



# n o t e s

<http://ehs.missouri.edu/index.html>

E N V I R O N M E N T A L H E A L T H a n d S A F E T Y

## Avoid Heat Related Illness

Summer will soon be upon us and so will the heat. While many of us work indoors, a large number of MU employees must brave the hot Missouri summer. People who work in excessive heat conditions need to take precautions to avoid heat related illness. It can be a matter of life and death.

There are different types of heat related illnesses and it is important to recognize how they are different. Heat cramps are the least severe and involve muscle spasms, usually in the legs and abdomen. These painful spasms usually occur when a person is working or exercising heavily in a hot environment. People suffering from heat cramps should be moved to a cool place and given cool water to drink. Stretching and gentle massaging the affected areas may also relieve symptoms.

Of more importance is heat exhaustion, which involves profuse sweating, flushed or pale ashen skin, headache, nausea, dizziness, weakness, exhaustion and generally normal body temperature. Heat exhaustion requires prompt attention; otherwise, it can develop into more serious heat stroke. Care for victims of heat exhaustion begins with placing them in a cooler environment. Cooling can be enhanced by loosening or removing clothing, increasing air circulation, or applying cool cloths. If the person

is conscious, they should also sip cool water. If the person's condition does not improve, call 9-1-1 for medical help.

The most severe form of heat related illness is heat stroke. Heat stroke is always life threatening and should be treated as a medical emergency. Heat stroke is a condition where the body loses its ability to cool itself. When a person is experiencing heat stroke their body temperature climbs uncontrollably. They may stop sweating, develop redness in their skin, and have difficulty breathing. If you see someone exhibiting signs of heat stroke, call 9-1-1 immediately and cool the person by any means available while emergency workers are in route. For more information, check out the following MU resources:

EHS Web Site

<http://ehs.missouri.edu/work/heat-stress.html>

MU Extension

<http://extension.missouri.edu/publications/DisplayPub.aspx?P=Gh1900>

MissouriFamilies.org

<http://missourifamilies.org/FEATURES/nutritionarticles/nut34.htm>

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## MSDSonline® Updated

Material Safety Data Sheets (MSDSs), as conceived by OSHA, are documents designed to inform workers about the hazards of chemicals and chemical-containing products. Generally MSDSs are updated when better or more recent information becomes available. Traditionally departments kept physical copies in 3-ring binders but soon discovered the difficulty in maintaining the latest version. As we move to a paperless world, users of chemicals have two main options for MSDSs to meet the regulatory requirement of “readily accessible”. For labs that use chemicals only from major suppliers like Fisher, Sigma-Aldrich and Mallinckrodt Baker, having quick access to the internet should suffice. (Be sure to take the time to familiarize yourself with the locations of MSDSs on your supplier’s web site, so that you can obtain an MSDS quickly in an emergency.) For locations such as the skilled trades or medical facilities that use more commercial or specialized materials, with subtle differences in naming or numbering, EHS sponsors use of a commercial product called MSDSonline®. The product retains the concept of keeping binders of MSDSs but automates the process of making sure the most recent MSDSs are available when you open your electronic binder.

At the beginning of the year, EHS deployed a major update to MSDSonline® – now containing a single search field like Google or Bing. If you tried MSDSonline® when it was first launched in 2008 but found it confusing – I suggest you give it a second look. MSDSonline® uses the concept of an electronic binder (or eBinder) to store the MSDS you use most, while also providing access to an extensive database of additional MSDSs. Full use of the product does require the commitment of a departmental contact who

will take the time to set up the department’s eBinder with MSDSs of the products you use and update it with new products. But once the MSDS is in your eBinder, the system will keep your eBinder updated with the most recent version of each MSDS. MSDSonline® can also be used as a secondary source to obtain an MSDS either for safety information or in an emergency.

Our main MSDS web page (<http://ehs.missouri.edu/chem/msds.html>) is ideal to bookmark for electronic MSDS access either through major manufacturers or the use of MSDSonline®. It also provides more information about MSDSs and their management. As always, EHS is here to assist in providing a safe and healthful environment.

**Todd Houts**  
Assistant Director, EHS

## Radiation Safety in Laboratories

There are several tools available to ensure laboratory safety is maintained for radioactive materials and other sources of ionizing radiation. Fortunately, these tools are well known and easy to use. Radiation safety in laboratories boils down to giving appropriate attention to the use of these tools.

The easiest tools for maintaining radiation safety in a laboratory is utilizing the three golden rules of ALARA (As Low As Reasonably Achievable) which are:

- Minimizing your Time,
- Maximizing your Distance, and
- Maximizing Shielding around radiation emitting sources.

## Radiation Safety Cont.

Another tool when working with radioactive materials is the consistent use of appropriate radiation survey instrumentation for personal surveys of hands and feet. Performing deliberate and frequent surveys of your lab spaces, equipment, and persons while (or after) working with radioactive materials is one of the best ways to maintain proper laboratory radiation safety in your lab, and prevent the spread of any unwanted contamination.

Finally, for those of you who work with RAM (or X-Rays) and are monitored using dosimeters, ensure you wear the dosimeter(s) issued to you when around ionizing radiation, that it is worn correctly, and that it is returned when it is due so accurate records of your exposure can be determined.

**Jack Crawford**  
Radiation Safety Officer

## Tell An Animal Care Staff Member “Thanks”!

Did you know the week of January 29-February 4, 2012 was International Laboratory Animal Technician Week? I know what you are thinking, you didn't know and that was weeks ago. But just because it passed by, doesn't mean you can't take a few moments to say “Thank you” to MU's Animal Care Staff.

But what's the best way to say “Thank you”? It doesn't have to be a card. It doesn't have to be lunch. It doesn't even have to be a pricey gift. A simple “Thank you” is a good way to go but there are other possibilities. I talk with MU Animal Care Staff almost weekly and the number one wish I hear most, is how they would love to hear how the animals they care for help MU research. Tell an Animal Care Staff Member how

your research is going. I am very fortunate to talk with MU Investigators and research lab staff and I am always interested in their discoveries. Animal Care Staff are an important part of research activities, and are frequently unaware of what their day-to-day efforts are assisting. Here are other suggestions to “Thank” Animal Care Staff:

- If you are telling faculty and other staff how your research is going; don't forget to tell an Animal Care Staff Member as well. You don't have to give them all the details but give them the high notes that you can share. Tell them how important their work is to your research.
- Tell them if you see something they've done really well or tell them if there are supplies running out in a room—this can help open up the lines of communication. As I walk through facilities I can see the remnants of very busy animal research rooms: filled sharps containers and filled biohazard boxes. Take a moment to communicate what you see and tell an Animal Care Staff Member.
- If you are a Principal Investigator and you haven't been through the animal facility in a while or if you have a visiting researcher, how about asking for a tour of the animal facility?

Given the number of research animals on the MU campus and the small number of Animal Care Staff who support the animal facilities, these staff are very busy. It obviously takes a great deal of organization and commitment to manage the feeding, watering, cage changing/cleaning and general care of the research animals. Let Animal Care Staff know they are a part of a larger picture and know they've made a real difference. It will make their day!

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## Helping Someone Experiencing a Seizure

Seizures can happen without warning. They can be caused by a number of reasons including low blood sugar, a head injury, poisoning, or a heat related emergency. During a seizure a person may not be able to respond if you ask them what is wrong. They may fall to the ground, lose muscle control, and have jerking movements.

### ***As with any medical emergency, call 9-1-1!***

If the person has a medical condition which is accompanied by chronic seizures, such as epilepsy or other conditions, they may give you instructions prior to a seizure on what to do if they experience one in your presence. Call 9-1-1 immediately if the seizure last longer than five minutes, the person has multiple seizures, the person is pregnant or diabetic, the person appears to be injured, the seizure follows a quick rise in the person's temperature, or the person fails to regain consciousness. These are medical

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emergencies and the person's life is at risk.

While difficult to watch, seizures typically only last a few minutes. During that time keep the person safe by placing a thin cushion such as a folded up jacket under their head, removing nearby objects that the person may hit during the seizure, and prevent them from falling down stairs. **DO NOT** try to hold the person still or place something in their mouth.

After the seizure the person will typically start breathing normally. They may be confused or embarrassed. Stay with the person until they are fully conscious and aware of their surroundings, or until help arrives. At this point they may need treatment for any injuries which occurred during the seizure.

As with any medical emergency, it is important to remain calm and be reassuring and comforting to the person experiencing the emergency. For more information on how to perform first aid for someone experiencing a seizure you can attend a first aid class through your local American Heart Association or local American Red Cross - Disaster Services office.

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