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## BlackBerry Thumb

### **Emerging work-related ailment or new name for an old problem?**

*By Marsinah Trujillo, contributing writer*

BlackBerry Thumb generated quite a media buzz over the last few years. The condition causes concern in some employers about its potentially adverse impact on employee health and productivity and whether they could face liability or workers’ compensation claims related to the injury.

Given that BlackBerry Thumb is a musculoskeletal disorder (MSD) and that 30 percent of all 2006 injuries/illnesses requiring days away from work were due to MSDs, according to the U.S. Department of Labor, that concern is understandable. Yet employers should not become overly alarmed. This type of repetitive strain injury is common in the workplace and can be prevented and treated by adopting common-sense workplace preventive health principles, such as creating workplace policies on the use of the device and educating employees on risk factors, symptoms, prevention, and treatment.

Though the California Department of Industrial Relations stated that in 2006 workplace injuries and accidents declined in all industries (except for four) compared to 2005, the service sector continues to be an industry where injuries are on the rise. In this sector, professional and business services account for 2.27 million workers in California, representing a significant market in which wireless handheld devices are used. Overall, more than eight million people subscribe to the BlackBerry service, according to Research in Motion, the maker of the product.

With the explosion of these devices in the marketplace — and the increasing rate that employees use them — companies need to understand what they can do to prevent work-related injuries.

### **Internet Hoax or Bona Fide Medical Condition?**

Though the Internet offers a wealth of general information on BlackBerry Thumb, scientific studies and evidence-based health guidelines on the treatment and prevention of BlackBerry Thumb are scant at best because no such disorder officially exists in the annals of medicine. All recognized health disorders in the medical system have a diagnostic code, and there is no such associated code for BlackBerry Thumb.

BlackBerry Thumb’s origin mirrors “Nintendonitis,” a term coined in the 1980s by the game maker

to describe soreness in the thumb after a few hours of playing Nintendo. Like Nintendonitis, BlackBerry Thumb describes physical symptoms associated with a repetitive stress injury (RSI). The link between RSI and BlackBerry surfaced when a consumer agency, the American Society of Hand Therapists (ASHT), issued a warning about the device.

The ASHT issued an alert that stated, “heavy uses of electronic devices, such as BlackBerry, iPod, could lead to hand ailments.” The organization stated that “handheld electronics may require prolonged grips, repetitive motion on small buttons and awkward wrist movement ... leading to hand, wrist and arm ailments such as carpal tunnel syndrome and tendonitis.”

Other experts, including some physicians, support this consumer alert, saying that too much “thumbing” can cause injuries, especially to those people with underlying conditions, such as arthritis, that repetitive motion can aggravate.

### **Causes of Repetitive Stress Injury**

A board-certified occupational health physician explained just what BlackBerry Thumb means.

“BlackBerry Thumb is really just a catchy word for something that occupational medical doctors have long been dealing with: repetitive stress injury (RSI). We see it a lot when people’s work requires the prolonged use of specific muscle groups,” said Dr. Peter Greaney, president of WorkCare, a company providing integrated health services to employers.

He explained that RSI is a musculoskeletal disorder that damages tissue because of repetitive demands, instead of a single traumatic event. These injuries result in physical symptoms when the tissue damage is sufficient, causing pain and dysfunction. Carpal Tunnel Syndrome is an example of an RSI.

Dr. Greaney explained that the human body can withstand a finite amount of use. Overuse injuries, such as RSI, occur because of insufficient recovery time between demands, such as frequent use of the thumb on a PDA or BlackBerry.

“These types of injuries occur when mechanical fatigue in tendons and ligaments cause small tears in the connective tissue,” he noted. “This condition is worsened by the fact that the connective tissue has not repaired itself, yet continues to be placed under stress. The cumulative effect of stress on the region causes the mechanical or chemical activation of pain receptors, resulting in pain and dysfunction.”



Symptoms of RSI include recurring pain or soreness in the affected area; tingling, numbness, coldness or loss of sensation in the affected area; and loss of grip strength, weakness or fatigue.

### Risk Factors

Most occupational health physicians affirm the theory that the onset of MSD pain may be affected by variables such as psychosocial factors, including work satisfaction, as well as the capacity to cope with pain in the area of the body afflicted by RSI. People express pain uniquely. A person's inability to cope with pain due to psychosocial aspects of the work environment may result in mundane discomfort shifting into a disabling injury.

A study by the American Journal of Public Health, which examined a sample of workers from diverse occupations and backgrounds, showed that people who experienced work-related physical exertion, and psychological stress, (hectic work and conflicting demands) had a greater proportion of job-related RSIs than those who did not. Demographic variables, such as gender and higher education, were also shown to be greater predictors of work-related RSIs.

This study, as well as others, demonstrates that certain overuse injuries (e.g., carpal tunnel syndrome) vary in frequency between males and females, with females at an increased risk for RSIs. This variation may be related to differences in activities performed by men and women, differences in connective tissue tolerances that relate to hormonal factors and possibly psychosocial differences. (See "What Employers Should Do" for more information about the causes of RSIs and a few simple exercises to reduce the risk of injury.)

### Preventing BlackBerry Thumb

Since repetition is a primary factor contributing to RSI, reducing the prolonged use of such devices and/or altering the way they get used can help prevent these types of injuries. Employees should consider the following tips to prevent BlackBerry Thumb:

- Switch to a smaller BlackBerry. Over extending the thumb represents one of the main causes of BlackBerry Thumb, especially true in the bulkier devices like the 7520. To prevent over extension, consider switching to a smaller device.
- Use shortcuts. Shortcuts not only help you quickly get things done but also reduce the need to scroll. You can find these shortcuts by referring to your BlackBerry manual.
- Don't answer all e-mails from your BlackBerry. If you can, leave the non-urgent e-mails to when you get back to your computer.
- Use the AutoText feature. If you find yourself

typing the same e-mails all the time, considering using Autotext, a feature on your device that will automatically change common spelling mistakes and also allow for shortcut words.

- Use a neutral grip when holding the device. A neutral grip happens when the wrist is straight, not bent in either direction. This method will provide a greater range of motion for the wrist.
- Consider purchasing a folding, wireless keyboard to avoid typing on the small device.

### Treatment

The goals of tendonitis treatment are to relieve pain and reduce inflammation. Often home treatment, which includes rest, ice and over-the-counter pain relievers, is all that a person needs.

If the condition persists, consultation with a physician may be necessary to determine the severity of the injury.

Medical principles generally recommend following advanced treatment options only after other less complex treatments are considered. In some cases advanced treatment option may be appropriate to consider.

### Advanced Treatment Options

**Corticosteroid injections.** Sometimes your doctor may inject a corticosteroid medication around a tendon to relieve tendonitis. Injections of cortisone reduce inflammation and can help ease pain. However, there are potential side effects. For example, repeated injections may weaken a tendon, increasing your risk of rupturing the tendon. Also, corticosteroid medications should never be directly injected into the tendon itself because this can contribute to tendon rupture.

**Strengthening exercises and physical therapy.** People with tendonitis and tendonosis may also benefit from a program of specific exercise designed to strengthen the force-absorbing capability of the muscle-tendon unit.

**Surgery.** Depending on the degree and type of tendon tear, you may benefit from a surgical procedure that can improve tendon health. Damaged tendons can be removed to promote the formation of more healthy tissue. In select individuals, surgeons can repair full-thickness tendon tears to reduce pain and restore function.

BlackBerry Thumb is a preventable and treatable condition. Employers can stay ahead of curve by educating employees and creating workplace policies regarding the use of wireless handheld devices to avoid work-related claims and keep workers injury-free. □

## What Employers Should Do: Exercise Reduces Risk of Injury

The American Society of Hand Therapists (ASHT) recommends performing the following exercises:

- ✓ Fold your hands together and turn your palms away from your body. Extend your arms overhead. You should feel the stretch in your upper torso and shoulders to hand. Hold for 10 seconds and repeat eight times.
- ✓ Place your hand just above the back of the elbow and gently push your elbow across your chest toward the opposite shoulder, stretching the upper back and shoulder. Stretch both the right and left arms. Hold for 10 seconds and repeat eight times. Visit ASHT for more tips.

Any combination of the following factors can lead to repetitive stress injury:

- ✓ Repetition: The repetition of small, rapid movements, such as using a keyboard or mouse, for long concentrated hours.
- ✓ Static posture: Holding the same position, especially an uncomfortable or awkward posture, for a long period of time.
- ✓ Improper workstation setup: A workstation (table, chair) that cannot be adjusted to position you properly and comfortably at your computer or other work activity.
- ✓ Force: Using excessive force to complete tasks.
- ✓ Insufficient rest time: Intensive hours of working with too few rest breaks to allow your body to recover from an activity.