The NATION'S HEALTH
February 2007

Healthy outdoor air: You are what you breathe

By Teddi Dineley Johnson

It's a beautiful morning. You're in your car, headed for work. At the light, you come to a stop directly behind a school bus — close enough to smile at some kindergarteners waving at you. The light turns green, the bus begins to move and you suddenly find yourself engulfed in a cloud of black diesel soot.

Sound familiar? For many Americans, gulping carbon monoxide or diesel exhaust along with their coffee is an accepted part of the morning routine, but it comes with a price. Long-term exposure to air pollutants is linked with both heart disease and lung cancer.

Clean air is essential to your day-to-day and long-term health, but millions of Americans live in places where outdoor air pollution makes breathing difficult — even dangerous.

"Sources of air pollution exist in every community, every place there's a car, a power plant, a factory," says Paul Billings, a spokesman for the American Lung Association. "You can't completely escape air pollution."

Factoid:
U.S. air is cleaner now than 30 years ago, thanks to better laws and technology

Ozone and particle pollution are the two most dangerous airborne health hazards. Ozone, found in smog, is often worse on hot summer days because sunlight and hot weather cause ground-level ozone to form in harmful concentrations in the air. Some scientists have compared ozone's effect on the lining of the lung to the effect of sunburn on the skin.

Particle pollution, found in haze, smoke and dust, is often worse in the winter and is considered to be the most dangerous of the two. Particle pollution comes from a variety of sources, including cars and trucks, industry, fireplaces and power plants. The size of the particles is directly linked to their potential for causing health problems, and they can be much smaller than you'd suspect — even smaller than the width of a human hair.

Respect the color code

Outdoor air pollution can affect everyone's health, but certain groups, including people with asthma or other respiratory conditions, or heart disease, are more seriously affected. According to the Centers for Disease Control and Prevention, air pollution can make it harder to breathe and can also cause other symptoms, including coughing, wheezing, chest discomfort and a burning feeling in your lungs.

So, should we all don protective masks?

"No," Billings says. "Most masks aren't going to help you because the particles are so small they get past the body's defense mechanisms and penetrate deep in the lungs. The solution is reducing the sources of pollution, not having people run around with gas masks."

Start protecting yourself from outdoor air pollution by consulting the Air Quality Index each day. Many newspapers, TV and radio stations carry the index information as a community service. The index tells you how clean or polluted the air in your community is, and what associated health effects might be a concern for you. The index is color-coded to make it easy to understand. For example, orange means conditions are unhealthy for sensitive groups, such as people with asthma, while red means conditions may be unhealthy for everyone.

Make a difference

One way you can help reduce air pollution is to use your car less. As much as you love your car, keep in mind that cars are a major source of air pollution in the United States. Nationwide, 75 percent of carbon monoxide emissions come from motor vehicles. But your own personal driving habits can make a big difference in the amount of pollution your car produces.

To keep your car's emissions low, avoid unnecessary driving and maintain your car properly. Consider trading in your old clunker for a cleaner hybrid model. Cut driving miles by mapping out your errands before you get behind the wheel. Whenever possible, consolidate trips, carpool, use public transit and choose clean alternatives, such as biking or walking. Your car will last longer, you'll save money and you'll be doing the air a big favor as well.

>> For more healthy air tips, visit www.airnow.gov or www.lungusa.org.

American Public Health Association

Bad air days: Dos and Don'ts

What can you do to stay healthy when the air is bad?

DO check the Air Quality Index before planning your outdoor activities and heed warnings.

DO listen to what your body is telling you. Pay attention to asthma or breathing problems that occur up to day after being outdoors and discuss them with your health provider.

DO speak out! Identify sources of air pollution in your community and choose where you live carefully. Work with community groups and lawmakers to clear the air.

DON'T run or jog on congested streets. Pollution levels can be elevated up to 50 feet from the roadway, so take to the side streets.

DON'T exercise in the middle of the day or in the afternoon. Exertion causes you to breathe harder and faster, taking more air into your lungs.

DON'T schedule children's recreational activities, such as soccer games or softball practice when the air is bad. Children are especially sensitive to unhealthy air.