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ERGO TIMES



Texting Thumbs & Shoulders & Neck &...

Ergonomists have been expecting it for years. In fact, we're frankly quite shocked that it's taken so long for the concerns to surface. Reports have associated smartphone use with de Quervain's tenosynovitis and osteoarthritis. Research done at the University of Waterloo (UW) shows that heavy users of portable mobile devices report thumb, shoulder, and neck pain. The smartphone has become

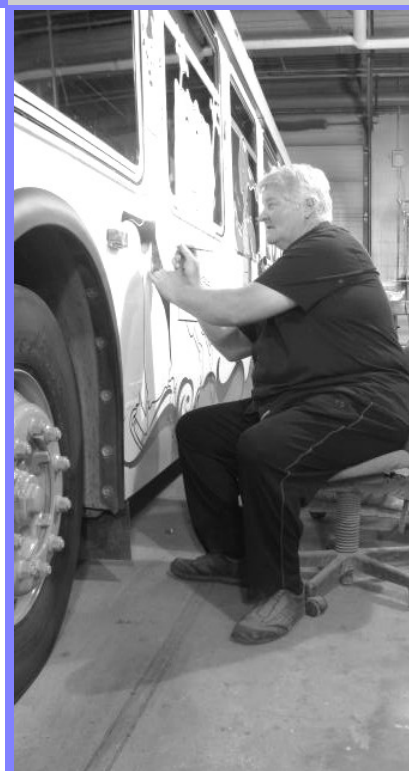
ubiquitous; 98% of the UW survey, involving university staff, students, and faculty, used a mobile device. About half of those experienced moderate to severe pain in their thumbs, neck, or shoulders. In fact, 15 percent of them experienced "severe" pain (7 or more on a 10-point scale). **More importantly, the study showed that the more you use a portable mobile device, the more discomfort you'll experience.** Participants who used their devices for more than 2 hours and 22 minutes a day were 3.5 times more likely to report moderate to severe thumb discomfort.

Of course, employers don't have control over smartphone use outside of work, and so this will ultimately raise issues regarding compensability of these injuries. What are people doing on their smartphones? UW's study indicated that users reported that they spent, on average, the following amounts of time using information and communication technology:

Computer/laptop	8 hours, 14 minutes
Internet browsing*	2 hours, 14 minutes
Music/videos/taking pics*	2 hours, 8 minutes
Gaming on smartphone*	1 hour, 17 minutes
Game controller	1 hour, 11 minutes
Email, texting, and messaging*	1 hour, 2 minutes
Telephone*	58 minutes
Scheduling*	19 minutes

* Note that some of these activities were simultaneous, as the reported average for total time using a portable mobile device was 4 hours, 39 minutes.

Teenagers don't seem to complain as much as adults...an article in US News reported that the "itises" don't seem to show up until the 40s or 50s. Of course, most "adults" can probably identify how our current "itises" relate back to activities or injuries that we sustained as teens....projecting forward a few decades, this doesn't bode well for the "adults" of the



Our mission:

Inspiring, building, and supporting partnership between your organisation and our innovative team to advance ergonomics excellence.

Our team:

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We are recruiting...please pass the word. We're looking for an experienced ergonomist with at least "Associate Ergonomist" status through the Canadian College for the Certification of Professional Ergonomists.

All of our ergonomists are members of:







2040s! Add to that the current trend toward inactivity and obesity, and we've got some serious problems ahead!





Tablets seem like an attractive alternative....bigger hand movements on the larger screen are less "cramped" and perhaps less repetitive for the thumbs. However, the neck posture while holding a tablet is really no better than while holding a smartphone, and the weight of the tablet, although light, still must be supported somehow. Reading a recipe or watching videos on a propped up iPad is not so bad, but playing games on the touch screen is only marginally better than playing games on the smaller iPod.


So how will this story progress....what is the "solution"? Well, there are a few things we can do:

 **Limit usage.** "What? Are you kidding me?" I can almost hear your teenager (and mine) wailing. Sometimes we just need to be reminded that fresh air, the oldest of all sources of entertainment, is really also the best. This would also help to resolve our obesity issues. And really, when it comes to social media use, can anyone really argue that it's more efficient or effective to text than to talk?

 **Do more on your computer.** The keyboard and traditional display screen have their limitations, but by and large the computer offers a better hand/arm/neck interface than the tiny personal mobile device.

 **Encourage an optimal texting posture.** A study by Gustafsson et al. (2011) showed that texting with two thumbs, with the back and forearms supported, were less likely to be "symptomatic" than those who texted with one thumb, or sat with the neck and back bent forward.

 **Stretch.** Every once in a while, open your hand wide, rotate your thumbs in big circles, clench and release your fists. Stretch your neck by tilting ear to shoulder and circling your head from side to side (not back). Stretch your shoulders by reaching up, and circling your arms. It's really a bit late, by the time you feel tension in your muscles and joints, but, as they say, "Better late than never." (Call us for pricing on our stretching posters!)

 Surely, ergonomists somewhere must be toiling away to ensure that the next generation of smartphones is likely to address these issues, and we are anxious to see how the user will view the screen with the head balanced over the shoulders, and enter text with the hands and wrists in a neutral position. Already, some devices provide options

to allow a variety of postures to be used to control the devices (i.e. keyboard AND touch screen) In the next smartphones... how will the interface with the hand become more "neutral"? How will the devices project a display into a space where it can be seen with neutral neck and shoulders? Maybe people will learn a new syntax to reduce how much they have to type? Will language recognition progress to allow us to enter sentences without typing out full words? Is a stylus better than a keyboard?.....stay tuned....



Promote Ergo at your Company

Looking for a summer ergo promotion? Consider purchasing water bottles for all of your employees. These blue, 1-litre bottles are made of BPA-free plastic, and they have "clever" ergonomics graphics wrapping all the way around.

We can also help you to choose an ergo "contest" to get people thinking about ergonomics. Perhaps now would be a good time to think about heat stress prevention....



Report on the Nashville Applied Ergo Conference

Karen and Carrie travelled to Nashville to participate in the Applied Ergo Conference, and returned to Ontario all fired up with new ideas and information (and also a little practice at line-dancing!) Among some of the more interesting tidbits:

- A ton of research is being done on **obesity**, which is one of our areas of interest. The trend continues toward heavier body weight and more sedentary lifestyles; one researcher reported that obesity is the largest change in the human form that we've ever seen in one generation. We attended some intriguing sessions on how to account for this trend.
- Carrie liked the new term "**stand-biased workstations**", which are essentially height-adjustable standing workstations, with "optional" high chairs. The research shows that people are more likely to stand at this type of work station, in comparison to a seated workstation which can be adjusted for standing.
- We jotted down dozens of **research papers** that we want to look up and review in more detail, in an effort to improve or streamline our analysis approach.
- The "**Ergo Cup**" competition was inspiring! Teams of employees from companies around the world set up very elaborate booths to highlight their case studies and

About the newsletter...

Your address: If your mailing address is incorrect, please let us know by emailing (info@taylorergo.com or faxing (519 632 7469) a correction. We'll enter you into a sweatshirt draw. Congrats to Lana Brooks of St. Thomas Energy, who earned a shirt this month.

Electronic: We're happy to send you a hard copy if you prefer to read it on paper, but we also distribute the newsletter electronically. You can also download it from our website at www.taylorergo.com Just let us know your preference!

After you've read it: Please send the newsletter along to a colleague, post it on your safety board, take it home for your family, or leave it in your lunch room. When everyone is done with it, please recycle!



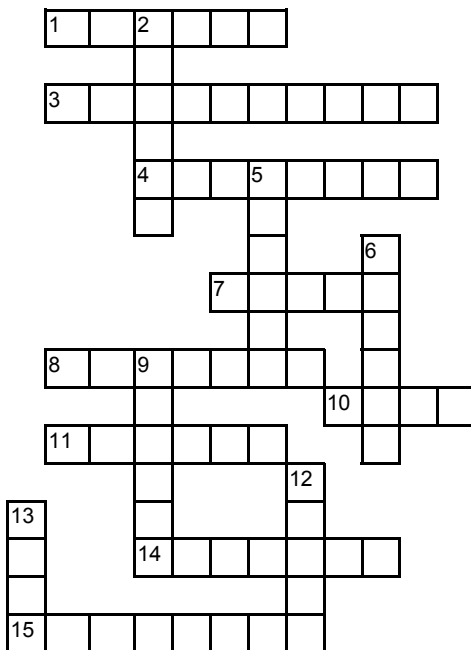
Free Ergo Speaker



If your professional association is looking for a speaker on an “ergo” topic, please contact Carrie in our office. We would be happy to come out to speak with your colleagues! (Of course, we always hope that someone might stick around to ask questions about our services.) If you are within an hour radius of one of our offices, we can probably come at no charge!

- interventions.
- We were referred to lots of “free” tools and resources on the internet, including:
 - Analysis tools suitable for ergo teams at www.ergopage.com
 - OSHA’s ergonomics resources at <http://www.osha.gov/SLTC/ergonomics/outreach.html>
 - Thomas Bernard’s “second generation” ergo analysis tools at <http://personal.health.usf.edu/tbernard/ergotools/index.html>
 - Boston College’s Sloan Center on Aging and Work provide examples of how companies are dealing with an aging workforce. www.bc.edu.research/agingandwork
 - Ergo is an *engineering* issue. Ergo is only a *safety* issue *after* injury has occurred.
 - Ohio’s BWC has an innovative safety grants program that offers a 2:1 match in funding, up to \$40000, for the implementation of an engineering control that is known to reduce MSD risk. In 2011, BWC doled out \$3M total, with an average \$20000 claim, and a typical return on investment of 1.5 years.
 - Mobile technology changes what we’ve traditionally known to be the “office environment”. Now you could be working in a hotel room, from an airport lounge, plane, waiting room, or car. The ergonomics issues are huge, and will be a challenge to resolve.
 - Lean programs list “waste” as a problem. Note that damage to humans could also be considered “waste”, along with excessive walking and motion, rework, and under-utilizing human capabilities. For example, for every 6 inches (15 cm) of reach, 0.2 seconds is added to the cycle time.
 - A study with touch-typists showed that they could learn to use the numbers on the top row of a standard keyboard, in about 2-3 days. This reduces the shoulder demands associated with reaching the numeric keyboard. Non touch-typists took longer (13 days) to learn to use the numbers on the top row.

Reminder: **North American Occupational Safety and Health (NAOSH) Week** is May 6 -12, 2012. Let us know if we can help, or check our web site for resources at www.taylordergo.com



Texting, Ergonomically!

If fewer keystrokes would reduce the risk of injury, then perhaps learning a new, more cryptic, texting language, would be part of the “ergo” solution to thumb, neck, and shoulder pain. Here is a puzzle, to get you thinking like a teenager...Write the “English” version of the following “text message” ergo abbreviations, into the puzzle.



Across

1. NRG
3. XLR8
4. STR8
7. 4CE
8. GR8R
10. FL@
11. B4
14. 2EZ (2 words)
15. DV8D

Down

2. XS
5. NE1
6. PPL
9. E4T
12. ST&
13. H&

And, in case you weren’t convinced that short-forms are less work, the 96 letters in the solution required only 46 keystrokes in the list above. And we haven’t even included acronyms that most people are familiar with, such as “LOL”, “TTYL” and “TMI”.

Of course, we are just kidding around...this system wouldn’t really be an effective ergo intervention. Once you learned the language, you would type just as fast as you do now. The sad fact is that we can’t type as fast as we can think. Until we can come up with a way to transcribe thoughts directly to text, the fingers will be the limiting factor!



Physical Demands Description May 8-9, and September 11-12, 2012

This two-day session will allow participants, including ergo co-op students, nurses, safety coordinators, and return-to-work coordinators, to collect data and write a concise physical demands description report for the WSIB, employee's doctor or physiotherapist, or for internal company use.

You will learn to:

- Identify a **primary job objective**.
- Discriminate between **essential** and non-essential duties.
- Use tools to measure **force, posture, and repetition**.
- Learn to take **photos** effectively. (Bring a digital camera from your facility, or use one from our class set.)
- Measure and document **workstation** parameters.
- Describe environmental, sensory, and mobility demands.
- Write a **concise physical demands description report** including a summary of the "functional requirements" that matches the WSIB's FAF form.
- Validate** the report, obtaining worker and management verification.

Ergo Hazard Control Toolbox, May 30, 2012

Participants in this one-day course will learn to how identify and implement quick fix solutions. THIS IS THE PERFECT COURSE FOR YOUR JHSC!

You will learn to:

- Identify and invite **key stakeholders** to your brainstorming session.
- Effectively conduct a **brainstorming** session, to develop creative and practical solutions.
- Use **simple machines** (levers, pulleys, wheels, etc) to solve ergo issues. (We'll inspire you with case studies!)
- Apply **basic ergo design guidelines** for working heights, reaches and clearance
- Effectively summarise your **recommendations**.
- Conduct a **mock up**.
- Assist with **implementation** through coaching, posters, and other good communication methods.

Driver Ergo, June 6, 2012

Join us for a one-day workshop where participants, including drivers, safety coordinators, and fleet managers, will learn how to identify risk factors faced by drivers, and how to identify and implement solutions.

You will learn to:

- Identify "**risk factors**", including awkward driving postures, force, and static or repetitive tasks.
- Describe how the **design and layout** of a typical vehicle contributes to ergonomic issues.
- Adjust the seat, steering wheel**, and other options for maximum comfort and back, shoulder, and neck safety.
- Identify and address additional issues such as **manual material handling, vibration, and sleep deprivation**.
- Identify **products and solutions**, including things that drivers and management can do.

To register, complete and fax this page to 519 632 7469, with your purchase order number, or mail it with a cheque to Taylor'd Ergonomics, Box 1107, Ayr, ON N0B 1E0. Your registration will be **confirmed by fax or email, 1-2 weeks before the course**. Register early, as space is limited. We do not accept credit card payment. Cancellations within one week of the workshop will be subject to a \$100 charge, although substitutions are welcome at any time.

Name(s) _____

Company _____

Phone _____ Fax _____

e-mail _____

P.O.# _____
(if no PO, please send cheque with registration)

Please register me for the:

Physical Demands Description course on May 8-9, \$785+hst = \$887.05

Ergo Hazard Control Toolbox course on May 30, \$360+hst = \$406.80

Driver Ergo course on June 6, \$365+hst = \$412.45

HST#89765 6377

A bi-monthly publication from
Taylor'd Ergonomics
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