Improving Middle Tennessee's Air Quality

It May Be Easier Than You Thought

By Melissa Stevens

Drive into most major cities in Tennessee on a hot summer day and you're likely to see a white or brown haze instead of a clear, blue sky. It's not uncommon and it's caused by air pollution. Now imagine breathing the harmful particles that make up that pollution deep into your lungs.

The average person breathes about 3,400 gallons of air a day. Several studies have shown that poor air quality may cause or worsen respiratory illness including asthma.

The two pollutants of particular concern in Middle Tennessee are ozone and particulate matter. Ozone is a gas created from nitrogen oxides and volatile organic compounds (VOCs) chemically reacting with the sun. Particulate matter is a mixture of extremely small particles and liquid droplets in the air. These particles are so small that they're just a fraction of the size of a human hair, but they pose serious health threats because they can pass through the nose and throat, and travel deep into the lungs and bloodstream.

Ground-level ozone and particle pollution are caused by some of the same things: vehicle emissions, which contribute to more than half of Middle Tennessee's air pollution; power plant smoke; spilled solvents; and small gasoline powered engines (such as lawn equipment and small watercraft).

These pollutants can pose a serious risk to your health. The effects of breathing ozone are like sunburn on the inside of the lungs and can cause shortness of breath, throat and eye irritation, and even permanent lung damage. Prolonged exposure to even low levels of ground-level ozone can reduce a healthy adult's lung function by 15 to 20 percent and even more for children because their delicate lungs are still developing.

This is a serious problem, but the good news is together we can reduce our area's air pollution just by making some simple lifestyle changes.

For example, sharing a ride to work cuts car emissions by almost half, plus it reduces congestion. According to the Federal Highway Administration's National Household Travel Survey, carpooling, using transit, walking, or bicycling—just one day a week for a year—can save the typical commuter about 1,200 miles on their vehicle and more than $600 in total driving costs.

Here are a few other easy steps we can all take to help improve our air quality.

• Sign up to receive air quality alerts via e-mail at no charge by clicking on the EnviroFlash link at *www.cleanairpartnership.info*. Getting the alerts in *advance makes it easier to plan your day to avoid pollution producing behaviors*.

- Keep your car properly maintained, including regular tune-ups and oil changes and keep your tires properly inflated. The average "peak period" traveler uses an extra 28 gallons of fuel per year due to inefficient vehicle operation in congested conditions.

- Try trip chaining. Combine errands and plan your route to reduce trips in your car. Making one trip in the car to take care of several errands will help conserve gas and reduce pollution.

- Cut down on the amount of time your car is idling by skipping the drive thru, and going inside at banks and fast food restaurants; turning your engine off when waiting to pick up or drop off passengers; turn your car off while waiting for a passing train; and scheduling your day to avoid driving during peak traffic times.

- Bring your lunch to work or walk to a nearby restaurant instead of driving during the heat of the day when ozone levels are at their peak.

- During the summer months, refuel your car after dusk. Gasoline vapor escapes into the air during refueling and can react with the sun to produce ground-level ozone. Ozone concentrations are usually at their highest in the mid- to late afternoon, so it helps to refuel when it's cooler and ozone production has tapered off.

- And when you do fill up, remember to stop at the click. Spilled gasoline from overfilling automobile gas tanks contributes to the production of ground-level ozone. Stopping at the click—the pump's automatic shutoff—reduces spills and evaporation.

Improving our air quality is easier than you think. By making small changes in our daily habits, together we can make a big difference.