

SAF~T~GRAM

"A gram of safety is worth a pound of cure."

Summer 2012

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With Summer Comes Heat!

What Is Ground-Level Ozone?

Ozone is a colorless gas that is a variety of oxygen. Ground-level ozone is one of the main components of smog, which is formed by the interaction of hydrocarbons (unburned or evaporated gasoline) and nitrogen oxides in the presence of sunlight.

Where Is It Found?

Stratospheric ozone (in the upper atmosphere) is known as the ozone layer and protects our health by shielding us from the sun's damaging ultraviolet rays. However, ground-level, ozone (tropospheric ozone) is a pollutant with highly toxic effects. It is a health hazard causing damage to human health, the environment, crops, and a wide range of natural and artificial materials.

What Are the Health Effects of Ground-Level Ozone?

Ozone that is close to the ground can cause eye irri-

tation; headaches; coughing; impaired lung function; and eye, nose, and throat irritation. Asthmatics and children are most at risk. The chance of exper-

also a product of reactions between chemicals that are produced by burning coal, gasoline, other fuels, and the chemicals found in paints and hair sprays. Oxidation occurs readily in the presence of sunlight. Motor vehicles and industries are major sources of pollutants that cause ground-level ozone.

What Are Ozone Action Days?

The voluntary initiative was put in effect by cooperative efforts among government, environmental, and business organizations in order to reduce ground-level ozone. Ozone Action Days are most often on hot days, above 90 degrees Fahrenheit, with little or no wind blowing. Predictions that a day may be an Ozone Action Day are announced on television and radio news prior.

Ground-Level Ozone



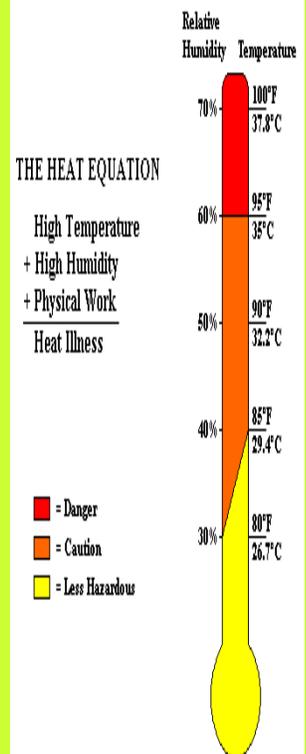
riencing adverse health effects from elevated ozone levels increases during heavy exercise or outdoor activity. Ground-level ozone can also damage trees, plants, and reduce visibility.

What Causes Ground-Level Ozone?

Ground-level ozone comes from the breakdown (oxidation) of volatile organic compounds found in solvents. It is

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Check this out!
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Heat Safety

Heat illness includes a range of disorders that result when your body is exposed to more heat than it can handle. The human body is constantly engaged in a life-and-death struggle to disperse the heat that it produces. If allowed to accumulate, the heat would quickly increase your body temperature beyond its comfortable 98.6° F.

Who is at risk? Infants, young children, elderly and pets, individuals with heart or circulatory problems or other long-term illness, employees working in the heat, athletes and people who like to exercise (especially beginners), and individuals taking certain medications that alter sweat production.

Water Safety

In 2005, drowning claimed the lives of 3,582 people. Although all age groups are represented, children four years old and younger have the highest death rate due to drowning, representing more than 25 percent. Most drowning and near-drowning incidents happen when a child falls into a pool or is left alone in the bathtub.

Safety Tips

- Never leave a child alone near water: on the beach, at a pool, or in the bathtub. If you must leave, take your child with you.

Car and Road Trip Safety

A simple pre-trip inspection can help save trouble down the road. In addition to routine maintenance and repair, drivers can use this checklist to reduce the risk of a breakdown:

- Be sure tires (including the spare) are properly inflated. Watch out for uneven tread wear and follow your owner's manual for proper tire rotation frequency. Take your car to an ASE-certified technician to have tires rotated and balanced.

Heatstroke is the most serious and life-threatening heat-related illness. In certain circumstances, your body can build up too much heat, your temperature may rise to life-threatening levels, and you can become delirious or lose consciousness. If you do not rid your body of excess heat fast enough, it "cooks" the brain and other vital organs. It is often fatal, and those who do survive may have permanent damage to their vital organs. **Heat Exhaustion** is characterized by heavy perspiration with normal or slightly above normal body temperatures. It is caused by water or salt depletion or both (severe dehydration). Heat exhaustion affects workers and athletes who do not drink enough fluids while working or exercising in hot environments.

- Kids don't drown only in pools. Bathtubs, buckets, toilets, and hot tubs present drowning dangers as well.
- Enroll children older than age three in swimming lessons taught by qualified instructors.
- Always follow posted safety precautions when visiting water parks.
- If you're visiting a public pool, keep an eye on your kids. Lifeguards aren't babysitters.
- Never consume alcohol when operating a boat.

- Test brake lights, headlights and turn signals to make sure they work properly. Change any weak bulbs.
- Replace worn wiper blades.
- Check fluid levels under the hood, including battery fluid, brake fluid, coolant, oil, transmission fluid and windshield wiper fluid.
- Check belts and hoses for any visible cracks or bulges. If belts and hoses are over 4 years old, take your car to a certified technician and have them replaced.



Symptoms of heat exhaustion- Severe thirst, fatigue, headache, nausea, vomiting and sometimes diarrhea. The affected person often mistakenly believes he or she has the flu. Uncontrolled heat exhaustion can evolve into heatstroke.

Heat Cramps are painful muscular spasms that happen suddenly affecting legs or abdominal muscles. They usually happen after physical activity in people who sweat a lot or have not had enough fluids.

"Children four years old and younger have the highest death rate due to drowning."

- Always use approved personal flotation devices (life jackets).
- Don't underestimate the power of water. Even rivers and lakes can have undertows.
- Always have a first-aid kit and emergency phone contacts handy. Parents should be trained in CPR.



In case of a roadside emergency, the National Safety Council recommends you be prepared with a "survival kit" that should always remain in the car. Some essential supplies include: Compass, exterior windshield cleaner and coolant, first aid kit, non-perishable food, reflective triangles and brightly-colored cloth, tool kit, water, working flashlight and extra batteries.

There are many things that can go wrong when driving, overheating is a big one. Many factors can cause a car to overheat, typically low coolant during warm temperatures, long drives and congested traffic are to blame. If your car overheats, do not drive more than a quarter mile. Have it towed to avoid further damage to the engine. However, if there is no experienced mechanic or tow truck nearby, follow these simple steps:

- Pull over to a safe location and turn off the engine.
- Do not open the hood until the car has **completely cooled** or the temperature gauge has moved from hot to cool.
- Check the coolant (also called anti-freeze) level in the radiator. Look in

the owner's manual if you are unsure where the coolant reservoir tank is.

- Make sure the radiator cap is cool before opening it. Slowly twist it off with a towel and beware of any hot steam. If needed, fill coolant to the top of the radiator. Put the radiator cap back on.
- Be sure the upper or lower radiator hose and any of the heater hoses have not been blocked, disconnected or burst.
- Restart the engine.
- Carefully monitor the temperature gauge. If you see it crossing the optimal mark, pull over to a safe location and turn the engine off.



Workplace Safety

- Know all emergency precautions such as evacuation routes, locations of emergency shelters and fire extinguishers.
- Keep your work area clean.
- Clean up spilled liquid, oil, or grease immediately.
- You may be exposed to several hazards at the same time. The right equipment can protect your eyes against irritation and injury. Ask your supervisor or an EHSO employee to help you select the right eye

protection.

- Do not wear sandals or open toe shoes when working in the lab.

Proper Lifting Tips:

Assess the situation and plan the lift.

Make sure you have nonskid shoes and firm footing.

Bend your knees, tighten your stomach, and keep your back straight.

Make sure you have a good grip on the item or person you're lifting. Lift smoothly. A smooth lift means that you avoid twisting your body, point your feet in the direction you want to go, and push if possible rather than pull.

- Shut down your machine before cleaning, repairing, or leaving it.



Surplus Chemicals

Don't forget! In an effort to reduce waste at the University (saving \$\$\$ and other resources), the EHSO has established a surplus chemical program. These chemicals are in good shape, mostly unopened, and available free of charge to University departments. For a complete list, visit the EHSO website at <http://www.ouhsc.edu/ehso/SurplusOKC.htm>



Laboratory Safety Manual Updates

Periodically, the EHSO reviews and updates the Laboratory Safety Manual. The June, 2012 Laboratory Safety Manual updates may be downloaded at:

OUHSC/OU-Tulsa - <http://www.ouhsc.edu/ehso/labman/2012update.pdf>

OU Norman - <http://www.ouhsc.edu/ehso/Normanlabman/12Updates.pdf>

Please print these updates and insert/replace the pages in your current manual according to the instructions provided.

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The Environmental Health and Safety Office (EHSO) provides health, safety, and environmental services to the University of Oklahoma including off-campus facilities to facilitate compliance with all environmental, occupational health and safety regulations. These regulations include, but are not limited to, those promulgated by OSHA, EPA, the Oklahoma Department of Environmental Quality, the Oklahoma Department of Labor and applicable regulations under the Department of Transportation.

The Mission of the EHSO is to "develop and coordinate appropriate policies and programs to promote occupational health, reduce accidents and injuries, protect our environment, and provide technical assistance to administration, faculty, staff and students of OU regarding environmental and occupational health and safety regulatory compliance."

<http://www.ouhsc.edu/ehso/>

Have You Completed Your Safety Training?

Compliance Requirements

Annual Safety Training Courses

Safety training for certain employees is required by some OSHA standards. An employee is any individual who receives a paycheck from the university.

How does one know which training is required?

- If an employee uses chemicals on the job or chemicals are present in his/her workplace, Hazard Communication training should be completed annually. All employees of the OU HSC are required to complete this training annually.

- Each employee of the OU HSC and

OU Tulsa are required to complete Fire Safety annually.

- If an employee has the potential for exposure to with human blood, human cell lines, or other potentially infectious materials in the course of their duties, Blood borne Pathogen training should be completed annually.

- If an employee's job duties include patient care or if they work in a patient care setting Tuberculosis Training is required annually.

- If an employee works in a laboratory where chemicals are used, Laboratory Safety training should be completed.

- Employees who package or ship

biological or hazardous materials should receive DOT Shipping training every two years.

- Employees who have direct patient contact or work in a clinic type setting that have completed the initial healthcare training modules (haz,fire,bbp,tb) can take the Healthcare Refresher course to satisfy the annual EHSO safety training requirements.

