

UNIVERSITY OF SAN DIEGO
OFFICE OF ENVIRONMENTAL HEALTH & SAFETY
NEWSLETTER
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CLEANING CHEMICAL HAZARDS

Incompatible chemicals

When certain hazardous chemicals are stored or mixed together, violent or toxic reactions can occur – they are incompatible. Even if you are using something as seemingly harmless as window cleaner, it's important to understand the potential hazards.

One example: Ammonia and chlorine

You probably know that many spray window cleaners contain ammonia. Ammonia vapors can be corrosive and extremely irritating to the respiratory tract. Effects of exposure to concentrations of ammonia vapors are severe respiratory distress, headache, and chest pain, possibly leading to pulmonary edema and asphyxia.

You also probably know that many common powdered cleansers and laundry products contain chlorine (“bleach”). By itself, chlorine can be toxic by inhalation. It can cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath, and pulmonary edema.

Did you know that accidentally mixing these two materials – ammonia and chlorine – can make them even more dangerous?

One material safety data sheet (MSDS) for ammonia reports that “violent or explosive reactions can occur with strong oxidizing agents” (like chlorine).

An MSDS for chlorine says that there is the “risk of formation of unstable, potentially explosive nitrogen chloride” if mixed with ammonia. It also notes that, if chlorine is swallowed, there is a “risk of formation of toxic chlorine gas, by reaction with stomach contents.”

Mixing other substances such as acids with bleach can generate highly toxic chlorine gas.

Protect yourself

Protect yourself when working with chemicals – even if they are “just cleaning products.” Find out what they are incompatible with, and do not mix those chemicals. Also, do not reuse a container if it previously held material that is incompatible with what you are putting in it.

Check out the [label](#) and the [material safety data sheet \(MSDS\)](#) to find out the hazards and incompatibilities of substances you use to do your job.

FIRE DOORS

Fire Doors are doors that have been manufactured and tested to be fire resistant, self closing and are usually placed along emergency exit corridors and stairways. When closed they will slow the spread of fire, smoke, and toxic gases and protect the exits long enough for the building occupants to escape. Wood blocks, wedges, or pieces of rope or wire or anything that would block or hold the door open is a fire code violation and not allowed. This practice defeats the whole purpose of the door. Only fire doors that are equipped with automatic releasing devices are allowed to be held open.

OFFICE SAFETY

Although an office worker who is injured from a fall off a chair may not create as much attention as a worker who falls off a bridge, both injury incidents are important to the worker and the employer. In both cases, there may be similar consequences...pain and suffering; lost work time and wages, and medical and insurance expenditures. But, in both situations, workers have a responsibility to follow all established safety procedures to prevent injury incidents to themselves or their coworkers.

What is the first step in making sure the office is a safe place to work? Good housekeeping is critical to office worker safety and injury prevention. When workers practice good housekeeping many slip and fall related injuries can be avoided. So, when you notice a wet or slick area, clean it up or block and mark the hazard until it can be corrected. Pick up off the floor any object that could cause a slip or trip. Mark or cover loose cords. Remove them and other obstacles from walkways.



Avoid fall injuries involving chairs by not leaning back too far or overreaching while seated in them. Don't use a chair as a ladder or step stool. Use a proper climbing device.

The risk of puncture and cutting injuries might be prevented if sharp or pointed objects are kept in a protected area, stored with the point or sharp sides down, and away from edges and opening. Remember, even paper products can cause painful cut injuries.

Prevent being struck by falling office objects by arranging files and supplies so that heavier ones are in lower areas and lighter ones are higher up. To avoid pinched fingers, close file and desk drawers using their handles. Close one drawer before opening another.

Prevent back strain or sprain injuries when lifting office items by practicing proper lifting techniques. If the load weight is beyond what you can safely lift alone, use a mechanical aid or get someone else to help you. When carrying a load, make sure you can see over the load and where you are stepping.

Finally, hurrying or being distracted causes many office accidents and injuries. Approach blind corners carefully, open doors slowly, and watch where you're walking at all times. Be alert to potential office hazards. If you see an office hazard you cannot correct yourself, report it to your supervisor.



FLU PANDEMIC?

Bird flu. Avian flu. Pandemic. Mass hysteria! Like a monster on the other side of the door, it is something we all fear. The current monster is the Avian or Bird flu, but it is, for now, not in the United States. Birds, however, have this instinctual thing of flying around and migrating. Remember, too, that at this stage, the avian flu has NOT been transmitted human to human-which is important. But, given the ability of viruses to mutate and change rather quickly, it is also important to understand how the "regular" or "seasonal" flu (influenza) is transmitted, and we can put practices into place NOW to reduce disease transmission before it really becomes an issue.

The flu is an illness caused by a virus. Like a cold, it attacks the nose, throat, and lungs. The flu can sometimes lead to other problems like pneumonia, ear and sinus problems, dehydration, and worsening of asthma. For most of us, the flu will go away in one to two weeks.

The following is a summary of some of the Center for Disease Control most important points concerning this subject:

The flu, or influenza, is a contagious respiratory illness caused by the influenza virus. It can cause mild to severe illness and, at times, can lead to death. Typically, in the U.S., 5% to 20% of the population gets the flu every year; more than 200,000 people are hospitalized from flu complications, with about 36,000 deaths. The very young, very old and persons with certain health conditions are at the highest risk.

A pandemic flu is flu that causes a global outbreak, or pandemic, of serious illness that spreads easily from person to person. While this is NOT the situation we have right now, we CAN start teaching people where we work and live how to prevent seasonal influenza, which will greatly reduce the spread of a more dangerous flu should it eventually happen.

Flu viruses spread in respiratory droplets caused by coughing and sneezing. They usually spread from person to person, though sometimes people become infected by touching something with the flu viruses on it and then touching their mouth or nose. Most healthy adults may be able to infect others beginning one day before symptoms develop and up to five days after becoming sick. That means that you can pass on the flu to someone else before you know you are sick, as well as while you are sick.

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***If you are sick, stay home!**

***Cover your mouth and nose with a tissue when coughing and sneezing**

***If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands.**

***Put your used tissue in the waste basket.**

***Clean your hands after coughing or sneezing.**

***Washing your hands often will help protect you from germs...and others from YOUR germs.**

***Wash with soap and water for 20 seconds (two verses of "Happy Birthday," or your other favorite melody.**

***When water is not available, use an alcohol-based hand cleaner: Rub thoroughly, let dry.**

VACCINATION

The best way to prevent this illness (seasonal flu) is by getting a seasonal flu vaccination. Usually recommended for persons who are over 65, younger than 2, or have their health compromised in some other way. However, there have been some recent studies that found that vaccinating ALL grade school-aged children greatly reduced the incidence of flu in the entire surrounding population. Kids are apparently an important link between us all!

There is currently no readily available Avian flu vaccine. There are lots of scientific and political discussions on this topic with no clear action to mass produce one (if the virus will stay in one form long enough to make a vaccine!) and it will undoubtedly stay that way until human to human disease transmission has been confirmed.

In the meantime, do what you can NOW to prevent disease transmission before it really becomes a matter of life and death.

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