ENVIRONMENTAL HEALTH AND SAFETY

Lab Chatter

UNE UNIVERSITY OF NEW ENGLAND

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Safety Spotlight

Lab Safety Shout Out!

The Macroalgae Nursery and Research Cluster gets this month's safety shout out! This particular lab in the Arthur P. Gerard Marine Science Center had several very large and sharp knives used for marine animal dissections. Without being directed to do so, the lab decided it would be much safer to store the knives in plastic sheathing to protect workers from accidentally cutting themselves on the knives. It's these subtle safety initiatives that create a positive safety culture and prevent injuries. Good job and keep up the great work!

REMINDER TO ALL LABS:

Please remember to label all of your edible household products that are strictly for laboratory use as:
"NOT FOR HUMAN CONSUMPTION" or "LAB USE ONLY".
This includes but is not limited to:

- Baking powder and baking soda
- Vegetable oil, corn oil, canola oil, etc.
- Aspirin, Tums, and other over the counter medications
- Soda bottles, water bottles, etc.
- Table salt, sugar products, etc.

These items can be labeled using a label printer or you can write on them with a marker or sharpie as long as the text is legible and easily visible on the product.

**All ice machines in labs should also be labeled
"NOT FOR HUMAN CONSUMPTION".
Larger labels are available through EHS for the ice machines.**

Let's Take the Mystery Out of Training Millennials: Important steps to take and misconceptions to avoid

By Evan Hackel | January 27, 2016 *via LabManager.com*

(Contributed by Jessica Tyre)

"What are the most effective ways to train millennials?" is probably the question that training professionals hear more often than any other today.

To training professionals who were born before 1980—the year when the first millennials were born—the question can seem mysterious and complex. We look at millennials and see a group of young people who seem addicted to texting on their phones, who sometimes seem skeptical about the lessons we want to teach them, and who are prone to changing jobs frequently.

That's what we see, or what we think we see. But do those rough observations really reflect who millennials are? Do they offer useful insights on how millennials should be trained?

The answer is, not really. So let's decode the millennial mindset more strategically and see what we can learn about how to train them effectively.

Meet the Millennial Cohort

The so-called millennial generation (also called "Generation Y") includes people born between 1980 and 1998. Many older millennials, now in their early to mid-30s, are already established in their careers. Chances are that a number of them are already working throughout the ranks of your organization. They have already taken part in your training, maybe even designed parts of your training, and chances are very good that you already understand their learning preferences better than you expect. Another factor to consider is that some of the millennials who work for you are currently training your other millennials. So while you think you don't know or understand them at all, you probably do.

Key Traits of Younger Millennials

Let's focus on younger working millennials—those born between about 1990 and 1995. Chances are they are the group that is causing you to feel the most uncertainty regarding training. Millennials born between those years are the younger workers who might be applying for their first "real" post-college jobs with your organization right now. They're young and fresh-faced. If you're a generation or two older than they are, it could be that you've hit some roadblocks when creating training programs that work well for them.

Although generalizations tend to be flawed, here are some attitudes that training professionals have found to be shared by significant members of this cohort.

- **An entrepreneurial mindset** – They want to stake out a business identity and space for themselves, even in larger companies.
- **Risk tolerance** – Many are self-confident, able to take risks, and willing to help their employers take chances too.
- **A love of technology** – They tend to be highly mobile and like to access information and training on smartphones and tablets.
- **Social consciousness** – They tend to be compassionate and respond positively to working for companies that embrace and support social causes and "do good in the world."
- **Openness** – Many welcome being part of diverse workforces. Furthermore, they are more welcoming of alternative lifestyles than preceding generations were.
- **Career mobility** – Your assumptions that millennials are job-hoppers could be correct. Many do not hesitate to change jobs as a way to achieve personal goals and success.

Critical Steps to Take when Training Millennials

Here are some ways to make your training more compelling and effective with younger millennial workers:

1. Deliver lessons and modules in short "digestible" chunks that millennials can absorb quickly. They are generally fast-moving and can tune out as soon as training seems irrelevant.
2. Use animations, videos and other moving images to deliver key concepts. They often work better than words or text to convey important take-away concepts to millennials.
3. Deliver training on platforms that millennials prefer and already use, including smartphones and tablets. Remember, millennials grew up using mobile devices.
4. Ask for their ideas and suggestions before and during training, because millennials think like entrepreneurs, value autonomy, and like to shape the content of their jobs.
5. Express your company values in your training. You can explain, for example, that your organization is trying not just to generate profits, but to support employees and do good in the world. When younger millennials see that their work supports those objectives, they are more likely to believe in company leaders and initiatives—and more likely to experience levels of satisfaction that make them want to continue working for you in the long term.

Remember that Training Fundamentals Still Apply

Don't let the fact that you are training millennials worry you. Even though they may differ in some ways from your other trainees, the fundamental principles of all good training still apply. That means knowing who your trainees are and what they do, understanding the results that you want to achieve, identifying metrics to measure before and after training and delivering it in empowering and interesting ways. No matter who you are training, those principles still apply. So be brave about training your millennial newcomers, go out, and get the job done.

(Source: www.labmanager.com)

What if?

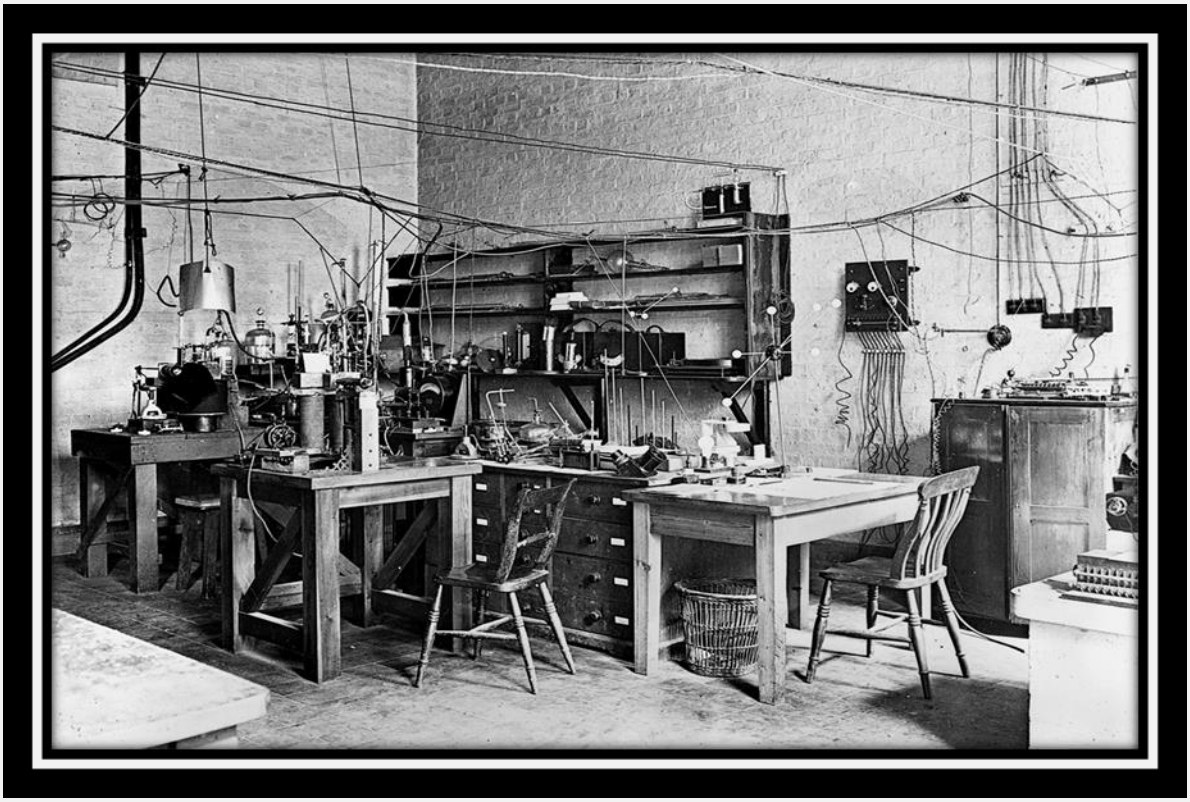
By Ronnie Souza

"What" and "if" are two words as non-threatening as words can be. But put them together side by side and they have the power to haunt you the rest of your life.

What if? **What if?** **What if?**

What if you were a student or faculty member in laboratories like the ones below in the early 1900's?

And what if we never had rules and regulations from OSHA, NIH, CDC or the EPA?



Back then…

What if you had a fire in your laboratory?

What if you spilled a hazardous chemical on you?

What if you needed a flammable storage cabinet?

What if you needed hazard information about the chemical you were working with?

What if you generated hazardous waste? Would you even know you had hazardous waste?

What if you were working with toxic vapors and needed a fume hood, and laboratory ventilation?

What if you needed a drink of water or a beverage?

Try to imagine how unsafe our safe laboratories would be to work in.

The rules and regulations set forth by governing agencies in regards to lab safety are there to protect us and eliminate all the “what ifs” in the lab environment. Our predecessors have made those mistakes and those sacrifices so we don’t have to.

Mindfulness in the workplace

By Jessica Tyre

In case you have not heard the term before, the definition of **mindfulness** is: a mental state achieved by focusing one's awareness on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and bodily sensations, used as a therapeutic technique. Being mindful in the workplace during our activities and tasks can be very beneficial for productivity, employee interactions, injury reduction and risk prevention. It is a proactive approach to how we live and function that enhances our well-being and overall mental, emotional and physical health. Studies have shown that persistent and intensive demands can result in cognitive slow-down/shut-down, depletion of working memory capacity, emotional disturbance, and physiological declines. Mindfulness can reduce negative effects from anxiety, stress, and depression that are all too common in today's work force.

How does mindfulness improve employee performance at work?

Improves FOCUS:

- Helps to focus the employee on the job at hand
- Reduces outside distractions
- "One task at a time" mentality
- Focus on the moment and take a step back from a situation and do a 3-center check in: body, mind, emotions and then return to the situation (see below)

Improves SAFETY:

- If your mind is not wandering you are more focused on the job and there is less chance of an injury
- You will be focused on the task at hand and clearly think about what safety precautions should be taken (work smarter not harder) to reduce the chance of injuries

Improves EFFICIENCY:

- Mindfulness has been known to increase efficiency in the work place by reducing distractions and having less stress
- When you are focused on what you are doing you are better at completing tasks and managing your time
- Better mood=more efficient

Improves STRESS REDUCTION:

- Being able to take a step back and simplify tasks and interactions reduces stress, improves mood, and improves physical and emotional health. (3-center check in)

Improves EMPLOYEE INTERACTIONS:

- When you feel better it shows and if you are treating others more positively they are going to feel that and react in a positive way

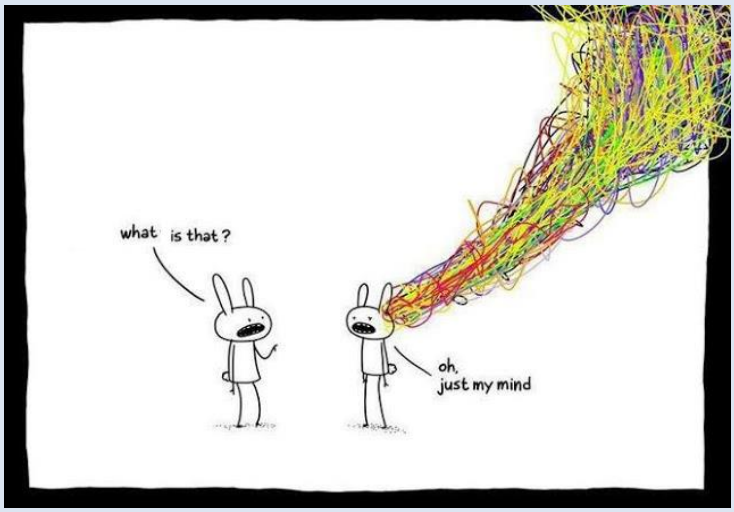
Mindfulness is an investment in yourself and your lifestyle. It takes practice and continuous re-engagement to be successful. It is about focusing on the task at hand and the awareness of what is happening in a specific moment. It is about setting aside distractions and undesirable thoughts or feelings that promote negativity and anxiety. It is a self-assessment that can be done to promote a more desirable outcome to a task or situation. So, how do you practice mindfulness? The first thing you can do is to practice the 3 Center Check-In when you are in a situation that is questionable for you personally or may be causing you stress or anxiety.

Paying Attention
On Purpose
In a Particular Way
In the Present Moment

To practice the 3 center check in:

1. **How is my body feeling right now? What is my body telling me?**
    a. Examples may be: muscle tightness, a clenched jaw, a headache forming, etc.
    b. Solution: Relax your body, think about relaxing your muscles, gently massage your neck or head to relieve some of the physical discomfort, do some light stretching.
2. **What am I thinking right now? Is this the way I want to think?**
    a. Examples may be: I have to pick the kids up; I need to feed the dog; I need to pay the electric bill; the report I am writing is going to be late; somebody thinks something negative about me or my ideas.
    b. Solution: Stop. Clear your mind. Only focus on the task at hand. Once that task is complete move on to the next task and focus. Do not get caught up in the "big picture" of your day when you are trying to accomplish a specific goal in a particular moment.
3. **How do I feel right now? Why am I feeling this way?**
    a. Examples may be: I am afraid; I am anxious; I am worried; I am frustrated.
    b. Solution: Take a moment to figure out why you feel that way and what you can do to alleviate your feelings. Only focus on the feelings involved with the moment at hand and let the other feelings go.

There are many resources available in literature and online if you are more interested in the practice of mindfulness. It is a very simple philosophy that has gotten lost on us in the age of "right now" and instant gratification. There is a lot more stress on the working individual in present time than there has been in the past due to all of our technological advances, societal expectations, and social obligations. Society as a whole needs to stop, take a breath and grab a moment of clarity. Trying to focus on everything in our mind at once is confusing and counter-productive. Clarity breeds creativity, ideas, and self-awareness. In closing, remember, "It's not stress that kills us; it is our reaction to it". –Hans Selye



EYEWASH STATIONS-IMPORTANCE AND SAFETY

By Samantha Hardy

Eyewash stations are designated areas where a student or faculty member can go in the case of an emergency in which chemicals, blood borne pathogens (BBP), or other irritants have entered the eye. When turning it on, it flushes water into the eyes for fifteen minutes, removing most, if not all, of the irritant. These stations are marked off in all labs on campus to prevent serious injury or blindness. The ANSI standard for eyewashes states that they must deliver fluid to the eyes at no less than 1.5 liters per minute for 15 minutes after a single movement. This means that eyewashes must be inspected and functioning properly. A dirty eyewash station could cause even more damage to an already vulnerable eye. Stagnant water in pipes or reserve tanks can lead to the buildup of dangerous pathogens that may enter an injured eye easily. Some examples of pathogens are:

Acanthamoeba- an amoeba that can live in treated water. It is commonly found in mucous membranes like the nose, throat and eyes and usually causes no harm. However, on rare occasions Acanthamoeba can cause a harmful eye infection called Acanthamoeba keratitis. Workers with compromised immune systems have a much higher risk for developing neurological infections like Granulomatous Amoebic Encephalitis or whole body infections. Workers may experience redness of the eyes, pain, tearing, blurred vision, light sensitivity, and eye inflammation several days after the use of a contaminated eyewash station.

Pseudomonas- A bacteria called Pseudomonas aeruginosa that can cause infections to eyes, skin, muscle, lung, and other tissues. This infection can result in green-blue pus in or around the infected area. If this infection spreads through the bloodstream, workers can become very ill, experiencing fevers, chills, confusion, shock, and even death. This bacterium has also developed resistance to many antibiotics, making it harder to treat. This just intensifies the need for eyewash stations to be properly maintained.

Legionella- Bacterium found in nature living with amoeba that may cause a serious lung infection. Acanthamoeba can become hosts for Legionella, meaning they may both be present in contaminated water. These bacteria do not cause eye infections, but can cause Legionnaires' disease, a severe and fatal form of pneumonia, through the inhalation of water droplets containing the bacteria. Workers with compromised immune systems, workers over the age of 55 or those with preexisting lung diseases, such as Chronic Obstructive Pulmonary Diseases (COPD) are more at risk for infection. Symptoms occur 2 to 14 days after exposure and include coughing, breathlessness, high fever, muscle aches, and headaches, often requiring hospitalization.

To prevent these or other serious injury from contaminated eyewashes, the Environmental Health and Safety Department here at UNE requires that all eyewashes be run and inspected weekly. This will prevent buildup of debris on the caps where the water comes out as well as buildup of harmful pathogens in the water. Caps that are removable can be lifted to inspect the sponge inside to ensure that it has not dried out and is still clean. If you have questions or concerns about your eyewash station, contact Peter Nagle: (207) 602-2791 or Jessica Tyre: (207) 602-2046 at the Environmental Health and Safety Department.

Source: https://www.osha.gov/Publications/OSHA3818.pdf

Safety Data Sheet (SDS) Management

By Peter Nagle

OSHA's Hazard Communication Standard requires employers to maintain SDSs for all hazardous chemicals and to ensure that they are readily accessible during all working hours. The standard however does not specify how they should be maintained (e.g. paper or electronic) as long as employees have immediate access to the SDSs. Below is a short summary of guidance provided in an OSHA inspection directive recently published.

Maintenance in electronic format

- OSHA states that the employer must not require employees to perform an internet search (e.g. Google, Yahoo) to view and /or obtain an SDS. The company may make the SDSs available to employees on a company website, contract with an off-site web based SDS service provider or provide them in an electronic file on the company network.

Maintenance of SDSs

- All labs are required by OSHA to maintain SDSs for each hazardous chemical used.
- Must maintain the most recent received version of the SDS.
- Older versions should still be maintained in order to limit future liability under OSHA's Access to Employee Exposure and Medical Records standard.
- If you have the same chemical from different manufacturers, you must have an SDS for each.

Access to SDS

- Employees must have unrestricted access to SDSs. This means the employer cannot require an employee to ask for an SDS (e.g., stored in a locked office or on a supervisor's computer that no one can access).
- Employees must be capable researching chemical hazards without the aid of a supervisor or another employee.

Organization

- OSHA is not concerned with how you organize, but rather, you do organize.
- With electronic systems, organization is not an issue as you can call chemicals by using a variety of criteria (e.g. chemical name, CAS #, or chemical formula).
- Paper collections are more of a challenge; especially if you choose to file alphabetically since many chemicals have several synonyms (e.g. acetone and propanone are synonyms).
- Filing by CAS# would be confusing as most personnel are not familiar with CAS#s.
- OSHA recommends filing SDSs by the name printed on the container label.

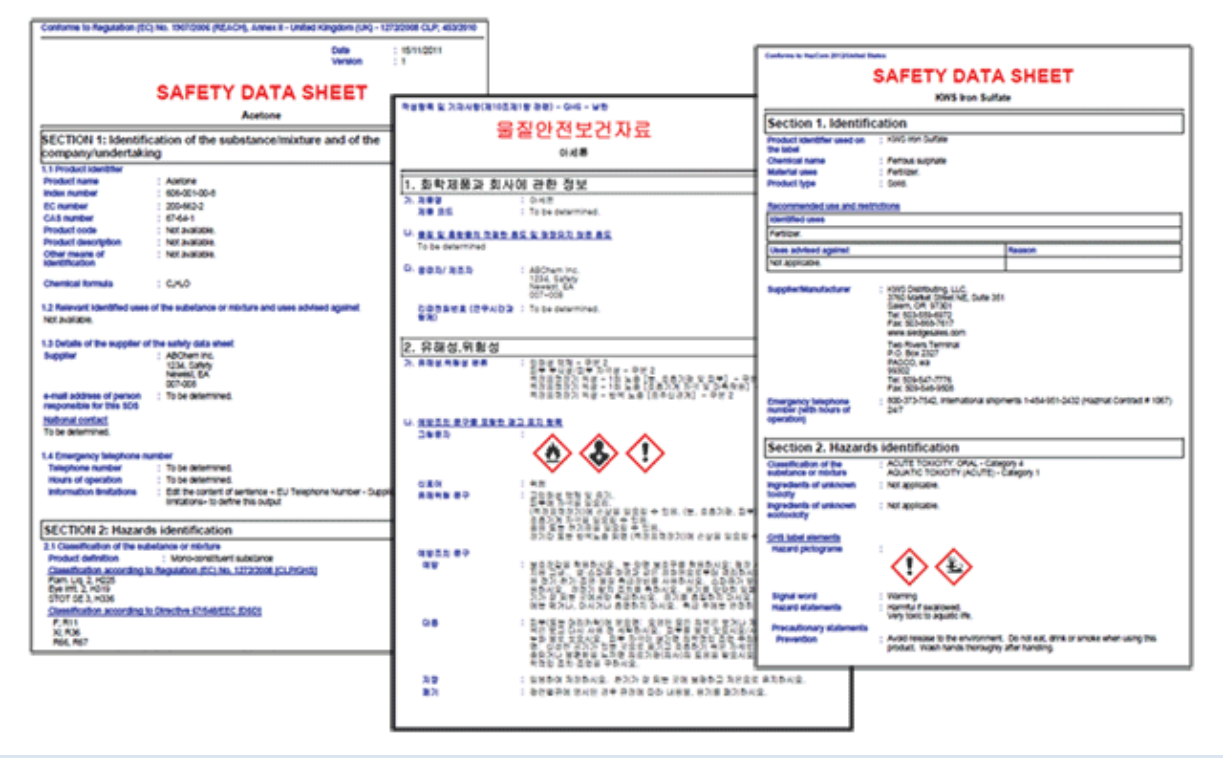
Continued on next page…

Exemptions

- Consumer products
    - When the employer can demonstrate that the product is used for the purpose intended by the manufacturer and the use is not beyond the duration or exposure typically experienced by the typical consumer, an SDS is not required.
        - For example, a window cleaner occasionally used to clean an office window would not require an SDS; However an SDS would be required if the employee's job was to clean windows all day long.
- Drugs & Pharmaceuticals
    - In solid, final form for direct administration to the patient (e.g., tablets or pills).
    - Drugs which are packaged by the chemical manufacturer for sale to consumers in a retail establishment (e.g., over-the-counter drugs).
    - Drugs intended for personal consumption by employees while in the workplace (e.g., first aid supplies).
- Biological Material
    - If the hazard they pose is solely biological (e.g. microbes, vaccines, & cell cultures).

At UNE, all labs that use hazardous chemicals are required to maintain their own SDSs in order to satisfy the readily accessible requirement. Labs are allowed to maintain their collection either in paper copies or electronically. They also must ensure that all personnel working in the area know where to find the SDSs and that everyone has immediate access to them.

As backups to the labs, SDSs can also be found in the Vertere Chemical Inventory module and in a master collection of paper copies found in the Facilities building.



The 12 DAYS of SAFETY

1. Never use lighted candles near trees or boughs

2. Keep poisonous plants out of reach of children and pets

3. Keep trees away from fireplaces, radiators and other heat sources

4. Make sure your tree has a stable platform

5. Choose an artificial tree that is labeled fire resistant

6. If using a natural tree, make sure it is well watered

7. Check holiday lights for fraying, bare spots, gaps in the insulation or excessive kinking in the wire

8. Turn off all tree lights and decorations when not in use

9. When putting up decorations, use a step stool or ladder to reach high places

10. Designate a sober driver

11. When preparing a meal, wash hands, utensils, sink and anything else that touches raw meat

12. Reheat leftovers to at least 165°F

Happy Holidays

NATIONAL SAFETY COUNCIL

Proud Member

UNE Chemical Sharing Program

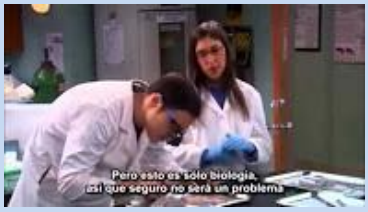
The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduce costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals that you are thinking of disposing, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

Chemicals currently available: None

Lab Safety Video of the Month:

Lab Safety Don'ts from Big Bang Theory and the Muppets

https://www.youtube.com/watch?v=9Wmn-U01b_Q&t=14s



This video link is for entertainment purposes only; do not imitate this behavior in any lab.

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