

Overuse of Handheld Devices

Handheld devices such as smartphones, tablets or small instrumentation equipment are an increasingly important part of many workers' lives. Unfortunately, the overuse of these devices can lead to injuries including wrist and thumb strains, muscle tension in the neck, and eye strain.

Signs and Symptoms of a Handheld Device Related Injury?

Pain in the thumb

The most common thumb problem is referred to as 'texting' thumb. Its medical name is 'DeQuervain's tenosynovitis', an injury to the sheath or tunnel that surrounds two tendons leading into the thumb.

Pain around the wrist

Sometimes it feels like a 'bracelet' of pain. Osteoarthritis at the wrist can also be aggravated by overuse of hand-held devices.

Pain at the top of the shoulder and neck

Neck discomfort and stiffness may be from the muscles of the neck 'Tension Neck Syndrome' or from the position of the vertebrae. Looking down flattens out the vertebrae in the neck resulting in a forward head position, sometimes called 'Turtle necking'.

Eye strain

Viewing a screen with small fonts can lead to eye strain and headaches.

Why Using a Handheld Device Can Cause Pain?

Frequent users of handheld devices may be at risk of injury. The main risks include:

- awkward postures of the thumb
- repetitive motions
- holding body positions for long periods of time (static postures)

“The key to preventing hand, neck and eye strain is to limit the use and duration of the handheld device.”

Tips to Prevent Handheld Device Related Pain

- Maintain good posture for the wrists, thumbs and neck.
- Pay attention to your grip and how you are holding your device. Keep wrists upright, straight and reduce continuous gripping.
- Use a normal speed of motion. Try not to rush and type fast.
- Alternate among using your thumb, index finger and a stylus, if available.
- Investigate the use of devices that reduce grip forces like a tablet holder or external keyboard.
- Take breaks, stretch, and avoid typing for more than three minutes at a time.
- Keep text messages short. Return only urgent emails and use key shortcuts (cut, paste, etc.) and abbreviations.
- Stop when it hurts and learn to recognize overuse aches and pains.
- When choosing a device consider its weight, size and how it 'fits' in your hand.

Risk Factors for Musculoskeletal Injuries from Handheld Devices

Awkward Postures

There are five different positions the thumb can make. When these positions are at their 'end range of motion' or when there is a stretching feeling, increased strain can occur. Some handheld devices place the thumb in an awkward posture.

Repetitive Motions

The force to activate a push button or touch a screen may seem small but when it is performed repetitively or for long durations, the internal strain can be compounded. Continuous gripping of larger devices like tablets, increases pressure in the fingers, wrists and elbows.

Static Postures

Holding parts of your body in the same position for long periods of time can result in muscle strain in areas such as the neck, shoulders and upper back.

What Can Your Employer Do?

Your employer is responsible to provide a safe and healthy work environment. Your employer can prevent musculoskeletal injuries from handheld devices by developing an ergonomics program with your workplace health and safety committee. Provincial health and safety laws in Manitoba, regulation part 8 require employers to:

- ✓ conduct a risk assessment when they have been made aware of a work activity that creates the risk of sprain and strain injury.
- ✓ if the risk assessment identifies a problem, the employer must implement measures to eliminate or reduce of injury.
- ✓ Monitor the effectiveness of the measures taken and inform exposed workers of the risk of injury, common signs and symptoms of injuries and provide instruction and training on how to work to avoid injuries.

What Can You Do?

- ✓ Ask your joint health and safety committee or worker representative to review and/or develop company policies and procedures for the safe use of handheld devices.
- ✓ Report any pain or injury to your supervisor or employer.
- ✓ See a doctor if you have any symptoms of injury.
- ✓ Read the OHC resource sheets on Ergonomics
 - Lifting Safely
 - Ergonomics
 - Workplace Accommodations: Solutions for Effective Return to Work

Available online at: www.ohcmb.ca

For more information

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