

# IN CASE YOU HAVEN'T 'HERD' ABOUT...

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## *Tufts offices are almost always safe places to work but...you need to control the forces!*

Tufts is a think factory where the most common work tasks are reading, writing, speaking, listening... in general, communicating and thinking.

The most common work place at Tufts is the office and the most common workstation involves the use of the keyboard, the video screen, the telephone, and paper documents.

However, the brain is attached to a machine made of muscles, bones and nerves. This machine uses forces to perform its tasks: gravity, friction, electricity, light and sound. Nevertheless, the force of most concern is gravity!

Gravity is pulling us to the floor. The muscles resist gravity and allow us to stand and sit. Too much friction causes the body machine to trip and fall. Too little friction causes that machine to slip and fall. Same-level falls are the leading cause of injury in the office – falls occur 2.5 times more often in the office than other workplaces.

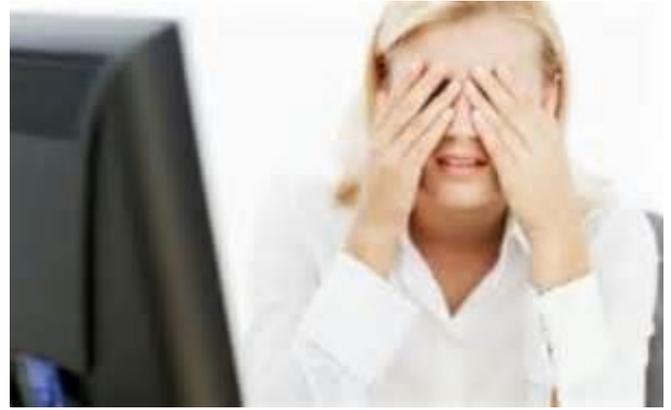
To prevent falls and falling objects,

- always close cabinet, desk and file drawers when not in use;
- do not place wires .e.g. extension cords, power strips or computer cables across walkways;
- do not carry boxes, supplies or equipment that is bulky causing a weak grip and poor visibility forward;
- do not carry boxes, supplies and equipment greater than 30-50 pounds-purchase and use a 2 wheel hand truck or a 4 wheel cart
- store heavy supplies and equipment on lower shelves
- inspect floors and report uneven carpets, flooring or broken tiles;
- report, post warning signs or dry up wet floors
- select footwear that meets the friction needs of the season
- remove floor mats or area rugs that do not lay flat
- purchase and use a stepladder or stool that elevates the body to the height of the shelf or cabinet
- carry supplies and equipment up and down stairs with one hand and use the handrail at all times
- do not overload shelves- know the weight limit for all tables and shelves- a box of 10 reams of paper weighs 50 pounds



## *Give your eyes a break too.*

A new term has arisen recently in the visual medical field, **Computer Vision Syndrome (CVS)**. Many more people are spending both working and recreational time on their computers. In addition to the more obvious issues such as carpal tunnel syndrome and other neuro-muscular concerns related to the frequent use of computers at work, our eyes are showing signs of the impact on regular use while working in an office environment.



*Covering your eyes and resting them for just a couple of minutes can reduce strain.*

Issues that may have an impact on our vision include, distance from Video Display Terminal (vdt), overhead lighting, amount of time spent in front of the screen, brightness of the screen, reflections from outside light at a window. Let's address each of these concerns independently.

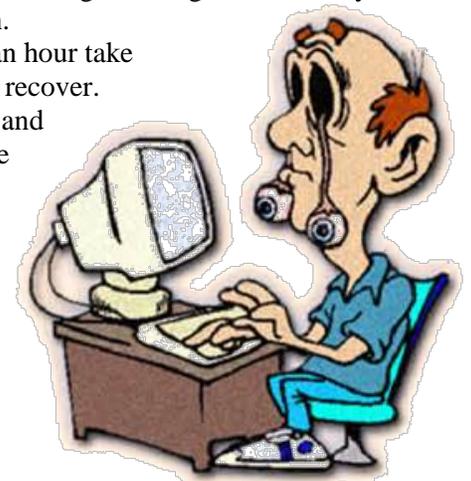
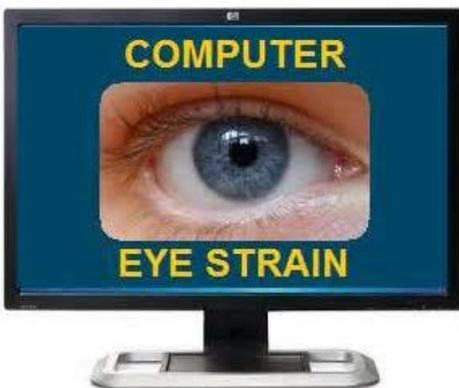
- A. Distance from monitor or screen. Each of us has a wide variation in how well our eyes function. Some people have stigmatism, others nearly perfect vision, others need corrective lenses that are bifocal or trifocal to accommodate our own issues. In general the VDT should be 18-24" away from our eyes. The upper to middle portion of the screen should be at eye level.
- B. Overhead lighting generally should not be too bright. Very often that is a function of the location where your office resides. If you do have some flexibility in controlling office lighting a medium range setting with a dimmer switch is best. Task lamps, for desktops are often a good substitute for overhead lights.
- C. VDT screen brightness is easily regulated in most computers by going into control panel and lowering the brightness; less brightness on the screen not only reduces eyestrain, but also reduces the amount of energy used by the computer.
- D. Reflections for outside lighting. This can be a big source of eyestrain. If your office has a large window to the side or directly behind where your VDT is located this can be a concern. A good way to test how much light is reflecting from outside would be to stand up and look at your screen from an angle at the corner of the screen, if you see a reflection of sunlight from outside your window in that reflection you may well be getting too much coming onto your VDT. Pulling shades or curtains even part way may reduce that amount of light.

Very often when we sit at our workstations for long periods of time we forget to blink. Dry eyes also can contribute to eyestrain.

Without a doubt the biggest issue is relaxation. When you work out lifting weights, running, walking for exercise you always give your body a chance to recover. Your eyes need that same consideration.

If you intend to be at your computer for an hour take 5 minutes and give your eyes a chance to recover.

Close your eyes to rest them. Look away and focus on a distant object, this short respite will help to keep your eyes healthy.



## *The Filthy Office and Infections: Is your desk cleaner than your kitchen table or the office toilet?*

For many faculty and staff at Tufts, the office is their home away from home. It is where they spend most of their time and because we spend so much time in our offices, it is important to understand the infectious diseases that can be transmitted there. Yes, you could get sick from your own computer and desk.

Many of our office surfaces are not as sanitary as we think. Desks, phones, computer keyboards and mice are key germ transfer points because people touch them so often. In addition, they may become contaminated with pathogens by direct contact with human fluids or secretions (mucus, saliva, blood). Finally, coughing and sneezing can leave behind "a minefield of viruses" that can live on a surface for up to three days. Despite the contamination, people don't clean their desktops frequently and custodians don't touch people's desks to avoid accidental misplacement or loss of important documents.



As Dr. Gerba said in a CNN interview in 2006: "Nobody ever cleans a desktop until they start sticking to it, from what we've found," "A lot of people eat and slop on their desks all the time so it basically turns into a bacteria cafeteria during the day, and that's one of the reasons you get a lot on your desktops." According to a survey by the American Dietetic Association and ConAgra Foods' Home Food Safety program, a majority of Americans continue to eat lunch (62 percent) and snack throughout the day (50 percent) at their desks. In another study of offices, parainfluenza virus could be isolated from one-third of all offices tested. A study by the University of Arizona in 2002 found the typical worker's desk has hundreds of times

more bacteria per square inch than an office toilet seat.

If that's not disturbing enough, desks, phones and other private surfaces are also prime habitats for the viruses that cause colds and flu. Bacteria, which can cause strep throat, pneumonia and other conditions, have also been isolated from computer keyboards. But health experts say that simple office hygiene can reduce infection risks dramatically. However, according to the Home Food Safety survey, only 36 percent of respondents clean their work areas (desktop, keyboard, mouse) weekly and 64 percent do so only once a month or less.

To lower your chance of infection from your desk we recommend that you:

- Wash your hands with soap and warm water, and keeping your desk stocked with moist towelettes or hand sanitizer for those times you can't get to the sink.
- Treat your desktop like you would your kitchen table and counters at home: Clean all surfaces, whether at home or work, before you prepare or eat food on them.

A clean desktop and hands are your best defense to avoid foodborne illnesses at the office.

In addition to desk top hygiene, Tufts Environmental Health and Safety can provide guidance to the Tufts community on indoor air quality, ergonomics, and other office safety areas.

*"Generally, research evidence suggests that a large portion of gastrointestinal and respiratory illnesses can be prevented through improved environmental hygiene, with an emphasis on better hand and surface cleaning practices" (Boone and Gerba, 2007)*

## Using Portable Space Heaters at Tufts University

Tufts University properties include hundreds of buildings that contain thousands of workspaces of all types. Due to the complexity and variety of workspace environmental conditions, the building heating system may not be sufficient to obtain the comfort level desired by the some workspace occupants. In such cases, a portable space heater (if used properly) may provide a workable solution to this condition.

*A quick review the Space Heater policy at Tufts University:*

Portable space heaters are a potential source of fire if not used properly. The requirements listed below, applicable code requirements, and manufacturer's recommendations must be followed to maintain a safe environment.

If a space cannot be adequately heated via the installed building heating system, do the following:

- Contact **Tufts Facilities Operations Desk** to report the condition.
- If the installed system cannot be repaired in a timely manner, Facilities may recommend a temporary space heater meeting the requirements listed below.
  1. All heaters must be Underwriters Listed (UL) or Factory Mutual approved for their intended use.
  2. Heaters must have a thermostat to automatically shut down the unit when the desired temperature is achieved.
  3. Heaters must have a tip over automatic shutdown feature.
  4. Heaters must be kept at least 3 feet (36 inches) from all combustible materials e.g. file cabinets, desks, trash cans, paper boxes, etc.

**If you will be using a portable space heater, ensure you follow these safety tips:**



- Do not place heaters under desks or other enclosed areas.
- Heaters must be monitored when in operation.
- Plug heater directly into a wall receptacle. Never plug it into an extension cord.
- Heaters need to be monitored daily. Those heaters missing guards, control knobs, feet, etc. must be taken out of service immediately and repaired by a competent person.
- Do not use heaters in rooms that will not be continually occupied.
- Keep doors and windows closed, including storm windows. This will help prevent freeze-ups.
- Keep space heaters away from exit ways, walkways and paths of travel.
- Do not use space heaters in wet areas like bathrooms or kitchens.
- Do not use portable space heaters if small children are expected in the area.
- **No open-coil space heaters are permitted in any university buildings.**
- **Space heaters of any type are prohibited in laboratories.**

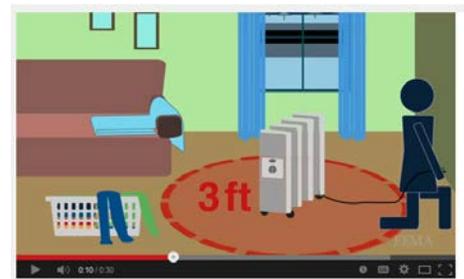
In summary:

- If a space heater is needed...obtain the correct TYPE (no open coils)
- Learn to use the features of the space heater – understand how it functions
- Apply personal responsibility and due diligence regarding *where and when* to use space heaters. Don't allow complacency to lead to unsafe practices in the workplace.
- Be sure to CHECK that you have shut off the unit when not in use.
- If possible, unplug the unit whenever feasible at the end of the day...and especially over the weekends.

FEMA has produced a very short video that summarizes this topic.

Please follow the link:  
Portable Heater Safety by FEMA  
<http://youtu.be/9AMQIASnmNU>

Please contact **Tufts Fire Safety at 617-627-2745** for additional assistance.



## *Where Does my Drinking Water Come From?*



Source: Massachusetts Water Resources Authority

Tufts drinking water is purchased from our host municipality on each campus. The cost includes drinking water delivery to campus as well as wastewater disposal. On the Boston and Medford/Somerville Campuses, the Massachusetts Water Resources Authority provides drinking water service to the cities of Boston, Medford and Somerville sourced from the Quabbin Reservoir 60 miles west of Boston. On the Grafton Campus, water is purchased from the Grafton Water District from ground water wells located in Grafton.

Before reaching each campus, water is treated to disinfect it, improve dental health (MWRA only) and to reduce corrosion in plumbing. Drinking water quality is regulated by the Safe Drinking Water Act that is enforced by the U.S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection. Drinking water must comply with 120 standards called maximum contaminant levels which are the level of contaminant in drinking water below which there is no known or expected risk to health.

The MWRA and Grafton Water District are responsible for complying with the maximum contaminant levels to protect human health and each produce annual report available to the public demonstrating compliance.

Once water enters Tufts buildings, Tufts must comply with the Massachusetts state plumbing code for the internal distribution systems. Drinking water testing is one of the public health programs of TEHS. Water on the Medford/Somerville and Grafton Campuses has been tested for biological, chemical and radioactive contaminants by MassDEP certified testing laboratories.

Periodically members of the Tufts community experience issues with water quality. TEHS is available to provide advice to ensure that everyone receives high quality drinking water for personal consumption as well as for research uses. Often we find that routine water system maintenance by the municipality may cause temporary issues such as discolored or cloudy water that can be remedied by running the faucet for a few extra seconds.

We believe that we are fortunate to have high quality drinking water at Tufts delivered by our host communities. Maintaining drinking water infrastructure results in high system reliability and high quality water; both of which are important to the health of the Tufts community and the ability to complete Tufts research and teaching mission without interruptions.

## *Clearing (and Cleaning) the Air: Indoor Air Quality at Tufts*

High quality air is an essential factor in achieving healthful and productive workplaces at Tufts. First, there are two kinds of air: indoor and outdoor. Outdoor air quality is determined by the concentration of pollutants while indoor air is determined by the concentration of contaminants. Indoor air quality is also defined by temperature, humidity, air movement, and odor.

The outdoor air in Massachusetts meets 4 of the 5 US EPA National Ambient Air Quality standards 100 percent of the year and ozone meets the standard of 0.075 ppm 96% of the year. Hence, for those offices that have operable windows, the air entering from out of doors is healthful.

In buildings without operable windows, the air quality is determined by the ventilation (HVAC) system which supplies and exhausts air from each room.

Tufts Environmental Health and Safety (TEHS) classifies all rooms at Tufts as normal hazard or high hazard with respect to indoor air quality. A high hazard room has one or several known sources of air contaminants. These rooms include laboratories, shops, art studios, mechanical rooms, kitchens, chemical/fuel storage rooms, garages in general, any rooms in which there are one or more activities that operate materials or equipment or both that generate airborne contaminants. These contaminants can be gases, vapors, dusts, fumes, mists or fibers.

TEHS staff identify all high hazard rooms or buildings and assists the faculty or staff person to control air contaminants and prevent entry into the building or adjacent buildings.

Construction and renovation projects also have the potential to generate air contaminants and TEHS staff works with facilities Services and the contractors to control air contaminants and prevent entry into the surrounding rooms, areas or adjacent buildings.

Offices, conference rooms, most classroom and lecture rooms, meeting rooms, auditoriums are normal hazard rooms. In these rooms, operable windows or mechanical ventilation systems provide high quality air with no or minimal sources of air contaminants. Tufts Facilities Services makes every effort to provide high quality air to these spaces at all times. This air meets standards for temperature, humidity and air movement as well as meeting appropriate air contaminant standards.

With the elimination of tobacco smoking, other sources of odors have become important to identify and control to government or national standards or Tufts policies. These include mold volatile chemical, human body odors and personal care products.

### What's Your Opinion?

What do you think of the new  
*In Case You Haven't "HERD" About...*

Do you have ideas for future topics? How to make it better?

We want to know!

Contact Natalie Tumbridge at  
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<http://publicsafety.tufts.edu/ehs/>

Many personal care products contain fragrance chemicals that some individuals find pleasant or are used to mask more objectionable odors.

However, some workers find odors unpleasant and rarely there are individuals that are highly sensitized to one or more of the chemicals in these personal care products: soap, body wash, laundry detergent, laundry softener, dryer odorants, shampoos, deodorants and the list goes on.

To address odors, workers often purchase and use room deodorizer sprays, scented masking sprays, and other devices that produce chemical vapors some of which claim to have a pleasing odor. At Tufts, any member of the Tufts community should contact Tufts Facilities Services or Tufts EHS before using aerosols, sprays, plug-in vaporizers or any chemical to improve the indoor air quality of their office or work area. High quality indoor air is the goal at Tufts.