

Research on the Dangers of Secondhand Smoke

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[Abstract]

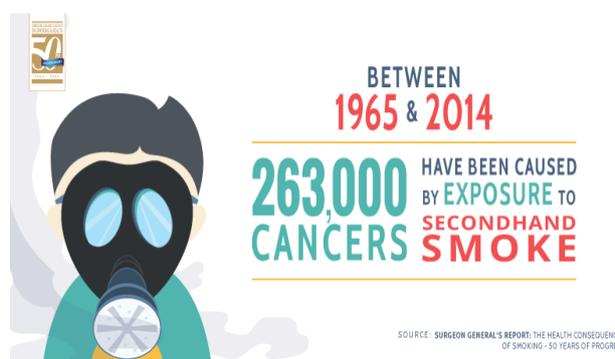
People who don't smoke may think they are safe from cancer that could be caused by smoking. However, studies have shown that involuntary smoking is very dangerous and fatal. Statistics of people diagnosed with cancer due to involuntary smoking are showing the seriousness and the fatality of secondhand smoking.

[Keyword] Involuntary smoking, cancer, secondhand smoking, sidestream smoking

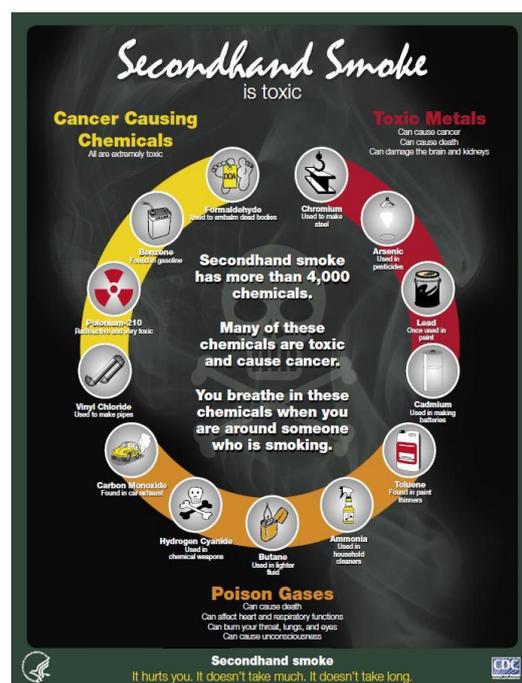
[Introduction]

According to World Health Organization, involuntary smoking is defined as "the exposure to second-hand tobacco smoke (SHS) which is a mixture of exhaled mainstream smoke and side stream smoke released from a smouldering cigarette or other smoking device (cigar, pipe, bidi, etc.) and diluted with ambient air. Second-hand tobacco smoke is also referred to as "environmental" tobacco smoke (ETS). Involuntary smoking involves inhaling carcinogens and other toxic components that are present in second-hand tobacco smoke."

from burning tobacco products, such as cigarettes, cigars, or pipes and also smoke that has been exhaled, or breathed out, by the person smoking."



[Figure1] Data showing the number of cancer diagnosed patients exposed to secondhand smoke.



[Figure2] Dangerous chemicals and materials that are harmful to health

[Effects of Secondhand Smoke]

According to the American Lung Association,

Centers for Disease Control and Prevention explains that "secondhand smoke is smoke

secondhand smoke is a deadly hazard that is causing more than 41,000 deaths per year and it not only causes harm to those who smoke but also those who involuntarily inhale the smoke making everyone a target.

Secondhand smoke is extremely dangerous especially to children as approximately 37 percent of the children in America are exposed to secondhand smoke. America Lung Association explains that it is especially harmful to children because 'between 150,000 and 300,000 lower respiratory tract infections in infants and children under 18 months of age, resulting in between 7,500 and 15,000 hospitalizations each year. It also causes 430 sudden infant death syndrome (SIDS) deaths in the U.S. annually.'

Secondhand smoke can lead to diseases such that can harm the blood vessels and the heart as well. Secondhand smoke may increase the risk of heart disease by 25 to 30 percent. Aside from cancer, it can lead to sudden infant death syndrome, ear infections, cold, pneumonia, bronchitis, and many more diseases.

Health Effects in Children

In children, secondhand smoke causes the following:^{1,2,3}

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

Health Effects in Adults

In adults who have never smoked, secondhand smoke can cause:

- Heart disease
 - For nonsmokers, breathing secondhand smoke has immediate harmful effects on the heart and blood vessels.^{1,3}
 - It is estimated that secondhand smoke caused nearly 34,000 heart disease deaths each year during 2005-2009 among adult nonsmokers in the United States.¹
- Lung cancer^{1,7}
 - Secondhand smoke exposure caused more than 7,300 lung cancer deaths each year during 2005-2009 among adult nonsmokers in the United States.¹
- Stroke¹

[Figure3] Causes of secondhand smoke

The Centers for Disease Control and Prevention have presented interesting information about secondhand smoke. They stated that opening windows or using air filters does not prevent people from breathing secondhand smoke. Also, most exposure to secondhand smoke occurs in homes and workplaces. Additionally, there are differences in secondhand smoke exposure depending on the racial and ethnic groups, income, and occupation.

Centers for Disease Control and Prevention have stated the following facts in regards to the information above.

1. **Racial and Ethnic Groups:** Cotinine levels have declined in all racial and ethnic groups, but cotinine levels continue to be higher among non-Hispanic Black Americans than non-Hispanic White Americans and Mexican Americans. During 2011–2012:
 - Nearly half (46.8%) of Black nonsmokers in the United States were exposed to secondhand smoke.
 - About 22 of every 100 (21.8%) non-Hispanic White nonsmokers were exposed to secondhand smoke.
 - Nearly a quarter (23.9%) of Mexican American nonsmokers were exposed to secondhand smoke.
2. **Income**
 - Secondhand smoke exposure is higher among people with low incomes.
 - During 2011–2012, more than 2 out of every 5 (43.2%) nonsmokers who lived below the poverty level were exposed to secondhand smoke.
3. **Occupation:** Differences in secondhand smoke exposure related to people's jobs decreased over the past 20 years, but large differences still exist. Some groups continue to have high levels of secondhand smoke exposure which include blue-collar workers, service workers, and construction workers.

[E-cigarettes]

A large number of people have started to use e-cigarettes instead of normal cigarettes. According to WebMD, 'E-cigarettes are battery-operated devices that can look like a real cigarette or pen. Some with refillable tanks look a bit different. There are hundreds

of brands, and they're sometimes marketed as a way to get your nicotine fix without the danger of cigarettes.'

People think it is safe but research shows that it is still harmful for children as their brain is still developing and it could possible affect memory and attention. However, still more research must be conducted to study in dept about the E-cigarettes.

[Avoiding Secondhand Smoke]

The only way to avoid secondhand smoke is to avoid people who are smoking and keep as much distance from those who do smoke. Other than keeping away from smoke as much as possible, there are no other ways to avoid secondhand smoke.



[Figure4] An advertisement showing that smoke can spread out through stairs and hallways

[Conclusion]

Even with the law of restricting public smoking, there are still people who smoke in public and at workplaces. The only way to keep the risk as low as possible is by keeping away from harmful smoke as much as possible

and keep the house smoke free especially if there are children in the house.



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