



Second-Hand Smoke

Second-hand smoke is often referred to as environmental tobacco smoke (ETS), or passive smoke.

People who do not smoke are exposed to second-hand smoke when they share a space with someone who is smoking.

The Report on Health Effects of Environmental Tobacco Smoke (ETS) in the Workplace, published by the Health and Safety Authority and the Office of Tobacco Control, looked at the international research and evidence about the health effects of second-hand smoke and this fact sheet sets out some of the main findings.

What is Second-Hand Smoke?

Second-hand smoke is a complex mixture of several thousand compounds, and it contains many toxic agents that are known to cause heart disease, cancer and other diseases. Tobacco smoke contains over 4000 compounds, some of which have marked irritant properties and approximately 50 are known or suspected carcinogens (cancer causing substances) such as benzene, nickel, arsenic and a variety of polycyclic aromatic hydrocarbons and N-nitrosamines. The World Health Organisation International Agency for Cancer Research has declared that second-hand smoke is a known human carcinogen, or cancer-causing agent.

Second-Hand Smoke is made up of:

- Exhaled mainstream smoke.
- Side stream smoke emitted from smouldering tobacco.
- Contaminants emitted during the puffs.
- Contaminants that diffuse through the cigarette paper.
- Contaminants that diffuse through the mouth end of cigarettes between puffs.

Mainstream smoke is the smoke inhaled from the cigarette and then exhaled by the smoker into the environment. Side stream smoke comes from the burning tip of the cigarette and is far more hazardous than the mainstream smoke inhaled by the smoker as it contains higher concentrations of a variety of harmful chemicals. Many potentially toxic gases are present in higher concentrations in side stream smoke than in mainstream smoke. Almost 85% of the smoke in a room results from side stream smoke.

Side stream smoke is produced at lower temperatures than mainstream smoke, which means that many carcinogens and other toxicants are generated in greater amounts in side stream smoke than in mainstream smoke.



Health Effects of Second-Hand Smoke

Some of the immediate effects of exposure to second-hand smoke include eye irritation, headache, cough, sore throat, dizziness and nausea. In the longer term, passive smokers suffer an increased risk of a range of smoking related illnesses:

In Adults:

- Second-hand smoke is a human lung carcinogen and exposure to second-hand smoke can increase the risk of lung cancer possibly by 20% to 30%.
- Second-hand smoke causes heart disease. Exposure to ETS causes an increased risk of coronary heart disease, estimated at 25% to 30%, and almost doubles the risk of stroke.
- Second-hand smoke causes chronic respiratory symptoms such as cough, phlegm production and shortness of breath and chest colds.
- There is evidence to show a cause/effect relationship between ETS and emphysema.
- Second-hand smoke increases the severity and frequency of asthma attacks.
- Second-hand smoke has also been shown to have had adverse effects on pregnant women and can cause low birth weight in their babies.

In Children:

- Second-hand smoke exposure increases the prevalence of fluid in the middle ear, a sign of chronic middle ear disease.
- Second-hand smoke exposure in children irritates the upper respiratory tract and is associated with reduction in lung function.
- Second-hand smoke increases the risk of lower respiratory tract infections such as bronchitis, pneumonia, and bronchiolitis in children.
- Second-hand smoke increases the severity in the symptoms of asthma in children and is a risk factor for new cases of asthma in children.
- Parental smoking is also a risk factor for sudden infant death syndrome.