Health Implications of Secondhand Smoke

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Background

Secondhand smoke is also called environmental tobacco smoke (ETS). It results from the exposure of nonsmokers to smoke from tobacco products. Tobacco smoking causes 90% of lung cancer deaths in males, 80% in females, and is associated with about half a million deaths annually.

In 1966, the U.S. Surgeon General declared that smoking causes cancer. A follow-up report in 1986, by the National Research Council (NRC) and U.S. Surgeon General confirmed that ETS can cause cancer in adult nonsmokers and worsen respiratory symptoms of children of parents who smoke. The Environmental Protection Agency designated ETS as a class “A” carcinogen, cancer causing agent. This classification puts ETS in the same category as asbestos.

Secondhand smoke consists of sidestream and mainstream smoke.

A. **Mainstream smoke:** The smoke exhaled into the air from the smoker’s lungs.

B. **Sidestream smoke:** The smoke released from the burning end of a cigarette, cigar, or pipe. Sidestream smoke is more toxic to the nonsmoker than mainstream smoke because it is not filtered by the smoker’s lungs or the filter on the cigarette. Sidestream smoke consists of 85% of the smoke in a room where someone is smoking and is known to have:

- Twice as much tar and nicotine
- Three times as much benzo (a) pyrene, a cancer-causing agent
- Three times as much carbon monoxide
- Three times as much ammonia
- Smoke from a cigar contains thirty times more carbon monoxide.
- It takes about six hours for 95% of airborne cigarette smoke particles to clear in a home with the windows closed.

Facts About Secondhand Smoke

The U.S. Centers for Disease Control associates the following morbidity and mortality data with secondhand smoke.

- 3,000 deaths from lung cancer annually
- 24 to 50% increase in lung cancer risk for those who live, work, or socialize with smokers
- 50,000 deaths from heart disease
- 20% increase in the progression of hardening of arteries
- Increase of fluid in the middle ears, upper respiratory tract irritation, and significant reduction of lung function
- Females account for three-quarters of adult lung cancer deaths among those who have never smoked
- Males account for one-quarter of adult lung cancer deaths among those who never smoked

Effects of Secondhand Smoke on Children

- Nine million American children exposed to secondhand smoke annually
- 150,000 to 300,000 million lower respiratory infections
- 15,000 hospitalizations
- Probably associated with the reported 5,000 SIDS deaths annually
- Associated with episodes, and an increased severity of symptoms in children with asthma

Other Health Problems Associated with Secondhand Smoke include:

- Bronchitis,
- Pneumonia,
- Hypertension/other heart problems,
- Asthma,
- Allergies, and
- Low birth weight.
**Control of Second Hand Smoke**

An nonsmoker has the right to breathe clean, tobacco-free air.

**Individual efforts:**
- Speak up tactfully - Smokers might not be aware of the dangers of secondhand smoke or that smoking bothers you.
- Display reminders, put up no-smoking signs in your home, room, workplace or your car.
- Open a window if you cannot avoid being in a room with a smoker.
- Sit in nonsmoking sections in a restaurant; complain to the manager if none exists.
- Fight for a smoke-free environment.

**Community efforts:**
- Antismoking ordinances in public places, schools, and day care centers
- Mandatory smoke-free areas in restaurants
- Designated smoking areas in airports
- Increased cigarette tax ordinances
- Tougher penalties for violators
- Education to enhance knowledge about the consequences of smoking to the nonsmoker

**National efforts:**
- Tougher antismoking legislations
- Federal incentives for states that restrict use of tobacco
- Disincentives for those that do not restrict tobacco use
- Education to enhance knowledge about the consequences of smoking to the nonsmoker

**References:**