



# THE SAFETY OBSERVER

A Quarterly Newsletter by the Environmental Health and Safety Office



[www.uic.edu/depts/envh](http://www.uic.edu/depts/envh)

## EHSO Profile: On Track with Mike Hartz, Medical Center Safety Officer

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On a typical day at UIC Hospital you may notice the patient-physician interaction, the long lines in the cafeteria during lunch, or the occasional blood donor at the door. The bustle of the modern day medical center makes it difficult to notice the finer details of how it operates and who maintains the institution's safety compliance measures. For the past five years, Mike Hartz has been committed to his role as the Medical Center Safety Officer. It is apparent if you follow Mike around that he symbolizes the dedication and evolution of one of Chicagoland's finest institutions. Whether he is moving along the hospital corridors ensuring safety protocols are met or perusing the onsite conditions of campus construction projects, he has led the Environmental Health and Safety Office in OSHA training and Construction Safety.



Photo taken by Dennis Terpin

Mike's background at UIC began twelve years ago as a Physical Plant safety officer where his experience in construction was used to ensure safety in campus construction projects. As his ardent efforts paid off over time, he found himself at a new position as an industrial hygienist at the University's Health and Safety Office. There his shrewd insights with safety would lead his department's efforts towards the betterment of a safer campus. While working for the department Mike had experienced many different aspects to campus safety, fire safety, medical center safety, professional IH, and management of chemical facilities. Through this copious amount of gathered experience, Mike gained a strong professional background needed for his current role as the Medical Center Safety Officer.

As Mike retires in the summer of 2007, we tracked down his footprints across campus in order to understand the impact one person can have in such a large academic setting. The day starts early as he arrives like clock-work just before seven or even earlier when duty calls.

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### NEWSLETTER SPOTLIGHT

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## Proper Cough Etiquette



Cover your mouth and nose with a tissue when you cough or sneeze. Put your used tissue in the waste basket

OR



OR



Cough or sneeze into your upper sleeve, not your hands.



Wash hands with soap and warm water for 20 seconds



Clean with alcohol-based hand cleaner.

Adapted from the CDC, APIC, and Minnesota Department of Health

## National Radon Action Month -January 2007-

National Radon Action Month serves as an annual reminder of the serious danger that radon gas poses to us in our homes. The U.S. Surgeon General has warned that radon is the second leading cause of lung cancer after cigarette smoking and the number one cause of lung cancer in non-smokers. The U.S. Environmental Protection Agency (USEPA) estimates that it causes about 21,000 deaths from lung cancer annually in the United States, with as many as 900 of those in Illinois.

The Illinois Emergency Management Agency (IEMA) recently verified and analyzed radon screening measurement data reports submitted by licensed measurement professionals throughout Illinois. These reports covered tests done from January 2003 through December 2004. The tests were performed on 22,082 homes in 72 of the 102 counties in Illinois. Results indicated that approximately 46 percent of all homes tested had potentially unsafe levels of radon.

### What is radon?

Radon is a natural radioactive gas released in rock, soil, and water from the natural decay of uranium. It is colorless, odorless and tasteless. Some of the ways it can enter our homes and buildings are through small cracks in the foundation, openings around sump pumps and drains, or soil in crawl spaces.

### How do I know if I have unsafe levels of radon in my home?

Because radon is colorless, odorless and tasteless, performing a radon test is the only way to know if the levels in your home are high. Fortunately, testing for this dangerous gas in the indoor air we breathe is simple, inexpensive and effective. Radon detectors are available at hardware stores or by calling IEMA for a list of licensed laboratories that sell detectors. Free radon home test kits are also available through the Illinois State Radon Office by calling their hotline at 1-800-325-1245. A home radon test conducted by a licensed radon contractor will cost around \$125-150.

### I've tested, now what?

If your test results do not show that you have unsafe levels of radon then no further action is required. You may re-test in two years or earlier if any renovations or additions are made to your home or building.

If unsafe levels of radon are detected, you can protect yourself from the effects of this harmful gas by implementing proven mitigation techniques in your home. Mitigation is the act of repairing or altering a building design for the purpose of reducing the concentration of radon in the indoor atmosphere. IEMA encourages you to contact a licensed radon mitigation professional to correct the problem. As with radon measurement professionals, mitigation experts in Illinois are licensed by IEMA to ensure they have the proper equipment, specialized training and technical skills to do the job right and reduce radon in the home to safe levels. Depending on the home, radon mitigation can cost between \$800-1,200.

More information about radon is available on the IEMA website at [www.state.il.us/iema](http://www.state.il.us/iema) or by calling the radon hotline at 1-800-325-1245.

Sources: United States Environmental Protection Agency (USEPA), [www.epa.gov](http://www.epa.gov) ; Illinois Emergency Management Agency (IEMA), [www.state.il.us/iema](http://www.state.il.us/iema) .

## Battery Recycling at UIC



Did you know that you can recycle your batteries on campus? Collection bins are available in the Campus Bookstores in the Student Center East (by the computer sales desk) and Student Center West (in the Micro Center). Nearly all batteries are accepted, including dry cell (alkaline, non-rechargeable) batteries and rechargeable batteries such as nickel cadmium, nickel metal hydride, lithium ion, and small sealed lead (< 2 lb), as well as cell phones.

What happens to the batteries? The dry cell batteries are collected through the City of Chicago's battery recycling program. The rechargeable batteries are sent to the Rechargeable Battery Recycling Corporation that is funded by a surcharge on all rechargeable batteries purchased.



## Space Heater Safety

### Stay Warm Safely!

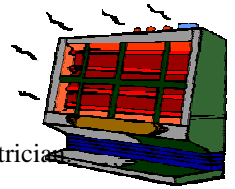
During the winter months, many people turn to alternative heating methods such as wood burning stoves, fireplaces and space heaters. These alternative ways to heat your home may become potential fire hazards. All potential sources of fuel, such as paper, bedding, clothing, among others, should be kept at least three feet away from heat sources.

Below are basic safety tips to follow when using Space Heaters.

#### Electric Space Heaters

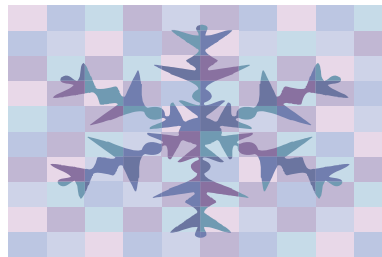
Portable electric heaters, while seemingly harmless, are responsible for many fires annually. These heaters are not substitutes for central heating. Nor are they designed for extended use.

- All types must be kept at least 36 inches from anything that can burn, including furniture, bedding, clothing, pets and people.
- Space heaters must not be left operating when you are not in the room, or when you go to sleep.
- Children should be supervised at all times when space heaters are in use.
- Make sure the heater has an element guard that prevents little fingers from straying onto hot coils.
- Do not put drying clothing or combustibles over heaters.
- Be certain your home wiring is designed to handle your space heater. If you have any doubts, contact a licensed electrician.
- Make sure the heater has a 3-prong grounded plug and used in a 3-hole wall outlet.
- Check for fraying or splitting wires, or overheating. Have problems repaired by a professional before operating the space heater.
- Make sure your space heater has an automatic switch that turns off the electric current if the unit is tipped over.



**Here at UIC, the only type of space heaters approved for use on campus are ceramic oil-filled space heaters. These space heaters are completely enclosed with no elements exposed. Make sure to always consult a campus electrician to see if your outlet is capable of handling a space heater. For more information regarding space heaters please contact the Health and Safety Office at 6-7411.**

## Safe Winter Driving



#### *The Three P's of Safe Winter Driving:*

**PREPARE** for the trip;

**PROTECT** yourself; and

**PREVENT** crashes on the road.

#### Prepare

##### Maintain Your Car:

Check battery and tire tread.

Keep your windows clear, put no-freeze fluid in the washer reservoir, check your antifreeze.

##### Have On Hand:

Flashlight, jumper cables, abrasive material (sand, kitty litter, even floor mats), shovel, snow brush and ice scraper, warning devices (like flares) and blankets

**For long trips, add** food and water, medication and cell phone.

**Stopped or Stalled?** Stay with your car, don't over exert, put bright markers on antenna or windows and shine dome light, and, if you run your car, clear exhaust pipe and run it just enough to stay warm.

##### Plan Your Route:

Allow plenty of time (check the weather and leave early if necessary), be familiar with the maps and directions, and let others know your route and arrival time.

##### Practice Cold Weather Driving!

\* During daylight, rehearse maneuvers slowly on the ice or snow in an empty lot.

\* Steer into a skid.

\* Know what your brakes will do: *stomp on antilock brake, pump non-antilock brakes.*

\* Stopping distances are longer on water-covered ice and ice.

\* Don't idle for a long time with the windows up or in an enclosed space.

#### Protect Yourself

\* Buckle up and use child safety seats properly.

\* Never place a rear-facing infant seat in front of an air bag.

\* Children 12 and under are much safer in the back seat.

\* Sit back 10 inches from an air bag.

#### Prevent Crashes

\* Drugs and alcohol never mix with driving.

\* Slow down and increase distances between cars.

\* Keep your eyes open for pedestrians walking in the road.

\* Avoid fatigue – Get plenty of rest before the trip, stop at least every three hours, and rotate drivers if possible. \* Slow down

Sources:

U.S. Department of Transportation  
National Highway Traffic Safety Administration  
[www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)

## WHY DO WE NEED A BLOODBORNE PATHOGENS PROGRAM AT UIC?

### Historical Perspective

Blood has long been recognized as a potential source of pathogenic microorganisms that present a risk to individuals who are exposed during the performance of their duties. Organisms of particular interest in a clinical setting are those causing hepatitis and acquired immunodeficiency syndrome (AIDS). The risk of acquiring an infection has to do with the prevalence of diseases in the patient population at large. For example, an estimated 1.25 million people in the U.S. are chronically infected with Hepatitis B Virus (HBV) and 5,000 die each year from HBV-related liver disease. Hepatitis C Virus (HCV) also is a major cause of chronic liver disease worldwide. In 1997, there were an estimated 4 million people in the U.S. infected with HCV. As many as 85 percent of all HCV-infected persons develop chronic hepatitis and are at increased risk for cirrhosis and primary hepatocellular carcinoma. Liver failure from HCV is the leading reason for liver transplants in the U.S. In 2006, more than 1 million persons are living in the U.S. with Human Immunodeficiency Virus (HIV) infections. Approximately, 25% of these individuals are unaware of their HIV infection. It is estimated that there will be 40,000 new HIV infections this year.

Although it is well known that some patients can be identified as infected with HIV or HBV which allows employees to be alerted to the increased risks present, it has become apparent that many individuals infected with these viruses are either undiagnosed or their infection status is not known to the healthcare employee. Patients being treated for unrelated injuries or illnesses, dental patients, trauma victims, and blood donors are all examples of individuals whose infection status might not be known and whose blood could present a risk to the employees who came in contact with it. The possibility of undiagnosed infection combined with the increasing prevalence of HIV and HBV led the Centers for Disease Control and Prevention (CDC) to

recommend that blood and certain other body fluids from all patients be considered potentially infectious and that rigorous infection control precautions be taken to minimize the risk of exposure. The approach was the basis for the development of "Universal Precautions," a set of infection control guidelines designed to protect workers from exposure to diseases spread by blood and body fluids. The CDC published their recommendations in August 1987.

The CDC approach laid the groundwork for the Occupational Safety and Health Administration (OSHA) to develop a more comprehensive strategy for protecting workers at risk for exposure to blood and other potentially infectious materials. OSHA believed it needed to put forth a set of instructions that would outline how an institution could provide protection to employees. In 1991, OSHA published the Occupational Exposure to Bloodborne Pathogens Standard in the *Federal Register*. In the development of the Standard, OSHA carefully considered comments and testimony from interested parties, numerous reference works, journal articles, and other data.

It was important to OSHA that the Standard applied to all occupational groups that were at risk of exposure to blood and other potentially infectious material. The hazard affects employees in many types of employment and is not restricted to the healthcare industry. The risk of infection with bloodborne pathogens is dependent on the likelihood of exposure to blood or other potentially infectious materials wherever that exposure occurs. A single exposure incident can result in infection and subsequent illness and in some cases, death.

### UIC's Bloodborne Pathogens Policy

UIC is committed to providing a safe and healthful work environment for the entire staff. In pursuit of this goal, the Environmental Health and Safety Office (EHSO) developed an Exposure Control Plan (ECP) to provide for the elimination

or minimization of occupational exposures to bloodborne pathogens in accordance with **OSHA Standard 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens."**

Employees who are determined to have an occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP. An occupational exposure is de-



defined as "reasonably anticipated skin, eye, mucous membrane or parenteral (needlestick) contact with blood or other potentially infectious materials that results from an employee's duties."

An employee's exposure determination is based on a description of their duties. Individuals who have routine (healthcare workers) or occasional (first aid team member) exposures to blood or other potentially infectious materials must comply with the ECP. Individuals whose performance and tasks do not expose them to blood or OPIM such as office support staff are not required to participate in the bloodborne pathogens program as a condition of their employment. A facility service staff member who handles potentially infectious waste would be an example of someone who is required to follow the ECP.

### The Bloodborne Pathogens Standard

"Bloodborne Pathogens" are pathogenic microorganisms that are present in human blood that can infect and cause disease in persons who are exposed to blood containing pathogens. Examples of bloodborne pathogens include HBV and HIV.

In March 1992, under the *Code of the Federal Regulations* (29 CFR 1910.1030), OSHA mandated that the Bloodborne Pathogens Standard would take effect.

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## Bloodborne Pathogens Program: continued from page 4



The Standard contained provisions for developing an exposure control plan<sup>(1)</sup>, instituting engineering and work practice controls, a provision for hepatitis B vaccinations, and requirements for hazard communication, training, and recordkeeping. The Standard also imposed requirements on employers of workers who may be exposed to blood or other potentially infectious materials and outlined individual employee responsibilities.

### Needlestick Safety & Prevention Act

Even though institutions that had implemented the Bloodborne Pathogens Standard had significantly reduced the risk that workers would contract a bloodborne disease in the course of their work, exposure to bloodborne pathogens from accidental sharps injuries such as syringe needles sticks, continues to be a serious problem in health care settings. The CDC estimates that up to 800,000 needlesticks are occurring each year in the U.S. Needlestick injuries account for up to 80 percent of the accidental exposures to blood. The injuries occur when employees dispose of needles, collect and dispose of materials used during patient care procedures, during the administration of injections, drawing of blood, or handling trash or dirty linens where needles have been inappropriately discarded. More

than 20 different pathogens have been reportedly transmitted from needlesticks. The most serious transmissions are Hepatitis C, Hepatitis B, and HIV. In fact, the risk of acquiring HBV or HCV from a contaminated needlestick has turned out to be greater than for HIV.

In response to this growing concern, Congress enacted an amendment to the Bloodborne Pathogens Standard entitled the Needlestick Safety and Prevention Act. The revised Standard was instituted in 2001 and clarified the need for employers to select safer needle devices and to involve employees in identifying and choosing these devices. The updated Standard also required employers to maintain a log of injuries from contaminated sharps.

### Employee Training

All employees who have occupational exposure to bloodborne pathogens should receive initial and annual refresher training. The training includes: a description of the Standard, an overview of the epidemiology, symptoms, and transmission of bloodborne pathogen diseases; an explanation of the use and limitations of engineering controls, work practices, personal protective equipment; a discussion of the types, uses, location, removal, handling, decontamination, and disposal of potentially infectious materials; an overview of the Hepatitis B vaccination; procedures to follow if an exposure incident occurs, including the method of reporting the in-

cident and the medical follow-up that will be made available; and an opportunity for interactive questions and answers with the person conducting the training session.

For more information about UIC's Bloodborne Pathogens training program go to the EHSO website <http://www.uic.edu/depts/envh> or contact Paul Umbeck, Sr. Biological Safety Specialist 3-8732.



To obtain more information about the Bloodborne Pathogens Standard & Needlestick Prevention go to <http://www.osha.gov/SLTC/bloodbornepathogens/index.html>.

<sup>1</sup> The Exposure Control Plan (ECP) is a written document developed by the employer that explains how the Standard will be implemented, how training is provided to employees, and the way employee's health and safety will be protected. At UIC, the ECP is a key document to implementing and ensuring compliance with the Standard, thereby protecting the University's employees.

## Profile, continued from page 1

Mike's trails always leads to the Medical Center where he often teaches the bi-weekly OHSA class and prepares the hospital for Joint Commission on Accreditation of Healthcare Organizations (JCAHO) inspections. It's not an aberrant day to see Mike following up on building odor calls, air circulation issues, and the occasional fire code violation. Considering the abundant knowledge Mike possess, many issues related to safety on campus are consulted with him. Asking Mike about his pet peeve, he responded by saying, "My pet peeve definitely has to be when someone knows the right thing to do and yet does not do it." This timeless viewpoint is a key center piece of a greater philosophy of keeping people safe in the workplace and at home. As the day ends you can find Mike using this philosophy to help others on campus and more importantly as a friend you can rely on.

When Mike retires from the UIC community this summer and takes the magical road of retirement to his newly finished log cabin home in Wisconsin he leaves behind a better institution than he arrived. As he grew to know his surroundings and his colleagues, he acquired an attitude for improvement and achievement. This mind-set helped to ameliorate the department, the medical center, and UIC. Hopefully this legacy of dedication and improvement continues after he leaves. As everyone who knows Mike and appreciates his valiant persona, we will all come to miss Mike and thank him for his time, efforts and his teachings.





## Do you know what's inside your laboratory?

Every day thousands of American researchers work with or around many carcinogens and reproductive toxins. Although the majority of the scientific community is astute with precautions concerning their health and well being, there is concern for researchers who consistently work with carcinogens and those who lack the specific knowledge to identify these dangerous compounds. The lists below are an abridged version of carcinogens and reproductive toxins known to cause cancer and reproductive harm. You can also find a list of these chemicals in UIC's Chemical Hygiene Plan. It should be taken into consideration that there are many chemicals, radioactive materials and biological hazards that may cause cancer or reproductive harm. Yet their MSDS (material safety data sheets) are limited by research. Most MSDS contain disclaimers or warranty information at the end of the report. So remember to practice safe science; it's your life at risk.

### Female Reproductive Toxins

Amitrole  
Ethylene Glycol Ethers  
Benzene  
Phenol  
Ionizing Radiation  
(x-rays and gamma rays)  
Beryllium compounds  
Tetrachloroethylene  
Tetrachloromethane  
Propylene oxide  
4-aminodiphenyl  
Arsenic  
Vinyl Chlorides  
Chloroethylene  
Chloroform  
Chloromethyl methyl ether  
Lead

### Male Reproductive Toxins

1,2-Dinitrobenzene  
Ethylene Glycol Ethers  
Benzene  
Phenol  
Radiation  
Sodium Fluoroacetate  
Beryllium compounds  
Cadmium compounds  
Chlordecone  
Chromate compounds  
Ethylene dibromide  
Arsenic  
Perchloroethylene  
Chloroform  
hexamethylphosphoramide  
Lead

### Carcinogens

#### *General Known Compound Groups*

dinitrotoluenes, arsenic and inorganic arsenic compounds  
crystalline forms of silica  
aniline and homologs, chromates  
Beryllium compounds  
Cadmium compounds

#### *Known and Suspected Compounds*

2-Naphthylamine  
Cyclophosphamide  
Thorium Dioxide  
Dichloroethylene  
Dimethyl sulfate  
Chloroform

For further information regarding reproductive hazards and carcinogens please consult the following websites. References 1,2,3,4.

### Safety Links

1. Centers for Disease Control and Prevention (CDC): [www.cdc.gov](http://www.cdc.gov)
2. United States Environmental Protection Agency (USEPA): [www.epa.gov](http://www.epa.gov)
3. Illinois Emergency Management Agency (IEMA): [www.state.il.us/iema](http://www.state.il.us/iema)

### References

1. Registry of Toxic Effects of Chemical Substances. U.S. Department of Health and Human Services, Public Health Service, National Institute for Occupational Safety and Health. Available from the Superintendent of Documents. Washington, DC, US Printing Office, 2005.
2. NIOSH; National Occupational Exposure Survey; 1981-1983.
3. U.S. Environmental Protection Agency, Office of Toxic Substances; Chemical Substance Inventory. EPA Publication 620-929/0027, 1985. Supplement EPA Publication 722-666, 1990, Washington, DC.
4. Nelson BK. 1989. Developmental and reproductive hazards: an overview of adverse outcomes from industrial and environmental exposures. *Pharmacopsychocologia* 2: 1-12.
5. Almeida Cartoons, "Do you mind?", [www.almeidacartoons.com/safe\\_toon1.html](http://www.almeidacartoons.com/safe_toon1.html) 2007.

## Fire Safety

According to the US Fire Administration (USFA), each year more than 4,000 Americans die and approximately 20,000 are injured in fires, many of which could be prevented. Although prevention is the key, it is just as important to understand what you should do if you ever encounter a fire. Here at UIC we follow and promote the RACE and PASS procedures when there is a fire. **RACE** stands for:

If you discover or suspect a fire:

- **R**escue anyone in immediate danger of the fire.
- **A**ctivate the nearest fire alarm pull station (in buildings not equipped with interior fire alarm, give vocal warnings to occupants) and call 6-FIRE on campus phone (312-996-FIRE on outside phone).
- **C**onfine the fire by closing doors (do not lock) and windows.
- **E**vacuate to an area of refuge.

You should know:

- the location of alarm boxes and the nearest emergency exit.
- the location of fire extinguishers and their use.
- the name and number of the building you are in.



**PASS** stands for:

Here's how you work a portable fire extinguisher:

- **P**ull. The pin, release a lock latch, or press a puncture lever.
- **A**im the extinguisher nozzle, horn, or hose at the base of the fire.
- **S**queeze or press the handle
- **S**weep from side to side in most cases, but extinguishing techniques

Questions/situations regarding fire safety should be brought to the attention of the Environmental Health and Safety Office, ext. 3-3706

**Environmental Health and Safety Office**  
**Clinical Sciences North, Room 339**  
**820 S. Wood St. (MC 932)**  
**Chicago, IL 60612-7314**

**Radiation Safety Section 312-996-7429**  
**Health and Safety Section 312-996-7411**  
**Emergency: 312-966-7233 (6-SAFE)**



Almeida Cartoons:  
[www.almeidacartoons.com/Safe\\_toons1.html](http://www.almeidacartoons.com/Safe_toons1.html)