ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

Cigarette Smoking, Asbestos Exposure, and Your Health

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Environmental *Health*

Cigarette smoking and asbestos exposure: Why is it a problem?

Many studies have shown that cigarette smoking and exposure to asbestos are both very harmful to your health. The risk of lung cancer greatly increases when you smoke cigarettes and are exposed to asbestos.

The **Agency for Toxic Substances and Disease Registry (ATSDR)** is the federal public health agency whose mission is to prevent adverse human health effects that result from hazardous waste exposure. The agency conducts assessments or evaluations to determine whether communities have been exposed to hazardous waste, and provides health information to prevent harmful exposures and related adverse effects to public health.

What do we know about cigarette smoking and asbestos?

More than 4,000 toxic chemicals are found in cigarette smoke. Of these, more than 60 are known or probable causes of cancer in humans, such as benzene, cadmium, and cyanide. Tobacco use is the leading preventable cause of death in the United States. Each year, cigarette smoking causes approximately 440,000 deaths in the United States, primarily due to cancer, heart disease, and stroke. That is nearly one of every five deaths per year. Even if you do not smoke cigarettes, you may be exposed to cigarette smoke in your home or work environment. Breathing the toxic chemicals in cigarette smoke harms nearly every organ in your body.

Asbestos is the name given to a group of fibrous minerals with separable, long, and thin fibers that are found in the environment. These fibers are so small that you cannot see them. Asbestos fibers are most common in the work environment (occupational exposure) that make or use asbestos-containing products such as insulation, ceiling or floor tiles, cement pipes, automotive repair of brakes and clutches. Asbestos also can be found in buildings containing asbestos products that are being torn down or repaired, releasing asbestos fibers into the air. We are all exposed to low levels of asbestos in the air. Even though in the United States current exposures are generally much lower than in the past, occupational and environmental exposures to asbestos remain a concern.

How can exposure to cigarette smoke and asbestos harm me?

Breathing asbestos fibers may damage the lungs or the linings of the chest wall. In some cases, this leads to asbestos-related illness and even death. You will breathe asbestos fibers into your lungs if they are in the air you breathe. Asbestos fibers may remain in the lungs for a lifetime. Cigarette smoking weakens the lungs and decreases their ability to remove asbestos fibers. Cigarette smoke also irritates air passages, causing them to produce more mucus. These effects block the passage of air and further decrease the removal of asbestos fibers from the lungs.

103929 Cigarettes&Asbestos(Dr Norys Guerra).indd

What lung disease is common to both cigarette smoking and asbestos exposure?

Both cigarette smoking and asbestos exposure can cause lung cancer. When a cigarette smoker is exposed to asbestos, his/her risk of lung cancer increases by 50 to 84 times. The longer you are exposed to asbestos, and the higher the amount of the exposure, the greater your chances for getting lung cancer. Compared to nonsmokers, men who smoke are about 23 times more likely to develop lung cancer and women who smoke are about 13 times more likely to develop lung cancer. Studies have confirmed how the risk of developing lung cancer multiplies with exposure to both asbestos and cigarette smoke.

Will your asbestos-related illness get worse if you smoke cigarettes?

Asbestosis is a serious, progressive, long-term disease of the lungs caused by high exposure or long duration of exposure to asbestos. Asbestosis is not a cancer. Cigarette smoking will make this asbestos-related illness worse. The disease typically develops 10 to 20 years after initial exposure, getting worse over time. It causes lung tissues to scar. Scarring of the lungs makes it hard to breathe and difficult for oxygen and carbon dioxide to pass through the lungs, and to clear out chemicals, such as the cancer-causing chemicals in tobacco smoke.

What are the health benefits when you quit smoking?

The Surgeon General's 2004 report highlights some of the immediate to long-term health benefits of quitting, including:

- Your heart rate lowers just 20 minutes after quitting.
- Carbon monoxide blood levels drop to normal after 12 hours.
- The risk of heart disease reduces by half after 1 year of quitting and after 15 years of not smoking the risk is nearly the same as someone who has never smoked.
- Two weeks to 3 months after quitting, lung function starts to improve. The risk of lung cancer decreases by one-half after 10 years of not smoking.
- The risk of cancers of the mouth, throat, and esophagus decreases by one half after 5 years of not smoking.
- Once you quit smoking, nearly every organ in your body will experience benefits.

What does ATSDR recommend to reduce the exposure-related risks of asbestos and cigarette smoke?

- Reduce your exposure to asbestos. Do not disturb areas containing asbestos products. If asbestos products are to be disturbed or removed, follow the Environmental Protection Agency advice for handling asbestos (http://www.epa.gov/asbestos/).
- If you smoke, you should stop. Quitting at any time offers immediate and long-term health benefits. (National Network of Quitlines-Call from anywhere in the U.S.: (800) QUIT-NOW (800) 784-8669)
- Avoid secondhand cigarette smoke.
- Get regular medical and preventive care from your doctor.
- Follow your doctor's advice about getting vaccines that can protect you against respiratory diseases such as pneumonia and flu.

Useful references and Web links

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