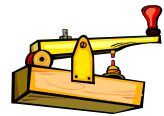




# The Ergonomic Wire



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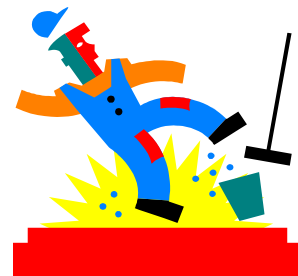
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## Preventing slips, trips and falls on the worksite.

Researched and co-written by EWI Works staff

In Canada, approximately 60,000 workers are injured each year due to fall accidents (CCOHS, 2008). Slip, trip, and fall hazards in the workplace include:

- ☞ Spillage on the floor,
- ☞ Cables or wires on the floor,
- ☞ Debris on the floor such as boxes or wrapping,
- ☞ Rugs or mats with curled edges,
- ☞ Slippery surfaces,
- ☞ Poor lighting,
- ☞ Changes of level in the floor,
- ☞ Slopes, and
- ☞ Unsuitable footwear.



Slips, trips & falls = lost time

More than 75% of major 'fall-from-vehicle' accidents occur during loading and unloading activities. The most common area of the vehicle to fall from is the load area followed by the cab access steps.

To reduce the risk associated with slips, trips and fall hazards, you can do the following:

Raise awareness about potential hazards and provide both verbal and written instructions for safe procedures and controls. Training may also be required. Encourage employees to report hazards and to identify potential controls. Apply anti-slip treatments to floors that ensures surfaces are not slippery even when

*(Continued on page 3)*

## Quick Ergo Tips:

☞ Before you lift that box off the floor, remember:

1. Know the weight of the object.
2. Crouch down as close as possible to the object. Keep it close to you and lift with the legs.
3. Do not twist - use your feet or legs if you must turn.
4. If it's too heavy to lift, get help or use a mechanical device.

## Safe air travel for business and pleasure.

By Lorel Hammerstad, Executive Assistant, EWI Works

Whether business or pleasure, there are good practices to follow whenever you take to the skies to get to your destination. Business travellers in particular should make themselves aware of the effects that air travel can have on the body and take precaution to ensure a comfortable and safe flight. These frequent flyers rack up the air miles more often and thus, increase the risk of discomfort, illness or injury.

### Effects of Flight

Anyone who has hiked up a mountainside knows firsthand the effects of altitude on the body. The "air is thinner". These effects are very similar to flying. Accord-

ing to *Health Tips* on the Air Canada website, the cabin might be pressurized, but it is still equivalent to the atmospheric pressure at the top of a 5000 foot mountain. At this level, there is less oxygen in the blood tissues (hypoxia in medical terms). Also, gas expands in higher altitudes - so you can pretty much imagine what is going on inside of our bodies when we're thousands of feet above the ground. Lower oxygen levels can cause light headedness and possibly put some individuals at risk of fainting if they get up too quickly. Something as simple as a stuffy nose could cause ear or sinus pain, or in some cases even a ruptured ear drum if the airflow in the si-

nuses or middle ear is blocked.

A hot topic in the last few years is the dangers of "venous thromboembolism" or VTE on long haul flights. Studies have shown that the risk is low but can be associated with immobility during any long trip, whether it is train, plane or automobile. This can become particularly dangerous or fatal if the blood clot that develops (usually in the leg) moves through the blood stream and eventually blocks the flow of blood flow if lodged in a crucial area, such as the lungs or heart.

Unfortunately, in an effort to accommodate the increasing number of individuals choosing to fly,



**Risks associated with flying increase with frequent flyers as well as the length of time you are flying**



**Avoid alcohol 24 hours before and during your flight.**

**If you are ill, try and postpone your flight.**

## Air travel tips continued

personal space is sacrificed. Conditions are cramped so travellers should make an effort to get up from their seats to move around or try seated exercises to get the blood moving (see page 3).

The impact of flying can vary from person to person but the following are risk factors that can increase the negative effects:

- ◆ medications
- ◆ alcohol consumption
- ◆ obesity
- ◆ illness such as sinus infections, heart disease, or circulatory problems
- ◆ age

Other things to consider when planning for a healthy, irritant free flight include dryness (dehydration, irritated sinuses and dry skin), air sickness and allergies (food allergies being the most important)

### An ounce of prevention...

Understanding what affects you when flying will help you plan accordingly so that you have a relaxing flight. The following tips were compiled from information from Air Canada and articles from ErgoWeb's Ergonomics Today - Quick News. Remember them

when you book your next trip:

1. Where comfortable clothing, non restrictive, shoes that have been worn and aren't too tight. I learned this first hand when wearing my cowboy boots for the first time on a long flight to Palm Springs. After taking them off, I couldn't get them back on again.
2. If you have a large carryon bag, put it in the overhead storage so you have room to stretch your legs and move your feet and ankles.
3. When the seatbelt light goes off, get up and take a stroll to get the blood circulating. Try to do some light arm and leg exercises before getting up after sitting for awhile.
4. If you suffer from air sickness, request a window seat or a seat by the wing - use medication if your doctor advises you to.
5. If you have a sinus infection or other illness, try and postpone your flight.
6. Swallow, chew, yawn when the plane is preparing for landing.
7. Avoid the following before and during the flight:
  - ◆ alcohol
  - ◆ caffeine
  - ◆ gas forming foods
8. Drink plenty of water or juice before the flight and during.
9. Contacts will make your eyes feel dryer - opt for your glasses when flying.
10. Talk to your doctor first if you have circulatory problems, heart disease, or blood clotting disorder.
11. Plan ahead. Check what will be served during your flight and make a special request if you have food allergies. Most airlines will be more than happy to accommodate. If you do have allergies that may cause a severe reaction, be prepared. Bring important medication with you on the plan and inform the airline staff of any health conditions you may have.

Flying definitely has its benefits over alternative means of ground travel. It's still by far the best way to get to your destination quickly. It can also be the most comfortable if you make yourself "air travel savvy".

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## Incorporating ergonomics in fleet acquisition

By Erin Walkom, AE, Ergonomics Consultant, EWI Works



**Keep costs down by knowing what features are most important and which ones are unnecessary when purchasing your company's vehicles.**

Does your organization have a fleet acquisition process – is ergonomics a part of the process? Did you know that integrating ergonomics into the process can save your company money?

For mass produced vehicles, like cars and trucks, getting adjustable features, such as lumbar support, is often secured cheaper through aftermarket products compared to purchasing a higher trim level with features that are not desired.

**Example** – An organization was seeking adjustable lumbar support for their fleet of new ¾ ton pickup trucks. In order to get that fea-

ture, it would have required three trim levels higher and approximately \$5000 more. Instead, they purchased the lower trim level that had all the other features desired and then installed an aftermarket air adjustable lumbar for approximately \$250.

When purchasing truck cabs that are made to order, it may be cheaper to purchase a more adjustable seat from the beginning. Often, upgrades to seating are only a fraction of the cost when included in initial specs, compared to changing out a seat or adding an aftermarket product.

When deciding what is needed in vehicles, involve your employees in the process. For examples, have them evaluate a design through questionnaires or focus groups. They can help to identify potential future concerns thereby preventing unwanted features or vehicle purchases. Considering user characteristics also help to establish the features of the vehicle which are required at purchased – or that may be added with an aftermarket product.

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## Seated exercises

Whether you are travelling a long distance or sitting at your desk for a long period of time, you should get up for a break or at least try some of these seated exercises.

### Back

Sit or stand in a relaxed position. Interlock your fingers and gradu-



ally raise your hands upward as if a cable was pulling your hands up. Hold for a count of three, relax, and repeat three times.

Place your hands behind your head and bring your elbows back. Gently stretch and lean back in your seat, arching your back slightly.



### Shoulder

Slowly rotate both shoulders back for a count of 10—then forward for 10. Repeat three times



Sitting up straight, slowly bring your shoulders up—hold—then bring shoulders down and hold. Repeat three times.

### Feet

While sitting, slowly rotate one foot from the ankle three times in one direction—then three times in the other direction. Repeat these rotations three times for each foot.



When sitting, point toes downward as far as possible—hold for three seconds and relax. Repeat three times.



### Legs

If you have the chance to get up from your seat, for example when travelling by train or airplane, or if you have a chance to pull over



when driving a long distance to stretch your legs, the following exercises are beneficial for the legs.

To stretch your hamstring, place one leg above the other. Bend at the waist and slowly lean toward your foot. Remember to keep your back straight. Hold for a count of ten.

For the thigh, stand facing your vehicle or the train/airplane seat about arm's length away and place your left hand on it. Grasp your left ankle with your right hand, making sure the knee of your standing leg is bent slightly. Tighten your stomach muscles and slowly bring your left ankle toward your buttocks. Keep knees close together and point knees downward. Hold for 10 seconds, relax and repeat for the opposite leg.



Monitor strip stretch reminder by EWI Works

**Interested in more workplace exercises? EWI Works has produced products that are good reminders to take a break from work and stretch your limbs or give your eyes a rest from the computer or long driving.**

**Our product descriptions can be found on our website: [www.ewiworks.com](http://www.ewiworks.com)**

## Slips, trips and falls continued

they are wet or oily. Provide proper equipment and protective equipment such as non-slip footwear or hand rails.

When working on and around vehicles, it is important to use the vehicle steps - particularly when exiting a vehicle as jumping out could cause injury due to the force of impact on the body in addition to the possibility of slipping on a slippery surface and falling. Keep in mind that the vehicle steps should be maintained to prevent them from becoming dirty, greasy or wet.

It is also important to reinforce that employees use a 3-point con-

tact when entering and exiting vehicles until they are securely seated or standing with both feet on the ground. Three-point contact involves two hands and one foot or both feet and one hand to keep steady while climbing in or out of the vehicle. Also, when grasping with the hands or placing the foot/feet somewhere on the vehicle to maintain the three point contact, employees should make sure the object is fixed (does not move). For example, utilize a grab bar rather than the door as the door can move position and could cause a fall.

Slips, trips and falls at the workplace (and at home) can be easily preventable through education and safe work practices. Implement a safety initiative to educate the staff at all levels. Involve your employees in the plan to brainstorm and find out where the issues lay. Utilize your corporate website, produce a brochure or lunchroom poster for reminders. Develop safety training or have lunch and learn sessions to teach everyone how to get involved in making your work place safe from slips, trips and falls.

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**EWI Works can help your organization develop and implement an action plan to reduce the number of injuries at your job site through ergonomic training.**



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**Hours:**

**Edmonton**

**Closed Dec 22—Dec  
26th**

**Calgary**

**Closed Dec 24—Jan 2**



EWI Works would like to wish everyone a safe and happy holiday season and we look forward to working with everyone in 2009!

**What's the buzz at EWI Works**



**EWI says goodbye to Claire**

The gang at EWI would like to wish ergonomic consultant, Claire Garipey all the best in her new home in Vancouver. Claire and her pet dogs and cats headed out West at the beginning of December to be with her beau, Les, and family. Although she was only

with EWI for a year, she made a great contribution to several projects. Good luck in Vancouver, Claire! Keep in touch!

**Ed keeps turning out the papers!**

In between assisting EWI staff with expert research for major ergonomic projects, Ed has been busy with publishing papers as of late. His most recent, *Facing the Challenge of Patient Transfers: Using ceiling lifts in healthcare facilities*, is going to be featured in **Health Environments Research & Design Journal, 2(1), 6-16**. Watch for links on our Resource page at [www.ewiworks.com](http://www.ewiworks.com) for a library of papers from EWI Works staff for your reference and research.

**NBA in Donald's future?**

Many of you may not know this but in his spare time, Donald is heavily involved with the Calgary Basketball Officials Association (CBOA). He has been refereeing for some time and after two years



on the Development List for College Officials, he is not only a full member but also began serving as the Secretary on the CBOA Executive. Now eligible to referee the regular season of the Alberta College Athletics Association basketball games, he has already officiated a few pre-season games and 4

regular season games this fall.

Donald would also like to announce that baby Dylan now has two teeth. Congrats to both of the MacDonalds!

**Linda and Erin take on new challenges**

Continuing on with the athleticism of our crew, this fall saw Linda and Erin take on a new learning experience – coaching girls soccer! Linda's daughter plays for the local Extreme team and both Linda and Erin have been enjoying the experience of helping both new and experienced players learn the love of the game! While the score sheets haven't looked in favor of Extreme at the moment, the girls have been getting better and better. This past weekend they blew away the competition and won their first game of the season. I'm sure with two ergonomists as coaches, the girls are also learning about keeping their limbs and backs in tip top shape.