

### Noteworthy Decision Summary

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**Decision:** WCAT-2005-01425-RB **Panel:** Debbie Sigurdson **Decision Date:** Mar 21, 2005

***Activity Related Soft Tissue Disorder – Ergonomic Assessment – Dominant Hand – Sections 6(1) and 6(3) of the Workers Compensation Act – Section 13(a) of Schedule B – Policy Items #27.12 and #27.20 of Rehabilitation Services and Claims Manual, Volume I***

The worker engaged in frequently repetitive and awkward postures of her right wrist in the course of her employment and was diagnosed with right wrist tendonitis that improved when she was off work. These factors indicated that her employment activities caused her right wrist tendonitis. The worker also had diagnosed left wrist tendonitis. However, this could not be presumed to have been caused by employment activities under section 13(a) of Schedule B. Although the worker occasionally placed her left wrist in an extended position for a short duration, the affected tissues had an opportunity to rest as most of the job duties did not involve use of the worker's left hand.

The worker was employed as a housekeeper at an assisted living facility. The worker experienced gradual onset of pain to her right wrist, followed by her left wrist. The attending physician diagnosed the worker with right wrist tendonitis. The worker had experienced left wrist pain for several years and had previously been diagnosed with tendonitis of the left wrist and osteoarthritis of the left carpal bones.

An ergonomic assessment of the worksite did not identify significant force or unaccustomed activities capable of occupationally causing the worker's wrist symptoms. The Workers' Compensation Board (Board) concluded that it was less than 50% probable that the work activities had significantly stressed the affected tissues of the worker's wrists. The worker appealed the Board's decision to the Workers' Compensation Review Board. Her appeal was subsequently transferred to the Workers' Compensation Appeal Tribunal pursuant to the *Workers Compensation Amendment Act (No. 2)*, 2002.

The panel noted that some of the worker's employment activities were considered repetitive with respect to right wrist motion. While the ergonomist reported the duration of those tasks were short, the panel noted that most of the worker's cleaning activities involved use of her right wrist and hand, such that her right wrist did not have the opportunity to rest. While the worker's activities may have been varied in the course of a one-hour period, almost all of the activities involved the use of her right wrist and hand and were performed at a brisk pace. The panel also noted that the worker was right hand dominant and performed the majority of her work activities with her right hand. The panel concluded that the worker engaged in frequently repetitive tasks with her right hand and wrist.

Following the considerations in policy item #27.12 of *Rehabilitation Services and Claims Manual, Volume I*, the panel found that the worker engaged in significant extension and ulnar deviation of her right wrist. The panel also found insufficient evidence that the worker had any pre-existing condition to her right wrist. The panel noted that the attending physician had reported that the worker's right wrist symptoms improved when she took time off work and returned with increased wrist use and repetitive motions. Applying the criteria in Schedule B, the panel concluded that the worker was entitled to the presumption in section 6(3) of the *Workers' Compensation Act (Act)* and found that her right wrist tendonitis was due to her employment activities.

However, the panel found that the worker's diagnosed left wrist tendonitis could not be presumed to have been caused by employment activities under the criteria in section 13(a) of Schedule B. There was insufficient evidence that the worker engaged in significant left wrist flexion, extension, ulnar deviation or radial deviation when performing her work activities. Although she occasionally used her left wrist for support, placing her left wrist in an extended position for a short time, the left wrist had an opportunity to rest as most of the job duties did not involve use of that hand.

The panel also found that the worker's left wrist tendonitis was not due to her employment activities under section 6(1) of the Act based on general rules regarding activity-related soft tissue disorders. The worker did not engage in forceful activities or awkward postures with her left wrist for any period of time in the course of her employment duties. The panel noted that the worker had a long standing history of osteoarthritis to her left wrist.

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## Introduction

The worker claimed compensation for injury to her wrists as arising from her work activities in November 2000. On January 18, 2001 the Workers' Compensation Board (Board) disallowed the worker's claim for bilateral wrist tendonitis and overuse syndrome. The Board officer relied on a Board medical advisor's opinion to find that it was less than 50% probable that the worker's employment activities significantly stressed her wrists. The worker has appealed that decision. She seeks acceptance of her claim and health care benefits. The worker, her representative and the employer's representative attended an oral hearing held on March 15, 2005.

## Issue(s)

Is the worker's bilateral wrist tendonitis due to her employment activities in November 2000?

## Jurisdiction

This appeal was filed with the Workers' Compensation Review Board (Review Board). On March 3, 2003, the Review Board and the Appeal Division of the Board were replaced by the Workers' Compensation Appeal Tribunal (WCAT). As this appeal had not been considered by a Review Board panel before that date, it has been decided as a WCAT appeal. (See the *Workers Compensation Amendment Act (No. 2), 2002*, section 38.)

The worker's entitlement in this case is adjudicated under the provisions of the *Workers Compensation Act (Act)* that preceded changes contained in the *Workers Compensation Amendment Act, 2002* (Bill 49). WCAT panels are bound by published policies of the Board pursuant to the *Workers Compensation Amendment Act (No. 2), 2002* (Bill 63). Policy relevant to this appeal is set out in the *Rehabilitation Services and Claims Manual, Volume I* (RSCM I), which relates to the former (pre-Bill 49) provisions of the Act.

## Background and Evidence

The employer operates an assisted living facility. This 48-year-old right-hand dominant worker has been employed as a housekeeper since 1999.

The worker experienced a gradual onset of pain to her right wrist in summer 2000, and approximately 1.5 months later developed symptoms to her left wrist. She sought medical treatment on November 17, 2000. Dr. Raynor examined the worker and noted tenderness to both wrists, greater to the right side, with no swelling. The worker had pain with passive extension and flexion of her wrist. Dr. Raynor diagnosed bilateral wrist tendonitis and overuse syndrome. She recommended the worker wear splints at work.

On December 1, 2000 Dr. Raynor noted the worker continued to have pain at work to both wrists. Dr. Raynor reported that the worker's pain was greater to the radial aspect of her right wrist particularly when squeezing the trigger on the cleaning spray bottle at work and when lifting. She diagnosed the worker with right wrist tendonitis. Dr. Raynor noted the worker had sustained an acute injury to her left wrist and that she had osteoarthritis to that wrist.

The worker's job duties involved cleaning eight residents' suites per day. On December 7, 2000 the worker told the Board officer that her duties included cleaning the bathrooms with use of a spray bottle, making beds, vacuuming and cleaning glass doors. She wore rubber gloves for part of her day. The worker acknowledged that her job duties were not heavy and that there were no unaccustomed or unusual activities she performed at the time her symptoms developed, but she stated that her duties were repetitious and hand intensive. The worker attributed the onset of her symptoms to the use of the spray bottle at work.

On December 14, 2000 an ergonomist conducted a worksite visit to assess the worker's job duties for occupational risks for the development of bilateral wrist tendonitis. The ergonomist reported that the worker's daily routine involved task variability. She noted that squeezing the spray bottle and wiping and scrubbing motions the worker performed were repetitive tasks, but that these tasks were performed for a relatively short duration. The worker used her right wrist in an extended posture particularly when scrubbing or wiping down a surface. She applied force when scrubbing the floor. Vacuuming also placed the worker's right wrist in an ulnar deviated posture and required medium force. This task was performed for five to ten minutes every hour for a total of one to two hours per day. The ergonomist reported that the maximum force the worker handled was 25 pounds at eight times per day. There were no unaccustomed activities or changes to her job duties. Cleaning the bathroom and kitchen areas also required the worker apply medium force with her right wrist extended at 50 degrees. This task was performed for approximately 20 minutes every hour or for a total of three hours per day.

On December 15, 2000 Dr. Raynor reported that the worker was quite tender over the base of her thumb. The worker was coping with her job duties, although the pace was demanding.

On January 5, 2001 a Board nurse advisor reviewed the ergonomic assessment and noted that the worker's duties included short periods of repetitious activities at a brisk

pace, but with task variability. The worker did not perform unaccustomed activities. There were no awkward postures of her left wrist and there was ulnar deviation and extension of her right wrist during some tasks for short periods. The nurse advisor concluded that the occupational risk factors were minimal and non-existent. She noted that the worker had a history of bilateral wrist arthritis, and provided an opinion that arthritis is usually permanent, with exacerbation or remission of signs and symptoms.

The Board officer relied on the nurse advisor's opinion to disallow the worker's claim. The Board officer concluded that it was less than 50% probable that the work activities had significantly stressed the affected tissues of the worker's wrists.

The Board obtained chart notes related to the worker's hand and wrist symptoms from Dr. Raynor prior to her claim for wrist tendonitis. Review of those records indicates that the worker has experienced left wrist pain for several years. X-rays taken in 1991 revealed osteoarthritis of the carpal bones of the worker's left hand. The worker had developed left wrist tendonitis in 1996.

On October 12, 2001 Dr. Raynor reported that the worker's right wrist symptoms improved when she took time off work for non-compensable reasons. On her return to work, the worker's symptoms returned with increased wrist use and repetitive motions. Dr. Raynor noted that the worker had not experienced osteoarthritis to her right wrist prior to onset of the wrist tendonitis.

On October 19, 2001 a Board medical advisor reviewed the additional medical information and provided an opinion that the worker's employment duties were not the cause of her condition, but rather her work activities may have brought a pre-existing non-compensable osteoarthritis condition to her attention. The Board medical advisor noted that the worker had a significant history of bilateral wrist complaints, and that her left wrist in particular had been bothersome since 1988. He noted that in 1992 Dr. Malone had suggested an arthrodesis of the worker's left wrist. The Board medical advisor confirmed that the ergonomic assessment did not identify significant force or unaccustomed activities capable of occupationally causing her bilateral wrist symptoms.

On the notice of appeal, the worker indicated that her attending physician disagreed with the Board's conclusion that work had not caused her condition. The worker indicated that the ergonomic assessment was not complete as it did not consider many of the tasks she performed. The worker took issue with the fact that the Board's decision was based in part on her previous medical history. She noted that there were co-workers with similar complaints.

At the oral hearing the worker acknowledged that she has a history of osteoarthritis to her left hand on the top of the left side of her wrist. The worker indicated that she has been able to perform her job duties with her osteoarthritis condition. The worker stated that she gradually transitioned from a night shift as a laundry worker to a day shift as a house cleaner in October 1999. She took time off in February 2000 for non-

compensable reasons. At the time she first experienced symptoms to her right wrist she was responsible for cleaning seven or eight suites per day. Each suite was a one or two bedroom unit. The one bedroom units took approximately 45 minutes to one hour to clean. Each suite included a small kitchen, living area, deck and bathroom. The worker explained that to clean a suite she changed the bed linens, scrubbed and cleaned the bathroom and kitchen areas including hand washing the floors, vacuumed the bedrooms and living room, cleaned the windows, dusted, and scrubbed the outside deck.

The worker used a spray bottle in her right hand to clean surfaces in the kitchen and bathroom. She described the spray bottle as weighing four pounds when full and measuring eight to ten inches in height. The worker indicated that after discussion with co-workers, she started using a half full spray bottle to reduce the weight of the bottle. In a day's work she would use one full bottle of spray. The worker stated that she wiped and scrubbed surfaces with her dominant right hand and used her left hand to support her body posture, for example, when on her hands and knees to scrub the floor, or when reaching across the bathtub to scrub the tub surround. The worker demonstrated for the panel that she bent her right wrist up when making a wiping or scrubbing motion and she additionally bent her left wrist up to support her body weight when scrubbing. The level of cleaning varied depending on the resident, and at times she scrubbed spills or stains out of the carpet. She described her work activities as fast paced. The worker indicated she used force to scrub the deck, scrub trails or stains on the carpet, and to scrub overspray on the tub surrounds.

The worker first noticed aching to her wrists when she was on her hands and knees scrubbing the floors. Her symptoms gradually worsened, with pain greater to her right wrist. The worker stated that many co-workers experienced similar symptoms. She denied that she participated in any sports or activities outside of work that would have caused her condition. The worker indicated that her wrists did not bother her when away from work. She denied any previous injuries to either wrist.

The worker's representative submitted that the worker spent a majority of her workday cleaning suites, with her wrists in an awkward posture for much of the time, and with use of occasional force. The worker's representative submitted that the worker made frequent use of a heavy spray bottle and scrubbed and cleaned at a rapid pace. She noted that the worker repetitively and frequently used the spray bottle, for short durations. The worker's representative submitted that the evidence supports a finding that the worker's occupational activities meet the requirements of Schedule B for a presumption of work causation, as the worker frequently and repeatedly worked with her wrists in an extended position greater than 25 degrees. In the alternative she submitted that the worker's occupational activities were a significant cause of her bilateral wrist tendonitis. She requested the panel rely on the evidence from the worker's attending physician, who supported her claim. The worker's representative noted that the nurse advisor's opinion is based on an erroneous finding that the worker did not use her left wrist in awkward postures.

The employer's representative requested that the panel rely on the Board medical advisor's and Board nurse advisor's opinions together with the ergonomic assessment to find that the occupational activities were not a significant cause of the worker's bilateral wrist tendonitis. The employer's representative noted that the ergonomic assessment was performed close in time to the diagnosis of the worker's condition and provided an objective report of her job duties. He noted that the ergonomic assessment demonstrated there were no unaccustomed activities at that time and that the force used was low or at most medium on occasion. The employer's representative acknowledged that the Board nurse advisor's opinion was flawed as the worker does not have a history of bilateral osteoarthritis to her wrists, but he submitted the fact she has osteoarthritis to the left wrist is of significance. He noted the Board medical advisor was not able to find a causal relationship between the worker's occupational activities and her diagnosed condition. He submitted that the worker only engaged in ulnar deviation and extension of her wrists for short periods of time. The employer's representative submitted that the worker's occupational activities do not meet the requirements for a presumption of work causation as set out in Schedule B, as her activities were not unaccustomed and not repetitive. He further submitted that the ergonomic assessment demonstrates that her occupational activities were not a significant cause of her bilateral wrist tendonitis.

### **Reasons and Findings**

Section 6(1) of the Act provides that when a worker suffers from an occupational disease which disables the worker from earning full wages and the disease is due to the nature of the employment, compensation is payable. Section 6(3) of the Act deems certain occupational diseases to be caused by employment in specific processes or industries, as detailed by Schedule B. Schedule B, 13(a) recognizes hand-wrist tendinitis and tenosynovitis (including deQuervain's tenosynovitis) as an occupational disease, where the affected tendon is used to perform tasks involving any two of the following:

1. frequently repeated motions or muscle contractions that place strain on the affected tendon(s);
2. significant flexion, extension, ulnar deviation or radial deviation of the affected hand;
3. forceful exertion of the muscles utilized in handling or moving tools or other objects with the affected hand or wrist.

The activity must represent a significant component of the employment.

Item #27.12 of RSCM I provides guidelines to determine the frequency, force, and positioning of the hand or wrist in performing the work activities to determine whether schedule B 13(a) applies. If the worker has been exposed to the work activities for sufficiently long, there may be a presumption that it was a significant cause in the development of the tenosynovitis.

To determine frequency of repetition of the task, consideration is given to four factors, as follows:

- the frequency of the work cycle for the tasks being performed (the number of times the same motion or muscle contraction is performed within a specified period);
- the amount of time during a work cycle that the affected muscle/tendon groups are working compared to the amount of time such tissues have to return to a relaxed or resting state;
- the amount of time between work cycles where the affected muscle/tendon groups are able to return to a relaxed or resting state;
- whether other activities are performed between work cycles that cause stresses to be placed on the affected muscle/tendon groups that affect the ability of those tissues to return to a relaxed or resting state, and if so whether such activities are repetitive in nature.

Generally the tasks in question require repetition at least once every 30 seconds or require the same motions or muscle contractions for 50% or more of the work cycle, such that the affected muscles or tendons have less than 50% of the work cycle to return to a relaxed or resting state.

Some of the worker's employment activities are considered repetitive with respect to right wrist motion. I note in particular that the use of the cleaning spray bottle and scrubbing and wiping surfaces required the worker's right wrist be used in a repetitive motion. While the ergonomist reported the duration of those tasks were short, particularly for use of the spray bottle, I note that most of the worker's cleaning activities involved use of her right wrist and hand, such that the affected tissues of her right wrist did not have the opportunity to rest. The worker's right wrist and hand was in use for vacuuming, scrubbing, wiping surfaces, operating the spray bottle, and changing the bed linens. While the worker's activities may have been varied in the course of a one hour period when cleaning a resident's suite, almost all of the activities involved the use of her right wrist and hand and were performed at a brisk pace, such that I find she engaged in frequently repetitive tasks with her right hand and wrist.

I am unable to make the same conclusion with respect to the worker's use of her left hand and wrist. The worker's evidence is that she is right hand dominant and used that hand to wipe surfaces and operate the spray bottle. While I accept that the worker used her left wrist occasionally to support her body weight when she moved to a more awkward position when cleaning the bathroom and kitchen surfaces, I do not find that she engaged in repetitive use of her left hand and wrist. Most of the house cleaning activities involved use of only her right hand and wrist.



To determine whether a worker engaged in significant flexion, extension, ulnar deviation, or radial deviation of the affected wrist, RSCM I item #27.12 directs the decision maker to consider whether the worker's hand or wrist is engaged in greater than 25 degrees flexion or extension, or greater than ten degrees of ulnar or radial deviation.

I note that the ergonomist has reported the worker engaged in right wrist extension at 50 degrees when wiping and scrubbing surfaces and right wrist ulnar deviation at 25 degrees when vacuuming the floors. The reported total time during her workday at these two activities is four to five hours of her seven hour shift. I further note that both of these activities were described as requiring medium force. I find the worker engaged in significant extension and ulnar deviation of her right wrist.

I note that the Board nurse advisor and Board medical advisor had based their opinions on a conclusion the worker had osteoarthritis to her right wrist. I find insufficient evidence the worker had any pre-existing condition, including osteoarthritis, to her right wrist. I rely on the worker's evidence and Dr. Raynor's opinion to find that the worker did not have a pre-existing condition to her right wrist. I further note that the worker's right wrist symptoms improved when she was away from work for non-compensable reasons, and returned on her resuming the cleaning duties. I rely on the ergonomic assessment and the worker's oral evidence to find that the worker engaged in frequently repetitive and awkward postures of her right wrist in the course of her employment such that her diagnosed right wrist tendonitis is due to her employment activities, pursuant to Schedule B.

There is insufficient evidence that the worker engaged in significant left wrist flexion, extension, ulnar deviation or radial deviation when performing her work activities. As previously noted, the worker occasionally used her left wrist for support, and I accept that when doing so the worker would have placed her left wrist in an extended position for a short duration. Many of the job duties did not involve use of her left hand and wrist, such that the affected tissues had the opportunity to rest. I find the worker's diagnosed left wrist tendonitis does not fall within the scope of a presumption of work causation as set out in Schedule B.

The next issue to determine is whether the worker's left wrist tendonitis was due to her employment activities, based on the rules of general application regarding activity related soft tissue disorders. In order for the condition to be compensable, the work activities must be a significant cause of the left wrist tendonitis; it need not be the sole or predominant cause. The risk factors associated with the employment, as set out in RSCM I item #27.20, are considered to determine whether the work was significantly causative in producing the condition.

I note that the worker did not engage in forceful activities or awkward postures with her left wrist for any period of time in the course of her employment duties, such that I find

her exposure to occupational risks for the development of left wrist tendonitis were minimal. I note that the worker has a long standing pre-existing condition to her left wrist, for which she has received medical treatment. I accept the Board medical advisor's and Board nurse advisor's opinions with respect to the relevance of the worker's history of osteoarthritis to her left wrist. I am unable to conclude that the work activities were significantly causative of the worker's left wrist tendonitis, given the worker's pre-existing, intermittent, and ongoing history of symptoms to that wrist, and the fact that she did not use her left wrist to the same degree in the performance of her job duties.

### **Conclusion**

I allow the worker's appeal and vary the Board's decision. I find that the worker's right wrist tendonitis is due to her employment activities, but that her left wrist tendonitis is not due to her employment activities. I refer the matter back to the Board to determine the worker's entitlement to benefits. No expenses were requested and none ordered.

Debbie Sigurdson  
Vice Chair

DS/jd