

# Doctor, Please Explain Secondhand Smoke and Children

Insight into effects and prevention

- What is secondhand smoke?
- Who is at risk?
- and more...

Secondhand smoke is a combination of the smoke from a burning cigarette and the smoke exhaled by a smoker. Also known as environmental tobacco smoke (ETS), it can be recognized easily by its distinctive odor. ETS contaminates the air and is retained in clothing, curtains and furniture. Many people find ETS unpleasant, annoying, and irritating to the eyes and nose. More importantly, it represents a dangerous health hazard. Over 4,000 different chemicals have been identified in ETS, and at least 43 of these chemicals cause cancer.

## Is exposure to ETS common?

Approximately 26 percent of adults in the United States currently smoke cigarettes, and 50 to 67 percent of children under five years of age live in homes with at least one adult smoker.

Smoke's effect on...

The fetus and newborn

Maternal, fetal, and placental blood flow change when pregnant women smoke, although the long-term health effects of these changes are not known. Some studies suggest that smoking during pregnancy causes birth defects such as cleft lip or palate. Smoking mothers produce less milk, and their babies have a lower birth weight. Maternal smoking also is associated with neonatal death from Sudden Infant Death Syndrome, the major cause of death in infants between one month and one year of age.

Children's lungs and respiratory tracts

Exposure to ETS decreases lung efficiency and impairs lung function in children of all ages. It increases both the frequency and severity of childhood asthma. Secondhand smoke can aggravate sinusitis, rhinitis, cystic fibrosis, and chronic respiratory problems such as cough and postnasal drip. It also increases the number of children's colds and sore throats. In children under two years of age, ETS exposure increases the likelihood of bronchitis and pneumonia. In fact, a 1992 study by the Environmental Protection Agency says ETS causes 150 - 300 thousand lower respiratory tract infections each year in infants and children under 18 months of age. These illnesses result in as many as 15 thousand hospitalizations. Children of parents who smoke half a pack a day or more are at nearly double the risk of hospitalization for a respiratory illness.

The ears

Exposure to ETS increases both the number of ear infections a child will experience, and the duration of the illness. Inhaled smoke irritates the eustachian tube, which connects the back of the nose with the middle ear. This causes swelling and obstruction which interferes with pressure equalization in the middle ear, leading to pain, fluid and infection. Ear infections are the most common cause of children's hearing loss. When they do not respond to medical treatment, the surgical insertion of tubes into the ears is often required.

The brain

Children of mothers who smoked during pregnancy are more likely to suffer behavioral problems such as hyperactivity than children of non-smoking mothers. Modest impairment in school performance and intellectual achievement have also been demonstrated.

### **Who is at risk?**

Although ETS is dangerous to everyone, fetuses, infants and children are at most risk. This is because ETS can damage developing organs, such as the lungs and brain.

### **Secondhand smoke causes cancer**

You have just read how ETS harms the development of your child, but did you know that your risk of developing cancer from ETS is about 100 times greater than from outdoor cancer-causing pollutants? Did you know that ETS causes more than 3,000 non-smokers to die of lung cancer each year? While these facts are quite alarming for everyone, you can stop your child's exposure to secondhand smoke right now.

### **What can you do?**

- Stop smoking, if you do smoke. Consult your physician for help, if needed. There are many new pharmaceutical products available to help you quit.
- If you have household members who smoke, help them stop. If it is not possible to stop their smoking, ask them, and visitors, to smoke outside of your home.
- Do not allow smoking in your car.
- Be certain that your children's schools and day care facilities are smoke free.

Acknowledgment is made to the American Academy of Pediatric Otolaryngology for contributions to this content.