



Harmful Effects of Environmental Tobacco Smoke

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Introduction

Breathing of smoke caused by someone else is known as passive smoking. It is also known as involuntary smoking or second hand smoking. Second hand smoke is also called environmental tobacco smoke (ETS). In passive smoking, the person is forced to breathe 'side stream smoke' from the burning tip of a cigarette / cigar / pipe, and 'main stream' smoke which is inhaled and then exhaled by the active smoker. Today secondhand smoke is one of the major sources of indoor air pollution. People are exposed to secondhand smoke in homes, cars, the workplace, and public places such as bars, restaurants, and other recreation settings. In the world, the source of most secondhand smoke is from cigarettes, followed by pipes, cigars, and other tobacco products.

Environmental tobacco smoke contain harmful chemicals :

More than 4,000 chemicals that have been identified in secondhand tobacco smoke, at least 250 are known to be harmful, and 50 of these are known to cause cancer. These chemicals include

- Arsenic (a heavy metal toxin)
- Benzene (a chemical found in gasoline)

- Beryllium (a toxic metal)
- Cadmium (a metal used in batteries)
- Chromium (a metallic element)
- Ethylene oxide (a chemical used to sterilize medical devices)
- Nickel (a metallic element)
- Polonium-210 (a chemical element that gives off radiation)
- Vinyl_chloride (a toxic substance used in plastics manufacture)

Factors affect :

Many factors affect which chemicals are found in secondhand smoke, including the type of tobacco, the chemicals added to the tobacco, the way the product is smoked, and the paper in which the tobacco is wrapped

Who is a risk due to passive smoking?

Every passive smoker is at risk with exposure to environmental tobacco smoke. ETS causes the maximum damage to fetuses, infants, and small children by damaging their developing organs, mainly the lungs and brain.

Effects of second hand smoke on a fetus and newborn babe :

Pregnant women who effected by



Environmental tobacco smoke is caused to the not proper developing fetus. Birth defects such as cleft lip and palate combined with a low birth weight have been noticed in cases of mothers affected by ETS. With the mother continuing effected by ETS even after giving birth, the production of milk is reduced. The chance of Sudden Infant Death Syndrome (SIDS) too increases due to maternal environmental tobacco smoke.

Effects of second hand smoke on a child :

Second hand smoke and children are a lethal combination. Children are affected the maximum due to second hand smoke, especially when it happens at home. All the organs of a child are in the development stage, and breathing second hand smoke can mainly impair the proper development of their lungs and brain. Children exposed constantly to second hand smoke tend to develop childhood asthma which could get worse with further exposure. Sinusitis, cystic fibrosis, and chronic respiratory diseases get worse when a suffering child is forced into passive smoking. Other diseases that are caused due to passive smoking and can be very difficult for small children to cope with are bronchitis and pneumonia. Many children exposed to second hand smoke develop an infection in the middle ear. The inhaled smoke irritates the Eustachian tube that connects the back of the nose to the middle ear. This irritation causes a swelling and

obstruction, which causes an imbalance of pressure equalization in the middle ear. This causes fluid retention and infection in the middle ear, which is very painful for the child. If diagnosed and treated in time it is totally curable, but if treatment is delayed, it could even lead to a permanent reduction in hearing.

Health effects of second hand smoke exposure :

Involuntary inhalation of second hand smoke can lead to a variety of immediate effects. Some harmful effects of second hand smoke inhalation can consist of one or more of the following.

- Cough
- Nausea
- Headache
- Eye irritation
- Sore throat
- Dizziness
- Difficulty in breathing in those already suffering from asthma
- Long-term involuntary smoking increases the risk of smoking-related disease. One or more of the following diseases could infect a person exposed to involuntary smoking over a period of time.
 - Lung Cancer
 - Ischemic heart disease
 - Harmful effect on the cardiovascular system, increasing the chances of a heart attack.



There is absolutely no risk-free level of exposure to second hand smoke. Even short exposures to passive smoking could cause the blood platelets to get stickier, damaging the lining of blood vessels, decreasing coronary flow velocity reserves, and reducing heart rate variability, all potentially increasing the risk of heart attack.

Reducing the risk of second hand smoke :

- If you are a smoker, there are many ways in which you can help prevent others around you from passive smoking.
- Stop smoking. This is the best advice. It will not just benefit you, but everyone around you. If it is difficult (which it will be), consult your physician who could help.
- Investigators concluded that nicotine was responsible for the compulsive use of tobacco products. There are numerous explanations for the tobacco habit but the main reason for its ubiquity is the addictive drug nicotine present in all forms of tobacco leaf. So control the passive smoking better to take nicotine in the form of gum, patches and its less toxic derivatives (synthesis and recommended by Dr. T. Siva Rao et. al. Andhra University)
- If you do not intend giving up cigarette smoking, don't do it at home. Whenever you feel the urge to smoke, go outside the house

where nobody will be at risk of your secondhand smoke.

- Never smoke in the car.
- Smoking in public places is banned almost everywhere, but even if it is allowed don't smoke where there is a large concentration of people. You could be causing someone unintentional harm.



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Books

Sundara Rao M., (1996), "Tribal Development." Tata McGraw, Hill, New Delhi, page. 250

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