next to them.

About 43% of children ages 2 months to 11 years live with a smoker, according to research described in Matt's 2004 study in the journal Tobacco Control.

In his small study of 49 infants under 13 months old, Matt found nicotine in the air and dust throughout smokers' homes, even when parents smoked only outside. Tests also found a nicotine byproduct, cotinine, in babies' urine and inside shafts of their hair.

As expected, babies whose parents smoked around them had the highest cotinine levels — nearly 50 times higher than the babies of non-smokers, according to the study.

Smokers who tried to shield their infants had only partial success, Matt says. The babies of parents who smoked only outside had cotinine levels seven times higher than in the infants of non-smokers, the study showed.

Children also may be at greater risk because they breathe faster than adults and inhale more chemicals, says Jonathan Winickoff, an assistant professor of pediatrics at Harvard Medical School.

Crawling babies may take in chemicals through their skin.

The Dangers of... Secondhand Smoke

In June 2006, United States Surgeon General Richard Carmona released a report, The Health Consequences of Involuntary Exposure to Tobacco Smoke, on the 20th anniversary of the first ever Surgeon General's report dedicated exclusively to the dangers of secondhand smoke exposure. This report synthesized more than 20 years of research on the subject, strengthening previous conclusions and revealing important new findings about the effects of secondhand smoke exposure.

In his report, the Surgeon General revealed six major conclusions, including the landmark finding that there is no risk-free level of exposure to secondhand smoke. Even brief exposure can be dangerous. He also concluded that eliminating smoking in indoor spaces fully protects nonsmokers from secondhand smoke exposure, and that simply separating smoking and non smoking sections or ventilating buildings cannot eliminate exposure to secondhand smoke or the dangers associated with that exposure.

Secondhand smoke, also known as environmental tobacco smoke or involuntary smoking, is a complex mixture of more than 4,000 chemicals which include smoke from the burning end of a cigarette, cigar, or pipe (side stream smoke) and exhaled smoke from a smoker (mainstream smoke). At least 250 of the chemicals found in secondhand smoke are toxic and known to cause cancer.

The U.S. Centers for Disease Control and Prevention identified secondhand smoke as the third leading cause of preventable death in the United States, killing an estimated 53,000 nonsmokers each year. It increases the risk for heart disease and cancer in non-smoking adults. It also increases the risk of developing asthma, bronchitis, pneumonia, and Sudden Infant Death Syndrome (SIDS) in children and babies.

Although substantial progress has been made in tobacco control in recent years, millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces on a daily basis. Voluntary change to smoking policies and public smoking bans have and will continue to be the only way to completely protect the health of those most adversely affected by secondhand smoke exposure.

Cigarettes and second-hand smoke are

LETHAL.

In addition to nicotine, there are more than 4,000 other chemicals in cigarette smoke. Some of these deadly poisons include:

Butane
a highly flammable component of gasoline.

Acetone
one of the active ingredients in nail polish remover.

Cadmium
which is found in batteries. It damages the liver, kidney, and brain and stays in the body for years.

Ammonia
which increases the amount of nicotine absorbed by the body, keeping smoker hooked longer.

Lead
which causes anemia and stomach problems. It damages brain nerves, kidneys, and the reproductive system.

Phenol
which is used in disinfectants and weakens the lungs.

Benzene
a product used in pesticides and gasoline. It causes leukemia.

Propylene Glycol
which is found in de-icer.

Toluene
a highly toxic substance found in paint thinner.

Benzopyrene
One of the most potent cancer-causing chemicals.

Formaldehyde
also known as embalming fluid. It causes cancer and can damage the lungs, skin, and digestive system.

Hydrogen Cyanide
which is used in the gas chamber. Enough said.

These toxins do not affect just smokers. The smoke that comes off the tip of a cigarette is twenty times more deadly than the smoke that is inhaled by a smoker. In fact, approximately 53,000 innocent victims die from second-hand smoke every year.

And, that is just the beginning. More of Nevada's children will ultimately die from tobacco-related disease and death than from alcohol, illegal drugs, AIDS, murder, suicide, and car accidents all combined!

Learn More. Get Involved. Fight Back! Contact the Nevada Tobacco Prevention Coalition at 702.798.6877 x3 x13.

◆ *Cindy Rorager is the Executive Director of the Nevada Tobacco Prevention Coalition.*

Nevada and the...

National Tobacco Free Rodeo Project

The National Tobacco Free Rodeo Project (NTFRP), funded under the Public Health Institute in California, is a national effort to restrict tobacco sponsorship of rodeos. Although the project began as the Buck Tobacco Sponsorship statewide campaign in California, it quickly spread to tackle tobacco sponsorship in rodeo states throughout the country. To restrict tobacco sponsorship of rodeos, the NTFRP advocates for policy change to the long-running practices of accepting money from smokeless tobacco companies, displaying rodeo advertising at events, and distributing or selling tobacco products in sampling booths. Although Nevada has attempted in the past to get tobacco sponsorship out of the National Finals Rodeo, a more concerted effort to tackle other Nevada rodeos began this past May.

In May, the NTFRP held a national training in Boise, Idaho, and included 1- 2 representatives from each of the 16 big rodeo states, including Nevada. Nevada was represented by both a Washoe County District Health Department and a Southern Nevada Health District employee. Following the national training, Nevada was invited to participate in a regional grant application submitted by the Public Health Institute that would focus on four states: California, Idaho, New Mexico, and Nevada. This grant would allow each of the states to focus their money and attention on an annual rodeo event in their state, and promote policy change at some level at that rodeo. Although current grant funding has yet to be determined, Nevada's vested interest in limiting tobacco sponsorship in rodeos will continue with or without grant funding because of its high profile status as a rodeo state.

Nevada is a unique state in many ways, and its rodeo involvement is no exception. Nevada is home to dozens of local rodeos, but also hosts three annual events on the Professional Rodeo Cowboys' Association (PRCA) ProRodeo Circuit, including the Laughlin River Stampede (in Laughlin), the Clark County Fair and Rodeo (in Logandale), and the Reno Rodeo (in Reno). Nevada is also host to the Wrangler National Finals Rodeo, the largest national rodeo of the year and a vital part of the Las Vegas economy. In fact, according to the 2006 Las Vegas Perspective, the annual rodeo sold out to more than 175,000 fans and yielded a non-gaming economic impact of $43.2 million in 2005.

Nevada is without a doubt a rodeo state; however, little has been done in the past to restrict tobacco sponsorship of Nevada's rodeos. There have been a number of successful tobacco policy campaigns in the state, including lifting preemption to allow Nevada school districts to enact smoke-free

policies, raising the cigarette excise tax to $.80 per pack, and getting a clean indoor air initiative on the ballot in November 2006 to prohibit smoking in public places where children are legally allowed to be present. Future policy change goals in rodeo will include building a relationship with the Nevada Attorney General's office in order to ensure compliance with the Smokeless Tobacco Master Settlement Agreement; increasing counter tobacco marketing; and building a relationship with state rodeo organizers and rodeo boards.

Nevada Initiatives

	BALLOT QUESTION 5: Nevada Clean Indoor Air Act	**BALLOT QUESTION 4: Responsibly Protect Nevadans from Second-hand Smoke Act**	**Current Law (NRS 202.249)**
K-12 Schools	Smoking banned on all grounds, including outdoors. Schools have authority to regulate tobacco at school sponsored, off-campus events.	Smoking banned on all grounds, including outdoors. Schools would not have the authority to regulate tobacco at school sponsored, off-campus events.	Schools have the legal authority to determine smoking policies on campus.
Daycare	Smoking banned at all licensed providers	Smoking banned at all licensed providers with more than 13 children. No regulations for locations with less than 13 children.	Smoking is allowed at licensed facilities with less than 6 children
Video Arcades	Smoking banned	Smoking banned	Smoking permitted in arcades with 9 or less machines
Government buildings	Smoking banned	Smoking banned	Smoking banned in public portions of buildings.
Movie theaters	Smoking banned	Smoking banned	Smoking permitted
Retail stores	Smoking banned	Smoking permitted in any area with 1 or more slot machine	Smoking permitted
Malls	Smoking banned	Smoking permitted	Smoking permitted
Grocery stores	Smoking banned	Smoking permitted in slot area if there is 1 or more slot machine	Smoking permitted in slot machine area. By 2007 the slot area must be in ventilated and in an alcove with 2 or more walls.
Convenience stores	Smoking banned	Smoking permitted in slot area if there is 1 or more slot machine	Smoking permitted in slot machine area.
Restaurants	Smoking banned indoors	Restaurants with a liquor license may allow smoking. Restaurants in casinos may allow smoking. All other restaurants may designate smoking areas where children would not be allowed.	Restaurants that have 50 or more seats must offer a non-smoking section.
Bars	Smoking permitted unless bar serves full meals. It would then be classified as a restaurant. Smoking would be banned in bars that are part of a restaurant.	Smoking permitted	Smoking permitted
Retail tobacco stores	Smoking permitted	Smoking permitted	Smoking permitted
Gaming areas of casinos	Smoking permitted	Smoking permitted	Smoking permitted
Hotel Rooms	Smoking permitted	Smoking permitted	Smoking permitted
Local control	Local governments would be able to make laws regarding tobacco stronger in their communities.	Local governments would not be allowed to make any law regarding tobacco.	School districts can determine smoking policies. No other local government may make laws regarding tobacco.
Enforcement	Health Authorities, Police Officers, & Sheriffs could issue $100 citation	None listed	Health Authorities, Police Officers, and Sheriffs can issue a $100 citation
Signage	No smoking signs and removal of ashtrays	No smoking signs	None required

* Both initiatives and current law allow business owners and property managers to regulate tobacco (stricter than state law) on their property.

Smoking, Lead Linked to ADHD

September 19, 2006
Research Summary

Researchers say that up to one-third of all cases of attention deficit/hyperactivity disorder (ADHD) in children may be caused by maternal smoking during pregnancy or lead exposure after birth, the Associated Press reported Sept. 19.

Researchers examined government child-health data; they then followed up on 135 kids identified as having ADHD by interviewing their parents about smoking and administering blood tests for lead exposure.

The study found that women who smoked during pregnancy were 2-1/2 times more likely to have children with ADHD, and that children with more than 2 micrograms of lead per deciliter of blood were four times more likely to have ADHD than children with 0.8 micrograms or less in their bloodstream.

The U.S. government considers it safe for children to have blood-lead levels of up to 10 micrograms per deciliter.

Leo Transande, assistant director of the Center for Children's Health and the Environment at Mount Sinai School of Medicine in New York, called the study a "landmark paper that quantifies the number of cases of ADHD that can be attributed to very important environmental exposures." The study authors, led by Joe Braun of the University of Wisconsin at Milwaukee, said the findings "underscore the profound behavioral-health impact of these prevalent exposures, and highlight the need to strengthen public-health efforts to reduce prenatal tobacco-smoke exposure and childhood lead exposure."

◆ *The research was published online in the journal Environmental Health Perspectives.*

Smoke Free is good for BUSINESS

In recent years, in Nevada and across the country, more and more businesses have gone smoke free. Many have voluntarily made the change and many have done so to comply with new laws. What they have all found is that smoke free policies are good for business.

Analysis has been done on sales, employment, and profits across the country before and after smoke free policies are enacted and from the smallest community, to large cities, to even entire states, and there has been no negative impact. This is especially true when it comes to restaurants, bars, or other hospitality industry establishments. Massachusetts even found that keno sales were not affected.

Business owners are finding a number of other benefits of going smoke free. First of all only 20% of Nevadans are smokers and in Washoe County over 50% (63.1%) of smokers favor a smoking ban in all restaurants. Also, there are reduced fire insurance rates for businesses that don't allow smoking, fewer cleaning costs, less repair costs for flammable items such as table clothes, carpets, curtains, etc. and no need to waste staff time emptying and cleaning ash trays.

Employees also benefit from smoke free policies. Health insurance costs are lower, employees not exposed to secondhand smoke are healthier and take less sick leave, leading to higher quality of life and productivity.

If you are looking for smoke free businesses in Nevada or own a business and want more information on going smoke free visit: www.GetHealthyClarkCounty.org or www.NoTobaccoNevada.com

Secondhand Smoke
Carries Large Financial Costs

Study shows that more than 13 percent of the true cost of a pack of cigarettes is borne by smokers' families

In light of the surgeon general's recent report on secondhand smoke, it's clear that the smokers aren't the only ones who bear the cost of their habit, says a Duke University health policy researcher.

The true cost of each pack of cigarettes sold in the United States is $40, and smoker's families (spouses, children) bear more than 13 percent of that cost, says Donald Taylor, assistant professor of public policy studies and community and family medicine at Duke and co-author of the book, "The Price of Smoking."

"Children of smokers are the most vulnerable to the harms of secondhand smoke, and are likely to be consistently exposed to this harm," Taylor says.

The cost calculation takes into account the costs to society, broadly defined. The true cost of a pack of cigarettes was estimated by Taylor and his colleagues by identifying how smokers and their families compared to non-smokers and their families in areas such as illness, mortality, wages and payments such as Social Security and life insurance.

Although the majority of the cost -- $32.78 -- is borne by the smoker in shortened lifespan, lower wages and increased health care costs, Taylor found that families or households of the smoker pay $5.44. Society pays $1.44 of the cost, he said.

Unfortunately, while policies such as bans on smoking in public places address the effects of secondhand smoking on the general public, it is more difficult to imagine effective policies to protect household members from the same harms, Taylor said.

"Currently there are few policy options that seem feasible to reduce this harm outside of medical providers counseling smokers with children to quit."

◆ *For more information, contact:*
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secondhand~smoke

Injures Babies' Lungs

UC Davis researchers today described in unprecedented biochemical and anatomical detail how cigarette smoke damages the lungs of unborn and newborn children.

The findings illustrate with increased urgency the dangers that smokers' families and friends face, said UC Davis Professor Kent Pinkerton, and should give family doctors helpful new insight into the precise hidden physical changes occurring in their young patients' lungs.

"Smoke exposure causes significant damage and lasting consequences in newborns," Pinkerton said. "This research has a message for every parent: Do not smoke or breathe secondhand smoke while you are pregnant. Do not let your children breathe secondhand smoke after they are born."

Pinkerton added that the results from this study are further proof that secondhand smoke's effects on children are not minor, temporary or reversible. "This is the missed message about secondhand smoke and children," he said. "Parents need to understand that these effects will not go away. If children do not grow healthy lungs when they are su posed to, they will likely never recover. The process is not forgiving and the children are not going to be able to make up this loss later in life."

The 2006 Surgeon General's Report on secondhand smoke estimates that more than 126 million residents of the United States age 3 or older are exposed to secondhand smoke. Among children younger than 18 years of age, an estimated 22 percent are exposed to secondhand smoke in their home; estimates range from 11.7 percent in Utah to 34.2 percent in Kentucky.

To get the word out to parents about the dangers of secondhand smoke, two states (Arkansas and Louisiana) have made it illegal to smoke in a car with young passengers. In California, a similar bill, AB 379, is currently under consideration in the state Legislature.

The new UC Davis research is reported in today's issue of the American Journal of Respiratory and Critical Care Medicine. The lead author is Cai-Yun Zhong, a former UC Davis graduate student now working at ArQule Biomedical Institute in Boston; the co-authors are Ya Mei Zhou, also a former UC Davis graduate student and now investigating breast cancer signaling pathways at Buck Research Institute in Novato, Calif.; Jesse Joad, a UC Davis pediatrician who studies children's lung development and cares for sick children in the UC Davis Health System; and Pinkerton, a UC Davis professor of pediatric medicine and director of the UC Davis Center for Health and the Environment.

> "Do not smoke or breathe secondhand smoke while you are pregnant. Do not let your children breathe secondhand smoke after they are born."
>
> *~ UC Davis Professor Kent Pinkerton*

The Pinkerton research group is one of the few groups in the nation capable of studying the effects of environmental contaminants on unborn and newborn animals. Their 15 years of studies on mice and rats have yielded greater understanding of how air pollution affects human lungs and health through experiments that attempt to reproduce true exposure conditions to environmental air pollutants.

The new study was done with rhesus macaque monkeys, in order to obtain the \best possible understanding of what happens in people. Pregnant macaques were exposed to smoke levels equal to those that a pregnant woman would breathe if someone in her home or workplace smoked. Newborn macaques were exposed to secondhand smoke levels similar to those a human baby would breathe if it was cared for by a moderate-to-heavy smoker.

What the researchers found is that environmental tobacco smoke wreaks havoc in babies at a critical time in the development of lungs -- when millions of tiny cells called alveoli (pronounced al-VEE-o-lye) are being formed.

Alveoli are the place where oxygen passes from the lungs into the bloodstream. Human infants are born with only about one-fifth of the 300 million alveoli they will need as adults. They construct almost all those 300 million alveoli between birth and age 8.

Pinkerton's group had previously shown that rats exposed to secondhand smoke while in the womb and after birth developed hyper-reactive, or "ticklish," airways, which typically occurs in children and adults with asthma. The airways in those rodents remained hyper-reactive even when the secondhand smoke exposure stopped. Thus, this early exposure to environmental tobacco smoke created a long-lasting and perhaps permanent asthma-like condition.

In the new study, the researchers analyzed step-by-step how the alveolar cells' inner workings reacted to cigarette smoke. They found the normal orderly process of cell housecleaning had gone haywire.

In healthy people, cells live and die on a schedule. Programmed cell death, called apoptosis (a-pop-TOE-sis), is regulated by genes that increase or decrease various chemical reactions in the cell.

But in this study, when baby monkeys were exposed to cigarette smoke before and after birth, apoptosis went awry. Critical cellular controls regulating cell death turned off. Alveolar cells died twice as fast as they should have.

"If you are killing cells at a higher rate during a critical developmental stage, when they are supposed to be proliferating in order to create new alveoli, the lungs may never be able to recover," Pinkerton said.

Funding for the study, "Environmental Tobacco Smoke Suppresses Nuclear Factor Kappa B Signaling to Increase Apoptosis in Infant Monkey Lungs," was included in a five-year, $1.5 million research grant from the National Institute of Environmental Health Sciences and $450,000 from taxes on sales of tobacco products in California.

◆ *University of California, Davis*
August 15, 2006

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Secondhand Smoke
is toxic

Cancer Causing Chemicals
All are extremely toxic

Toxic Metals
Can cause cancer
Can cause death
Can damage the brain and kidneys

Formaldehyde
Used to embalm dead bodies

Chromium
Used to make steel

Benzene
Found in gasoline

Arsenic
Used in pesticides

Secondhand smoke has more than 4,000 chemicals.

Many of these chemicals are toxic and cause cancer.

You breathe in these chemicals when you are around someone who is smoking.

Polonium-210
Radioactive and very toxic

Lead
Once used in paint

Vinyl Chloride
Used to make pipes

Cadmium
Used in making batteries

Carbon Monoxide
Found in car exhaust

Toluene
Found in paint thinners

Hydrogen Cyanide
Used in chemical weapons

Butane
Used in lighter fluid

Ammonia
Used in household cleaners

Poison Gases
Can cause death
Can affect heart and respiratory functions
Can burn your throat, lungs, and eyes
Can cause unconsciousness