

“New” Muscles

Jim Gindlesperger

Now that the weather is improving many of us will be getting outside more often. Some will do it as a matter of routine, others will do it to work off those extra pounds we tend to put on over the winter months. Whatever the reason, don't forget that you may be asking your body to do things that it hasn't done for several months.

If you have been relatively active over the winter (and didn't we all say last fall that we were going to do that?) you shouldn't have much of a problem moving into an active summer lifestyle. But if you fell into the couch potato routine, you are going to have to be careful in how you approach your new activities.

Some of us may be starting a walking or jogging regimen, or maybe a biking program. Others may take up gardening, or coaching a Little League team. All of these are great exercises, but if your body isn't ready for this kind of work load, you will soon be so uncomfortable that you will quickly fall out of the routine. Obviously, the benefits will be quickly lost as well.

If you have been inactive over the winter, it is important that you check with your doctor before beginning your new routine. Once approved, acclimate yourself by starting out slowly and building up gradually. Stretching is always beneficial, and it should be done both before and after exercising. Many experts believe that the post-exercise stretch may even help more than stretching before activity, because the muscles and tendons have warmed up and are more flexible.

Whatever activity you choose to take part in this summer, do it the right way. You will enjoy it much more and you will get more benefit from it. And your body will definitely thank you!

Meetings as a Vehicle to Discuss Safety

Andrew Lawson

Many of us have weekly or biweekly meetings to discuss various issues within each of our respective departments. Some of the issues discussed in these meetings include budgets, future goals and

objectives, new University policies, as well as various other topics that relate to or effect our respective departments. One thing that may be overlooked and not discussed in these meetings however, is safety. For those of you who work in laboratories, animal care facilities, labor shops, etc., safety is an essential and critical issue and special care and attention should be given to it. Department heads, principal investigators, and supervisors, can develop a positive safety culture as well as illustrate that safety starts at the top by practicing safety and discussing safety with staff members. So why not take 10-15 minutes during every meeting to discuss safety with your staff? Discuss safety issues that relate to the type of work or activities being conducted in your department and involve staff members in these discussions. The possibilities and benefits of taking time to discuss safety are endless.

Did you know . . .

Jim Gindlesperger

A recent study showed that an estimated 200 million people used cell phones in December 2005. This compares with 4.3 million in 1990, according to the Cellular Telecommunications & Internet Association.

A similar study showed that using a cell phone while driving quadrupled your chances of an accident. This was true for both hand-held and hands-free phones. The moral? Don't use your cell phone while driving, even if you have a hands-free device.

Household Hazardous Waste Disposal

Mark Banister

Again this year the Pennsylvania Department of Environmental Protection is sponsoring a Household Hazardous Waste collection event in Allegheny County. This is an excellent opportunity to help rid your home of hazardous materials that may have accumulated over the years, and to do it in a safe and environmentally friendly manner. This is the only currently scheduled event for Allegheny County for 2006.

The event will be Saturday, April 29th at Settlers Cabin Park, located about 8 miles west of the Fort Pitt Tunnels, off of I-279.

There is a brown sign at the appropriate interchange indicating the park.

Please go to this link from the Carnegie Mellon Green Practices web page for details on the exact location and times of the event, details of what materials are accepted, and the fees involved.

<http://www.cmu.edu/greenpractices/hhw.htm>

To Reach Us

Telephone: 268-8182

Fax 268-7871

Web: <http://www.cmu.edu/ehs>

Offices: FMS Bldg., 3rd floor

Exposure to Lab Air Contaminants

Jeffrey Harris

Air contaminants are often classified on the basis of physiological action. These include: Irritants, Asphyxiants, Narcotics or Anesthetics, and Other Contaminants. Physiological responses to contaminants depend on dose and duration of exposure.

1) **Irritants** aggravate any tissue the material comes in contact with. Many chemicals are not truly toxic, because they do not produce irreversible damage, but they can still irritate tissue at very low concentrations. Irritants are grouped according to their site of action and include: Upper Respiratory Tract, Upper Respiratory Tract and Lung Tissue, Primarily Terminal Respiratory Passages, and Secondary Irritants. Secondary irritants produce action on mucous membranes. Normally, irritation is completely reversible. Common examples found in the lab include formaldehyde, nitrogen dioxide and sulfur dioxide.

2) **Asphyxiants** interfere with oxygenation, and victims may literally suffocate. There are generally two types: **Simple and Chemical Asphyxiants**. Simple asphyxiants are physiologically inert gases that dilute or displace atmospheric oxygen below levels sufficient for normal respiration. Common examples of simple asphyxiants found in the lab include nitrogen, carbon dioxide, methane and helium. Chemical asphyxiants prevent the uptake of oxygen by the blood or interfere

Lifeline Your Safety Resource

A publication of the Environmental Health & Safety Department

with the transport of oxygen from the lungs to the tissue. Examples of chemical asphyxiants include hydrogen sulfide, carbon monoxide and hydrogen cyanide.

3) **Narcotics and Anesthetics** can produce unconsciousness and may duplicate asphyxiant symptoms. Narcotics and anesthetics affect the central nervous system, and large doses can produce serious systemic effects. Examples found in the lab include nearly all organic solvents, acetone, alcohol, ethers and chloroform.

4) Other Contaminants may also affect the body upon exposure. **Cardiac Sensitizers**, such as chloroform and cyclopropane, make the heart abnormally sensitive to epinephrine. **Neurotoxic Agents** (e.g., mercury or organic phosphate) produce toxic effects on the nervous system. **Dusts** less than one or two micrometers in diameter can produce adverse reactions if they reach the deep lungs.

Controlling these hazards is important. Your chemical fume hood or exhaust ventilation is your primary tool to control exposure. Equally important is your Standard Operating Procedures (SOP's) for working with these contaminants. Contact EH&S for questions or help (8-8182).

Congratulations!

Jim Gindlesperger

Another member of the EH&S staff, Jeff Harris, has obtained his professional certification. Jeff recently learned that he has passed the examination for Chemical Hygiene Officer. Join us in congratulating Jeff on his accomplishment.

We Need Your Help!

Jim Gindlesperger

In a recent audit by our insurance carrier three problems were noted. First, some departments are using their own internal injury reports. It is essential that we all use the same report form. The form on the Human Resources web page is the only recognized form for use. It has been designed with OSHA specifications in mind and contains all the information in the required format. If you don't have this form, it can be downloaded off the HR web site at <http://hr.web.cmu.edu/forms/benefits/SupervisorInjuryReport.pdf>.

The second problem that arose was that even when the correct report form is used, it is not always being completed by the supervisor. The injured person is NOT the person who is to complete the report. The supervisor of the injured person must complete all sections of the report, and those that do not apply should be marked N/A.

The third problem that quickly became apparent was that EH&S is not always included in the distribution of the reports. This was most often the case with the unauthorized departmental reports, but some of the official report forms were not sent to us, either. This report is an important part of our safety program and alerts us to problems we may not otherwise be aware of. It enables us to establish training programs that are meaningful, as well. Finally, we are required to be able to produce these reports if a representative of OSHA or some other governmental body requests them. We can only do this if they have been sent to us in the first instance.

Please help us make our safety program even more effective by making sure injury reports are completed properly, both on the official form and by the supervisor, and that copies are distributed correctly: to Human Resources, to Environmental Health and Safety, and to the Department. Thanks for your help.

Using Formaldehyde Safely

Michael Fouch

At room temperature, formaldehyde is a colorless, flammable gas that has a distinct, pungent smell. It is also known as methanal, methylene oxide, oxymethylene, methylaldehyde, and oxomethane. Commonly used as a preservative in medical laboratories, it can be found in a wide variety of other products. Formaldehyde is found in cigarette smoke and also can be formed in the environment during the burning of fuels or household waste. Very small amounts of formaldehyde are found naturally in the human body. Glues, permanent press fabrics, paper product coatings and plywood all can contain formaldehyde. It is also widely used as an industrial fungicide, germicide, and disinfectant. Everyone is exposed to formaldehyde in air and some foods, products and vaccines.

The term formaldehyde describes various mixtures of formaldehyde, water, and alcohol. The term formalin more precisely describes an aqueous solution that contains 37 to 50 percent formaldehyde and 6 to 15 percent alcohol stabilizer.

Overexposure to formaldehyde can produce an immune system response. It is also suspected to be a human carcinogen, linked to both nasal and lung cancer. Acute exposure can be highly irritating to eyes, nose, and throat. It is possible that subsequent exposures may cause a severe allergic reaction. Long term exposure to low levels of formaldehyde in the air can cause asthma-like respiratory problems and skin irritation such as dermatitis and itching. Concentrations in the air to 100 ppm are considered immediately dangerous to life.

Exposure to formaldehyde can occur by breathing the gas or vapor. Formaldehyde can also be absorbed through the skin.

You can protect yourself by always using formaldehyde in a properly working chemical fume hood. Make sure you always wear gloves, aprons and chemical splash goggles to prevent contact with the skin. Report any symptoms, such as skin irritation or asthma-like respiratory problems immediately to your supervisor when working with formaldehyde.

Interesting Fact

Jim Gindlesperger

The National Safety Council tells us that off-the-job injuries to workers cost the nation at least \$193.6 billion in 2004 compared to \$142.2 billion for workplace injuries. Remember: Safety doesn't stop when you leave the job.