

# The Productive Workplace

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## Pelletier & Associates to Speak at the National Ergonomics Conference & Exposition



The National Ergonomics Conference and Exposition is again upon us, and Pelletier & Associates has once again been invited to speak on a topic which is extremely relevant today. In light of the difficult economic times that we find ourselves in, Pelletier & Associates has opted to discuss ways to maintain and grow an ergonomics program during these challenging times. The workshop, entitled

“Maintaining Ergonomics Programs during an Economic Slowdown”, has been one of the most popular workshop selections for attendees registering for the conference. The focus of this session will be to bring ideas and creative methods to the ergonomics professional as part of the Program Management track of the conference.

The National Ergonomics Conference and Exposition, held in Las Vegas, Nevada from December 1-5, 2008, is the largest gathering of professionals in the field of

ergonomics in the United States. Along with excellent educational opportunities, NECE also provides ergonomics vendors to promote their products and services in the expansive Exposition. Pelletier & Associates will also be present in the Exposition, Booth #309, available to discuss the latest in technology tools for the ergonomics professional, in particular the Ergo Tracking Tool and Ergo Reporting Templates, which are currently being utilized by the University of California, Irvine, University of California, San Diego and the University of California, San Diego Medical Center. The tools have enabled the individuals in charge of large scale ergonomics programs to better track their data and capture metric data that enhances their program’s value.

In all, the National Ergonomics Conference and Exposition provides us with a great opportunity to share information on our services and technology products, allows us to provide other ergonomics professionals with ideas and solutions to issues present in our current economy and allows us to network and rekindle relationships with many of our business partners and colleagues. We at Pelletier & Associates are looking forward to taking every advantage of this excellent opportunity!

## Pelletier & Associates Awarded Ergonomic Services contract for the Department of Motor Vehicles

Diana Pelletier

In our continued expansion of services, Pelletier & Associates has been awarded the contract for ergonomics services for the Southern California section of the State of California Department of Motor Vehicles. This contract focuses on the provision of on-site ergonomic evaluations to assist the organization in minimizing their exposure to repetitive motion injuries, for employees at both seated workstations and in non-seated work environments. Training and other consultation services are also included as part of the award.

Pelletier & Associates will be responsible for services in the Southern California offices of the Department of Motor Vehicles, encompassing Los Angeles County, Orange County, Riverside County, San Bernardino County and San Diego County. The Pelletier & Associates team looks forward to working with the Department of Motor Vehicles in their efforts to enhance their work environments and create safer workplaces.

# Ergonomics in the Laboratory: A Quick Guide to Preventing Repetitive Stress

Jaulla Saatchi

**1 Issue:** There are numerous lab activities that involve highly repetitive hand and finger movements. These tasks, such as pipetting and using forceps, are often performed for prolonged periods. Pipetting results in ergonomic risk issues since it is hand intensive and is performed with thumb compressions and by using a pinch grip. In addition, while employees use pipettes or forceps, there is a risk of awkward hand and arm postures while holding and utilizing the tools.



**Solutions:** Employees completing prolonged, repetitive tasks that require excessive hand and finger manipulations should always take frequent breaks (for every 20-30 minutes of activity) in order to give the muscles and tendons that control these fine movements a rest. These tasks should be completed at such a height so that the user is able to keep the arms relaxed, in neutral posture. Attention should be paid to keeping the wrists straight and keeping the arms close to the body. Hand exercises and stretches are also recommended.

While pipetting, only low pressure should be applied. Pipettes should be cleaned on a regular basis to avoid build-up that may increase the force required to use them. Lab employees may feel more comfortable using special pipettes that fit better in the hand or are of shorter construction; shorter pipettes make it possible to complete pipetting activities without raising the arm quite as high in order to decrease hand elevation. Electronic, magnetic assist or latch-mode pipettes also help to reduce excessive strain on the hand by decreasing the thumb force required and reducing repetition. Pipette tips are also available that require less ejection force. There are many specialized tools that are manufactured to reduce ergonomic risks while pipetting.

In order to distribute the pressure from forceps more evenly over the hand, padded grips should be used; cylindrical foam works well as a padded grip. Also, users should try to alternate in between holding the forceps in between the thumb and pointer finger and the middle finger and pointer finger. These solutions should help to lessen the strain that these repetitive tasks take on the hands, fingers and arms.

**2 Issue:** Lab workers often stand for prolonged periods on hard surfaces or spend a great deal of time in lab stools. Sitting or standing for prolonged periods can take a toll on the body, more so if the user is not working with the lower body supported and the upper extremities neutral.

**Solutions:** When standing is required on hard surfaces, matting is recommended. This cushioning will help to ease the strain of prolonged standing on the lower extremities. Footrests are another option. Keeping one foot elevated while standing helps to ease the pressure placed on the back. Shifting positions frequently is also recommended.

It is important to achieve proper lower back support (in the lumbar region) and also upper back support (behind the shoulders) while sitting for prolonged periods. Lab stools often have adjustable features that are not taken advantage of. Lab workers should adjust the stools accordingly in order to attain the greatest amount of back support available. It is best to keep the feet flat on the ground in front of you, but while sitting high in a lab stool, lower body support can be achieved by placing the feet on a footstool (if available) or on a high footrest. To prevent pressure on the low back, it is best to keep the feet in front of, rather than below the body while seated.

**3 Issue:** Lab workers often spend a considerable amount of time in front of the computer. Computer equipment in labs is often set on high lab benches or in awkward spaces with insufficient leg room below. This positioning exposes workers to risks including leaning in, a lack of lower body support, excessive reaching, awkward hand, wrist and arm postures and contact stress at the elbows, forearms and wrists.

**Solutions:** Proper back and lower body support should be obtained and there should be free leg clearance below the computer setups. If the computer setups are intended to be multi-user workstations, the highest amount of adjustability should be taken into consideration by installing keyboard platforms and monitor arms. The mouse should always be positioned nearby and at the same height as the keyboard. Document holders are also recommended to minimize fine neck movements associated with gazing down to reference hard copy documents. Lab employees should avoid performing computer and then pipetting or other hand-intensive activities without taking an adequate rest break in between to allow recovery of the muscles and tendons in the hands.



**4 Issue:** Poor organization of supplies within the lab or while seated at the bench often results in unnecessary ergonomic risks. Employees may be required to carry heavy materials longer than necessary, obtain items from above shoulder level, lift items from the ground, or assume awkward hand or wrist postures while accessing supplies at the bench.

**Solutions:** Pre-planning should be conducted in order to place heavy bottles and supplies as near as possible to their point of use. All materials should be stored as close as possible to the fume hood, lab bench or wherever they will be utilized. Supplies should be arranged so that the heaviest items are placed no higher than shoulder level and no lower than knee level to allow employees to manage these heavy materials within their power zones. Correct height placement on carts or racks will reduce the impact of the lift on the body and prevent employees from handling heavy items for longer than necessary. Rolling carts (height adjustable options are available) should be utilized to transport heavy items within the lab.

At the lab bench, employees should organize their supplies before they start activities. All items should be placed within the employee's neutral reach zone to avoid repetitive over-extension of the arms. Employees should avoid extending their arms out or up to complete tasks. For example, pipette tips and waste receptacles should be placed as close to the test tubes or vials as possible. Also, supplies that are held in bins should be propped up at an angle; this should help to reduce awkward hand and wrist postures assumed while accessing supplies.

## Pelletier & Associates attends the Annual Joint Technical Symposium

Diana Pelletier

In our ongoing effort to support the safety community at large, Pelletier & Associates attended the American Society of Safety Engineers and American Industrial Hygiene Association Orange County and Los Angeles sections Annual Southern California Joint Technical Symposium held at the Grand Long Beach Event Center on October 23, 2008. This event focused on providing the health, safety and industrial hygiene professionals of the organizations with technical sessions geared to

the most pertinent issues today. Along with a variety of interesting workshops, the event offered an exhibit area where vendors and sponsors could provide information to the conference attendees as well as a lunchtime raffle of prizes. One of the highlights of the event were the keynote speakers, Dr. John Howard from NIOSH and Leonard Robinson from the California EPA. Overall the event was very successful and we look forward to attending next year.

# Product Spotlight: The Dandy-Tilter 350 provided by Bastian Material Handling

Michael Gonzales



Bastian Material Handling (BMH) is a product distributor dedicated to helping clients increase their productivity through proven automation and sound operating procedures ([www.bastiansolutions.com](http://www.bastiansolutions.com)). BMH works with nationwide industry types to meet their need for creating safer working environments.

BMH has made their introduction into the ergonomic market by offering a variety of material handling aids. Mobile lift tables are one of the many material handling aids that encourage safe lifting practices in shipping, distributing, and manufacturing settings. The Dandy Tilter-350 (DT) is a mobile lifter that allows users to stack, unstack, and transport materials safer and easier. The DT-350 works as a moveable platform that can be used to transport loads over various distances. All of Dandy's portable lifters adjust to appropriate height for safe loading and unloading. The DT-350 has a weight capacity of 750 pounds and features a unique tilting mechanism that separates it from all others in the Dandy product line. The featured tilting mechanism is ideal for tasks that require unloading of crates, deep storage bins, or tote boxes. The mechanism simply tilts to an accessible angle and helps reduce any awkward reaching postures during loading and unloading. All of the lifts in the Dandy Product line are attractively finished with enamel paint and chrome to ensure longevity. The Dandy Tilter-350 retails at \$1,370 and can be considered a necessary investment for preventative measures. At this price point an organization should have their manual material handling activities evaluated to determine a best fit. With the DT-350, distributors and manufacturers can receive a high return on investment through an increase in productivity and a decrease in injury rates.



## Specifications:

Overall Dimensions		Platform Size			Handle Height	Tilt Angle	Vertical Travel
Length	Width	Length	Width	Lip			
42.1"	23.6"	35.4"	23.6"	8"	37.5"	31°	18.3"

**At Pelletier & Associates, it is our mission to offer education, guidance, support and solutions to individuals and organizations by providing a complete line of disability management services.**

### We specialize in:

- ✦ Comprehensive Ergonomics Services
- ✦ Technology Products and Services
- ✦ Return-to-Work Program Development
- Workers' Compensation Services

**To learn more about these service and/or schedule a free, no-obligation initial consultation at your facility, please call us at (949) 206-9923 and be sure to visit our website at [www.pelletieirnc.com](http://www.pelletieirnc.com).**