

ERGONOMICS FAQ

About Ergonomics Expert

Sarah Webster, HBSc, C.K. is an Ergonomist at WESA Inc. She is a Certified Kinesiologist with the Ontario Kinesiology Association and she received her bachelor of science degree in kinesiology with a minor in computer science from the University of Waterloo. She is working towards a certificate in Occupational Health and Safety from the Ryerson University and a masters of health in ergonomics from the University of Derby. Sarah is familiar with the Canada Labour Code, and Canadian and Ontario OHS Regulations. Ms. Webster has over three-years experience in the field of ergonomics and occupational health and safety. Ms. Webster's field experience includes developing and managing ergonomics and occupational health and safety programs, and performing hazard assessments in a variety of industries: manufacturing, automotive, education, distribution, transportation, food, and social services. Ms. Webster has developed and delivered training sessions in ergonomics and occupational health and safety. Ms. Webster is also a registered member of the Association of Canadian Ergonomists. She has organized and developed the Greater Toronto Area (GTA) Environmental Health and Safety and Ergonomics Network; a volunteer, networking interactive forum for any professionals interested in related field developments and dialogue. Ms. Webster is working towards her CCPE (Canadian Certified Professional Ergonomist) and CRSP (Canadian Registered Safety Professional) designations.

She can be contacted directly by either e-mail swebster@wesa.ca or phone (905) 639-5789 Ext 150.

Feel free to ask any question about ergonomics. If Sarah can't answer it, she will find someone who can.

What Is Ergonomics?

The Association of Canadian Ergonomists (ACE) defines ergonomics as “the scientific discipline concerned with interactions among humans and other elements of a system (e.g., the tools, equipment, products, tasks, organization, technology, and environment). The profession applies theory, principles, data, methods, and analysis to design in order to optimize human well-being and overall system performance.”

It's about “fitting the task to the person” based on human characteristics and capabilities.

For example, take scissors, a common cutting tool used by all. There are child-sized scissors as well as adult-sized scissors. If you are left-handed, you can get a left-handed scissor.

Is there a difference between the terms “Ergonomics” and “Human Factors?”

No, the terms are interchangeable.

What are Musculoskeletal Disorders?

Musculoskeletal disorders (MSDs) are injuries or disorders of the musculoskeletal system of the human body, which is made up of the following: muscles, tendons, and tendon sheathes, ligaments, bones, joints/spinal discs, bursa, nerves, and blood vessels (OHSCO, 2007). They can affect the entire body from head to toe.

The typical MSDs signs and symptoms include (OHSCO, 2007):

- Pain with or without movement
- Reduced range of motion and/or stiffness
- Swelling and/or tenderness
- Tingling and/or numbness

MSDs are also known as (OHSCO, 2007):

- Repetitive Strain Injury
- Cumulative Trauma Disorder (CTD)
- Repetitive Motion Injury (RMI)
- Occupational Overuse Syndrome (OOS)
- Sprains & strains

To reduce confusion between the meanings of all of these terms, the recommendation is to use the term "MSD" to describe all of the above terms.

An MSD can affect every aspect of an individual's life, whether they are at work or at home. An individual, who cannot sit at their computer desk or lift a box comfortably at work, is the same individual who cannot sit in their armchair or lift their grandchildren comfortably at home.

MSDs may be caused or aggravated by various hazards at the home and/or in the workplace. The key MSD hazards are force, repetition, and fixed or awkward body postures with little or no rest. Other MSD hazards are vibration, contact stress or pressure, gripping, cold and hot temperatures, work organization and work methods. MSDs occur when the demands of the job tasks exceed the capabilities of the person.

References

Occupational Health and Safety Council of Ontario. (2007). *Occupational Health and Safety Council of Ontario's MSD Prevention Series. Part 2: Resource Manual for the MSD Prevention Guideline for Ontario*. Ontario: Author.

Association of Canadian Ergonomists. (2008). *About Ergonomics: What is Ergonomics and Who are Ergonomists??*. Retrieved November 13, 2008 from <http://www.acegocanada.ca/index.php?contentid=142>