DECISION OF THE WORKERS' COMPENSATION APPEAL TRIBUNAL

Introduction

[1] The worker, an insurance adjuster, applied to the Workers' Compensation Board (Board)[1] for compensation in March 2018. She advised that she had been diagnosed with right lateral epicondylopathy and right wrist extensor tendinitis. She attributed her symptoms to the repetitive strain on her right wrist resulting from increased mouse movement after a second computer monitor had been installed about six months earlier. The Board denied her claim on April 24, 2018.

[2] The worker now appeals a Review Division decision dated February 21, 2019 (*Review Reference #R0240455*) to the Workers' Compensation Appeal Tribunal (WCAT). The Review Division confirmed the Board's April 24, 2018 decision to deny the claim. A WCAT panel had previously varied the Review Division's February 21, 2019 decision following an oral hearing in July 2019, but that WCAT decision was set aside on the grounds of procedural fairness.[2] Accordingly, WCAT is now addressing anew the February 21, 2019 Review Division decision.

[3] As the previous WCAT panel recused itself from deciding the appeal anew, the appeal was assigned to a new panel. The employer is participating in this appeal. Both parties have representation. The parties agreed that another oral hearing was unnecessary. They were provided with a copy of the audio recording of the previous oral hearing, and I have listened to that recording. The parties were invited to provide written submissions on this appeal.

Issue(s)

[4] Did the worker develop right lateral epicondylopathy and/or right wrist extensor tendinopathy due to the nature of her employment?

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[1] operating as WorkSafeBC

[2] The original WCAT decision is *WCAT Decision A1900738*. The WCAT reconsideration decision is *WCAT Decision A1902626*. The procedural unfairness stemmed from WCAT's failure to invite the employer to participate in the oral hearing.

Workers' Compensation Appeal Tribunal

150, 4600 Jacombs Road, Richmond, B.C. V6V 3B1
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Jurisdiction and Standard of Proof

[5] The Workers *Compensation Act* (Act) was reorganized and renumbered under the *Statute Revision Act*, RSBC 1996, c 440, effective April 6, 2020. All references to the Act in this decision refer to the *Workers Compensation Act*, RSBC 2019, c 1.

[6] This appeal was filed with WCAT under subsection 288(1) of the Act, which provides for the appeal of a final decision by a review officer regarding compensation matters.

[7] The standard of proof is the balance of probabilities, subject to subsection 303(5) of the Act. Section 303(5) provides that if WCAT is hearing an appeal regarding the compensation of a worker and the evidence supporting different findings on an issue is evenly weighted in that case, the appeal tribunal must resolve that issue in a manner that favours the worker.

[8] I am bound to apply the published policies of the board of directors of the Board set out in the applicable version of the *Rehabilitation Services and Claims Manual, Volume II* (RSCM II), subject to the provisions of section 304 of the Act.

[9] Many RSCM II policies were amended as necessary to reflect the reorganization and renumbering of the Act as described above. Those changes apply to all decisions, including appellate decisions, made on or after April 6, 2020.

Preliminary Matter

[10] When the previous panel reached its (now set aside) decision on August 7, 2019, Dr. Robinson, an ergonomist with a doctorate degree in kinesiology, had offered an opinion that there were sufficient risk factors in the worker's employment to be of causative significance to the worker's right hand-wrist tendinopathy and to her right lateral epicondylopathy. In addition, Dr. Milde, the worker's family physician, provided a June 1, 2019 opinion on causation. Dr. Milde wrote that he had not identified any non-work-related causes for the worker's right upper extremity conditions.

[11] Since August 7, 2019, new medical evidence had been placed on the worker's claim file. That evidence included a November 6, 2019 consultation report from Dr. Dunne, a rheumatologist and internal medicine specialist. Dr. Dunne wrote that the worker had been having some difficulty with her shoulders, and aching in her right elbow and right wrist for some time. She also had trouble with her hands since May 2019, and her left knee occasionally ached. After examination, Dr. Dunne thought the worker had evidence of flexor tendinopathies in her hands due to an acute inflammatory tendinitis. He thought she had associated inflammation of her thumb joints, knees and feet, suggesting an inflammatory arthritis. He sent her for further testing.

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[12] Dr. Milde then reported to the Board on December 16, 2019 that the worker was currently in the appeal process for her claim, but there was now evidence of an underlying alternate cause of her disability. Dr. Milde explained that the worker had been diagnosed with inflammatory arthropathy and flexor tenosynovitis in the hands. Dr. Milde wrote that this was now the predominant cause of her disability, and his previous opinion "will need to be reevaluated."[3]

[13] In his chart note for December 16, 2019, Dr. Milde also wrote that the worker's problem had become more of an inflammatory problem than an ergonomic one. The letter he wrote for the Board was no longer valid as the worker had evidence of an underlying inflammatory medical problem. He indicated he would update the Board on this underlying condition and the worker understood "that this will likely negate her WCB [Workers' Compensation Board] appeal."

[14] On the current appeal, the worker provided a June 17, 2020 medical-legal opinion from Dr. Weiss, a physical medicine and rehabilitation specialist. Dr. Weiss was provided with Dr. Milde's December 16, 2019 report. Dr. Weiss wrote that there was no objective medical evidence provided that the worker had any pre-existing or new medical condition associated with the development of her symptoms. He added that there was no laboratory or medical imaging evidence to support a diagnosis of right-sided inflammatory arthritis. He noted she had seen a rheumatologist, but he had not seen a consultation report or the results of laboratory testing.

[15] Dr. Weiss concluded that the right hand, wrist, and elbow symptoms the worker developed in late 2017 and early 2018 were in keeping with the diagnoses of right lateral epicondylitis or tenosynovitis of the extensor region of her right forearm. He thought that the static co-contraction of the worker's right forearm flexors-extensors and overuse, the need for prolonged micro-movements with mousing, and the reported relationship between her symptoms and the changes in her work activities with a second monitor, were all factors that significantly contributed to the development of her clinical condition.

[16] Given the above new evidence, I exercised my authority under subsection 297(2)(b) of the Act to have the Board conduct further investigation. As part of that investigation, I asked the Board to try to obtain any laboratory results or medical imaging to first determine if the diagnosis of an inflammatory arthritis was accurate. If that diagnosis could be confirmed, I asked the Board to obtain a medical opinion that addressed whether or not the worker's right wrist and elbow symptoms, which began in late 2017 and for which she filed a claim in March 2018, were more likely symptoms of her underlying inflammatory arthritis than of the diagnosed activity-related soft tissue disorders (ASTDs).

[17] As part of the Board's further investigation, Dr. O'Brien, a Board medical advisor, provided a December 4, 2020 opinion. After reviewing all of the medical evidence, she concluded that the

[3] All quotes are reproduced as written, except where noted otherwise.

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worker's clinical findings in March 2018 were in keeping with the diagnosis of right lateral epicondylitis and tendinitis/tenosynovitis of the right forearm extensor compartment.

[18] Dr. O'Brien explained that rheumatoid arthritis is a chronic, systemic, inflammatory arthritis condition. It usually affects smaller joints in the hands, arms, feet, and legs. She noted that, while it is possible some of the worker's right elbow, forearm, and hand symptoms in early 2018 could have related to the beginning of an inflammatory condition, this was impossible to confirm. Rather, the findings in early 2018 were consistent with right lateral epicondylitis and right forearm tendinitis. The findings consistent with a systemic inflammatory condition were not noted until around May 2019, following which further assessment led to the diagnosis of rheumatoid arthritis.

[19] The above opinion and further disclosure were provided to the parties for submissions. The parties agreed that the best available diagnoses for the worker's condition in late 2017 and early 2018 remained right lateral epicondylitis and right wrist/forearm extensor tendinitis. I too am satisfied that this appeal should proceed on the basis of the diagnoses of right lateral epicondylopathy and right wrist/forearm extensor tendinopathy.

Background and Evidence

[20] The worker saw Dr. Milde on March 8, 2018. Dr. Milde documented the worker having said that there had been a change in the pattern of her mouse use with the addition of a dual screen at work about four to five months earlier. She had developed pain in the area of her right metacarpophalangeal joints. This pain radiated to her right lateral elbow, and she had pain and weakness when lifting with right wrist extension. Her pain was worse by the end of her work week. On examination, she had tenderness over the lateral epicondyle and the entire extensor muscle group to the wrist. Dr. Milde diagnosed right lateral epicondylitis and right wrist extensor tendinitis. He recommended physiotherapy and time off of work.

[21] When the worker filed her application for compensation in March 2018, she reported that she had a repetitive strain injury. She advised that dual monitors had been installed about six months earlier and the mouse movement between the two monitors increased the rotation of her right wrist. She is ambidextrous. She writes with her left hand, but completes most other job duties with her right hand, including using the mouse.

[22] During a conversation with a Board officer on March 16, 2018, the worker explained that her job entails keyboarding and mousing. Owing to the installation of dual monitors, moving the mouse between the two screens required more hand movements than before. Her workload of typing and mousing had also increased. She first noticed intermittent right elbow symptoms six months earlier. She would adjust her position and continue to work. She only noticed symptoms at work. Over the previous six weeks, her symptoms became more acute and began bothering her

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outside of work. The pain had begun to radiate from her right elbow into her wrist and hand. It increased with gripping, lifting, and twisting.

[23] The employer told a Board officer on March 21, 2018 that a new computer system was implemented about four or five years earlier. Within the last year or so, a second monitor was installed at workstations. Other than that, there had been no change in workload or duties.

[24] The worker first attended for hand therapy on March 29, 2018. The hand therapist documented the worker having said that she received a second monitor about six months earlier, and she noticed her right elbow and forearm had started to get sore. The newer software also required more mouse work, and she noticed more right arm strain. She commented that her right elbow felt much better after some recent time off of work.

[25] The Board conducted a job site visit (JSV) on April 10, 2018. A Board case manager attended the worker's workplace and evaluated her duties. Video clips were taken during the JSV and I have reviewed them. The JSV report is dated April 11, 2018. It describes the worker's duties as essentially identical to what she had testified to during the oral hearing. The case manager noted that the worker was constantly reviewing electronic documents and completing data entry tasks, which required her to use a large number of drop-down boxes to input data. The case manager observed that the worker was frequently mousing between windows and scrolling between lists and documents on the screens. The worker would also have intermittent periods of entering text into various fields on the screens. The case manager described the worker's breaks as being infrequent.

[26] The case manager observed that, when mousing, the worker demonstrated radial and ulnar deviation of up to 20 degrees, but with limited force. The case manager considered the worker's wrist movements to be frequent as they consisted of greater than 10 wrist movements per minute, but he commented that they were subtle in radial or ulnar deviation. The worker's finger movements when clicking and scrolling were much less than 200 movements per minute.

[27] The case manager summarized in the JSV that the worker had frequent right wrist movements with radial and ulnar deviation though a "short arc," the forces on her hands were sedentary, and there was occasional right wrist radial and ulnar deviation greater than ten degrees. The case manager found that the worker was accustomed to the work, although he thought there was a "slight change" in her right hand and wrist movements with the addition of a second monitor. Yet, of note, while observing the worker during the JSV, the case manager can be heard commenting that the worker's right wrist moved "quite a fair bit" when moving the mouse to access both monitors. I consider the case manager's "slight change" observation in his written report is inconsistent with what he said during the JSV. I find his comments during the JSV to be more reliable than his written summary in this regard, as the video clearly demonstrated the worker's right wrist moving beyond ten degrees of radial and ulnar deviation when moving the mouse so as to move the cursor from one monitor to another.

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[28] The case manager obtained an April 19, 2018 medical opinion from Dr. Potiuk, a Board medical advisor. In response to whether the activities/movements described in the JSV were capable of stressing the tendon/tissue in question, and whether the stress identified was sufficient to cause or contribute to the diagnosis, Dr. Potiuk replied:

> The worker was accustomed to the work tasks, which would minimize the risk of injury, and the addition of a second monitor would not significantly change the postures or movements required. The work duties, as described and seen in the video, require repetitive small movements of the hands and wrists; however, the repetition is not associated with any significant forces or awkward wrist postures. No awkward wrist flexion or extension or awkward elbow or forearm postures or movements are required and while ulnar and radial deviation of the wrist greater than 10 [degrees] can occur, these would be brief dynamic movements that occur with occasional frequency at no set pattern, and are not associated with any significant forces or repetition, which would minimize any potential stresses encountered and allow the affected tissues/tendons sufficient time for rest and recovery. There are no significant stresses on the elbows and certainly there is no evidence of activity approaching the identified Board guidelines, as delineated in Practice Directive C4-2, of no more than 10 awkward elbow movements per minute continuously for greater than 120 minutes; and/or no more than 10 awkward wrist movements per minute for greater than 120 minutes. Awkward postures of the elbow are defined as elbow flexion of greater than 120 degrees and elbow extension beyond neutral of 180 degrees (hyperextension). Awkward postures of the wrist are defined as wrist flexion of greater than 25 degrees from the resting posture of 0 degrees, extension greater than 25 degrees from resting posture of 20 degrees, and radial or ulnar deviation greater than 10 degrees from neutral. Additionally no sustained awkward postures were seen; with sustained being defined as more than 25% to 33% of the shift is spent in the awkward position. Development of a wrist extensor tendonitis would require repetitive awkward wrist extension, usually combined with moderate to high forces, which does not occur with the work duties described and seen in the video. Therefore, after reviewing the medical and ergonomic assessment and the Occupational Risk Factors noted above, I cannot find sufficient risk factors at work that would increase the risk of developing a right wrist extensor tendonitis or lateral epicondylitis.

[29] In response to whether there were any non-occupational risk factors, Dr. Potiuk responded that normal household duties could affect the tendons and tissues involved, but he was unable to comment on whether this was a risk factor with the information that was provided.

[30] The case manager relied on Dr. Potiuk's opinion when denying the worker's claim.

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[31] As earlier noted, on the original appeal to WCAT the worker submitted a June 1, 2019 medical opinion from Dr. Milde and an April 29, 2019 ergonomic assessment report from Dr. Robinson.

[32] In forming his opinion, Dr. Milde reviewed the worker's medical reports, the JSV, and Dr. Robinson's ergonomic assessment. Dr. Milde wrote that he did not have the expertise to make a statement on the ergonomic assessment or the recording, but his opinion was based on the worker's symptoms and medical assessments. Dr. Milde stated that the opinion of Dr. Potiuk was reasonable based on the information that was provided to him; however, the opinion did not take into account the significant change in mouse usage that the worker experienced. Dr. Milde opined that there was a connection between the worker's unaccustomed mousing activity and her right lateral epicondylitis and wrist tendinitis as the physical findings were consistent with these conditions, these conditions manifested during a period consistent with the changes in her mouse usage, and he was unable to identify any other non-work-related cause for the worker's symptoms. He also opined that the fact that her symptoms were relieved when she was away from work further supported work-related causation.

[33] Dr. Robinson reviewed the JSV report and the accompanying video. Dr. Robinson opined that the JSV provided a reasonable depiction of the worker's job duties, but the risk factors that were observable on the video were not adequately or accurately documented. Dr. Robinson indicated that, when identifying relevant work-related risk factors for both ASTDs, the main considerations were hand, wrist, and forearm activities that involved the extensor tendons of the wrist and forearm. These tendons will experience increased internal tension during activities that involve finger extension, fourth and fifth finger abduction, wrist extension, wrist radial and ulnar deviation, forearm pronation and supination, and gripping efforts.

[34] In assessing relevant risk factors, Dr. Robinson referred to the applicable Board policy and to the Board's Practice Directive C4-2.[4] I will not summarize all of his observations about risk factors as it is not necessary for purposes of this appeal.

[35] Dr. Robinson summarized the risk factors he observed with reference to some screen shots he took from the JSV video. He wrote that awkward postures of the right wrist and forearm that exceed guidance thresholds were observed throughout the use of the mouse and the keyboard. Right wrist ulnar deviation greater than ten degrees occurred during both mouse and keyboard use with an exposure of approximately 75% of work that was documented in the videos. Dr. Robinson also explained that the use of the keys on the right side of the keyboard (backspace, delete, shift, arrows, enter) involved abduction of the small finger with ulnar wrist deviation. Repetition rates for right wrist movements in radial/ulnar deviation occurred at rates exceeding the guidance threshold of ten per minute, mainly while sustaining lateral (ulnar/radial)

[4] Practice directives are not binding; however, they can provide adjudicative guidance for consistency purposes.

Workers' Compensation Appeal Tribunal

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deviation of the wrist beyond ten degrees. The rate of movement in and out of awkward ulnar and radial deviation exceeded two per minute for movement through awkward wrist postures.

[36] In addition, use of the mouse and keyboard required right forearm pronation greater than 80 degrees for the entire duration of the work shown. Dr. Robinson noted that this was not identified in the JSV report; yet, this position would require sustained activity of the muscles in the forearm, which attach to the lateral epicondyle. He explained that this contradicted Dr. Potiuk, where he stated there were no awkward forearm or elbow postures. Dr. Robinson further observed that the assessment of awkward postures did not address that the worker had sustained ulnar deviation with awkward forearm pronation with repetitive index finger movement during scrolling and clicking.

[37] With regard to repetition, Dr. Robinson noted that Dr. Potiuk acknowledged the worker had greater than ten wrist movements per minute while she was working. But, Dr. Potiuk found that these movements were brief and dynamic. Dr. Robinson explained that this would not make the movements less relevant as a risk factor as Board policy does not speak to the degree of the wrist movement. He stated that there was a lack of detail regarding the actual rate of repetition, which left the matter open to interpretation. However, from his observation, the worker demonstrated ulnar deviation of greater than 10 degrees and forearm pronation of greater than 80 degrees for the majority of her work cycle.

[38] In Dr. Robinson's opinion in relation to hand-wrist tendinopathy, the worker had frequently repeated right wrist movements through awkward radial/ulnar deviation (greater than 10 degrees) and this occurred for approximately 75% of her observed work. He also noted a number of other postures and movements of the right hand and forearm that would stress the extensor tendons (sustained forearm pronation greater than 80 degrees, sustained small finger-thumb grip on the mouse, repetitive scrolling with the index finger, lateral reach for keys on the right-hand side of the keyboard, and rapid finger movements (180 per minute) during keyboarding).

[39] In Dr. Robinson's opinion in relation to right lateral epicondylopathy, highly repetitive movements and awkward postures of the right hand, wrist, and forearm that engaged the right forearm extensor muscles were observed in her work tasks (use of the same extensor muscles that were relevant in the consideration of hand-wrist tendinopathy). They included sustained forearm pronation greater than 80 degrees, sustained and repeated ulnar deviation greater than 10 degrees, sustained fingertip grip of the mouse between the thumb and small finger, rapid and repeated extension of the index finger when scrolling, and ulnar deviation with extension and abduction of the small finger to use the keys on the right-hand side of the keyboard.

[40] The worker testified at the July 2019 oral hearing that she had worked for her employer for over 28 years at that time, and she had been working as an injury adjuster since 2005. Her job is an office-based position. She works almost exclusively on the computer during her entire 8.5-hour

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shift, except for two 15-minute coffee breaks and a 45-minute lunch break. The worker works Monday to Friday with every second Friday off.

[41] The worker began to notice pain in her right wrist and elbow areas in October or November 2017 after the employer had installed a second monitor at her workstation. The worker described the monitors as very large. The addition of a second monitor now required her to scroll from one screen to the other. This resulted in significantly more mouse movement to cover the greater distance.

[42] The worker explained that an electronic claims system had been in place for about five years, and use of it had been continually and progressively changing over time. With the addition of the second monitor, she began using the electronic claim system to a fuller capacity. In particular, she was now using the drop-down boxes and tabs to a fuller capacity. This resulted in more mousing and scrolling. For example, before the dual monitors, she would type in notes, but after the second monitor was in place, she would then also have to add those notes into the drop-down boxes under the appropriate tabs.

[43] The worker also testified that when she was away from work for periods of time, such as a vacation, her symptoms began to improve only to return when she was back in the workplace. The worker also explained that she was at times assigned paper-based legacy files as she is a senior adjuster. These legacy files only required typing text into the computer system. When completing the legacy files, her symptoms improved significantly as well.

[44] The worker described her symptoms as "painful and burning" in the right wrist and elbow areas. This prompted her to see Dr. Milde in March 2018.

Submissions and New Evidence on Appeal

[45] The worker contends that Dr. Robinson's report, in combination with Dr. Milde's evidence, is supportive of acceptance of her appeal, particularly given the flaws in Dr. Potiuk's interpretation of the JSV evidence and the conclusion that she was accustomed to her work.

[46] The worker also provided the June 17, 2020 medical-legal opinion from Dr. Weiss. He again observed that the worker's work demands changed with the introduction of dual monitors about five months prior to her March 2018 appointment with Dr. Milde. Her clinical complaints developed along this timeline.

[47] Dr. Weiss thought the worker's clinical presentation was in keeping with the diagnoses of right lateral epicondylitis and/or tenosynovitis of the musculotendinous extensor region of her right forearm. He explained that these muscles primarily control wrist and finger extension. The common extensor, which inserts into the lateral epicondylar region of the elbow is a blending of the origin of many but not all of these muscles. Soreness in this area is considered to be related

to overuse from repetitive movements, poor biomechanical practices, and/or excessive biomechanical stresses in this area. Discomfort can arise from chronic muscle tension and/or enthesopathy, which is defined as a disorder that involves the attachment (origin) of a tendon or ligament to the bone, which in the worker's case is the lateral epicondylar region of the humerus.

[48] Dr. Weiss noted the differing opinions regarding whether the worker met the Board's ASTD criteria. He wrote that it was beyond the scope of his review to comment on the accuracy of the assessments provided. In any event, he observed that the worker reported a material change in her computer-based activities with the addition of a second monitor. In his view, the impact this had on her work activities was probably a significant factor in the onset of her symptoms, and this supported a work-related causality. He thought Dr. Potiuk had not paid adequate attention to this factor and appeared to have discounted it without full consideration. Dr. Weiss also thought it important to note that the worker's symptoms improved with time off work, and this too supported a work-related causality.

[49] Dr. Weiss explained that a second monitor would be expected to materially change the use of a computer mouse, including dragging the cursor, the length of time the cursor needs to be held in place, and the need for prolonged micro-movements with mousing. He did not think there had been a thorough investigation in this regard, particularly the cumulative duration of co-contraction of the flexor and extensor tendons. He advised that prolonged co-contraction of antagonistic muscles can be associated with chronic muscle fatigue and increasing dysfunction.

[50] Overall, Dr. Weiss thought the ASTD criteria did not adequately address the association between static co-contraction of the forearm flexors-extensors and overuse, the need for prolonged micro-movements with mousing, and the clearly reported relationship between the changes in her work activities with the addition of a second monitor and the development of her symptoms. He thought these factors significantly contributed to the development of symptoms and dysfunction which supported a work-related causality. He considered the work activities to be a significant contributor to the development of the worker's condition.

[51] As this new evidence was provided on reply, the employer was offered an opportunity to provide a further submission.

[52] The employer reiterates that the worker was accustomed to her work duties, and the addition of the second computer monitor did not materially change her use of the computer mouse. The employer added that Dr. Weiss's opinion indicates that further investigation would be needed to determine the impact of the use of a mouse with a second computer monitor. With respect to a reduction in symptoms away from work, the employer submits that this does not establish her condition is due to her work activities.

Workers' Compensation Appeal Tribunal

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[53] The employer also contends that Dr. Weiss's statement that the change in the worker's work activities "probably" were a significant factor is not capable of establishing work causation ("due to" the nature of the work) as it is necessarily speculative. Further, that Dr. Weiss thought there was insufficient investigation of the changes establishes that his opinion is speculative. That he offered an opinion the ASTD criteria do not adequately address the worker's issue is not an opinion on causation and does not support causation.

[54] The employer contends that Dr. Robinson's report is flawed, that the worker was accustomed to her work, and that Dr. Weiss's opinion should be given little weight.

[55] I will address further details of the parties' submissions in my analysis that follows.

Analysis and Findings

[56] Section 136 provides that compensation is payable in relation to an occupational disease, as if the disease were a personal injury arising out of and in the course of a worker's employment, if the worker has an occupational disease that disables the worker from earning full wages at the work at which the worker was employed, and the occupational disease is due to the nature of any employment in which the worker is employed.

[57] Policy item #C4-27.10 provides that when the strength of association between a process or industry and a specific ASTD is strong, the Board may include it in Schedule 1 of the Act with the benefit of a rebuttable presumption provided for in section 137 of the Act. Hand-wrist tendinopathy is one such ASTD.

[58] In addition, the Board can designate or recognize a disease as an occupational disease by regulation of general application as provided for in subsection 138(2) of the Act. The Board determines whether a worker's ASTD was caused or aggravated by the worker's employment. Epicondylopathy does not have the benefit of a presumption and is adjudicated as an occupational disease by regulation of general application.

Hand-Wrist Tendinopathy under the Presumption

[59] Policy item #C4-27.20 addresses ASTDs recognized by inclusion in Schedule 1. With respect to hand-wrist tendinopathy, Schedule 1 provides a rebuttable presumption that hand-wrist tendinopathy is due to the nature of employment where a worker was employed in a process or industry:

> Where there is use of the affected tendon or tendons to perform a task or series of tasks that involve any 2 of the following and where such activity represents a significant component of the employment:

(a) frequently repeated motions or muscle contractions that place strain on the affected tendon or tendons;

(b) significant flexion, extension, ulnar deviation or radial deviation of the affected hand or wrist;

(c) forceful exertion of the muscles used in handling or moving tools or other objects with the affected hand or wrist.

[60] The Board provides guiding principles when interpreting the descriptions used in Schedule 1 in connection with hand-wrist tendinopathy. With respect to "frequently repeated motions or muscle contractions," this means a worker who is performing the same work task(s) again and again without interruption or rest in between the work task(s). Generally, tasks that place strain on the affected tendon or tendons, and that are considered to involve "frequently repeated motions or muscle contractions" are repeated:

- at least once every 30 seconds; or
- with at least 50 percent of the work cycle spent performing the same motions or muscle contractions, and less than 50 percent of the work cycle time for the affected muscle/tendon groups to return to a relaxed or resting state.

[61] The case manager observed that, when using the mouse, the worker demonstrated frequent right wrist movements as they consisted of greater than ten wrist movements per minute (far greater than at least once every 30 seconds).

[62] The employer acknowledges the worker's job requires frequent hand and wrist movements. Drs. Potiuk and Robinson agreed on this. But, the employer contends that the frequent movements did not place strain on the affected tendons.

[63] In support, the employer notes Dr. Potiuk differentiated between small movements of the hands and wrists and those involving ulnar deviation of ten degrees or greater. Based on the JSV video, Dr. Potiuk concluded the frequency of ulnar and radial deviation would be brief dynamic movements that occur with occasional frequency at no set pattern, and were not associated with any significant forces or repetition, which would minimize any potential stresses encountered.

[64] Dr. Robinson explained that brief and dynamic wrist movements would not make the movements less relevant as a risk factor as Board policy does not speak to the degree of the wrist movement. I note that "frequently repeated motions or muscle contractions that place strain on the affected tendon or tendons" does not require any particular degree of strain on the tendons.

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[65] In other words, to find there are frequently repeated motions or muscle contractions that stress the affected tendons does not require a finding that those motions or muscle contractions involved "significant" flexion, extension, ulnar deviation, or radial deviation of the affected hand or wrist. Indeed, the presumption can be met in the absence of any so-called significant "awkward" postures of the affected hand or wrist. This lessens the weight to be given to Dr. Potiuk's opinion.

[66] The first key question then is what movements/muscle contractions would place strain on the affected tendon(s). Dr. Robinson indicated that, when identifying relevant work-related risk factors for both ASTDs, the main considerations were hand, wrist, and forearm activities that involved the extensor tendons of the wrist and forearm. He explained that these tendons will experience increased internal tension during activities that involve finger extension, fourth and fifth finger abduction, wrist extension, wrist radial and ulnar deviation, forearm pronation and supination, and gripping efforts. I have no compelling reason to question Dr. Robinson's expertise in this regard, and find that the above-noted postures/movements will place strain on the affected extensor tendons.

[67] The remaining question is whether any of the worker's frequently repeated motions or muscle contractions placed strain on her right extensor tendons. I find that they did. Dr. Robinson observed that the worker had frequently repeated right wrist movements through greater than 10 degrees of radial/ulnar deviation. He also noted a number of other postures and movements of the right hand and forearm that would stress the extensor tendons. These included sustained forearm pronation greater than 80 degrees, sustained small finger-thumb grip on the mouse, repetitive scrolling with the index finger, lateral reach for keys on the right-hand side of the keyboard, and rapid finger movements (180 per minute) during keyboarding.

[68] The employer acknowledges Dr. Robinson's comment that the work activities involved frequently repeated ulnar and radial deviation, but it contends the basis for that conclusion is flawed based on the still images from the ergonomic assessment. Dr. Robinson indicated ulnar or radial deviation in each of the still images despite the fact that only three of the images provide an overhead view, which the employer contends is necessary to identify ulnar and radial deviation.

[69] According to the employer, it is apparent that Dr. Robinson made assumptions about the frequency of ulnar and radial deviation. In contrast, Dr. Potiuk, who viewed the same video, distinguished between small movements of the hands and wrist from the awkward ulnar and radial deviation. Given that Dr. Robinson could not have accurately measured the worker's wrist posture in a significant portion of the video, yet purported to anyway, the employer submits that Dr. Potiuk's opinion on frequency of ulnar and radial deviation should be given more weight.

[70] As is apparent from the above, the employer's focus is on "awkward" (greater than ten degrees) ulnar and radial deviation. Although it is not necessary for me to make a finding that the

150, 4600 Jacombs Road, Richmond, B.C. V6V 3B1
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worker's frequently repeated wrist motions that affected the extensor tendons involved "awkward" ulnar/radial deviation, I am satisfied that they did. My reasons will follow when addressing "significant" ulnar/radial deviation, but suffice to say for now that I am satisfied the worker's job exposed her to frequently repeated right wrist motions or muscle contractions and those motions or muscle contractions placed strain on her affected extensor tendons as they involved frequent awkward ulnar/radial deviation (in addition to the other postures and movements that Dr. Robinson identified).

[71] Turning to the second component under the presumption, with respect to "significant flexion, extension, ulnar deviation or radial deviation of the affected hand or wrist," policy provides that this means:

- moving (or holding) the hand or wrist in greater than 25 degrees of flexion from anatomical neutral (0 degrees);
- moving (or holding) the hand or wrist in greater than 25 degrees of extension from functional neutral (20 degrees from anatomical neutral);
- moving (or holding) the hand or wrist in greater than 10 degrees of ulnar deviation; or
- moving (or holding) the hand or wrist in greater than 10 degrees of radial deviation.

[72] The case manager observed that, during mousing, the worker demonstrated radial and ulnar deviation of up to 20 degrees. As just noted, Dr. Potiuk observed that, while there was radial and ulnar deviation of greater than 10 degrees, these movements were brief, dynamic, and had no set pattern.

[73] That this radial and ulnar deviation greater than ten degrees was brief, dynamic, and had no set pattern does not mean that the worker was not moving her wrist in greater than ten degrees of ulnar and radial deviation. Indeed, the word "moving" suggests brief and dynamic movement, and there is no requirement in law or policy for a "set pattern."

[74] I now turn to the employer's contention that Dr. Robinson's conclusion the work activities involved frequently repeated ulnar deviation is flawed because this is not reflected in the still images from the ergonomic assessment. Dr. Robinson provided screen shots from the JSV to demonstrate ulnar deviation greater than ten degrees. The employer's contention is that the only way to identify ulnar deviation is by way of an overhead view, and Dr. Robinson therefore made assumptions about the frequency of ulnar deviation.

[75] Dr. Robinson is a trained ergonomist. I am not prepared to reject his observations of the nature and extent of the worker's right wrist ulnar deviation on the basis of the employer's contention that only overheard views can be used.

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[76] I also find it necessary to point out that Dr. Potiuk opined the development of a wrist tendinitis would require repetitive awkward wrist "extension," usually combined with moderate to high forces, and that this was not demonstrated in the JSV video. This is inconsistent with the presumption and Board policy; it is not only wrist "extension" that is deemed an awkward posture. Furthermore, repetitive awkward wrist movements do not have to be combined with force to even meet the presumption. Dr. Potiuk's opinion appears to be setting a standard for hand-wrist tendinopathy claim acceptance that is even greater than the presumption. This further lessens the weight to be given to his opinion in this regard.

[77] For all the above reasons, I find the evidence satisfies the presumption requirement for "significant" ulnar and/or radial deviation of the affected wrist.

[78] The final component to satisfy the presumption is whether the worker's frequently repeated movements that stressed the extensor tendons represented a "significant component of her employment," as did the radial and/or ulnar deviation of her right wrist beyond ten degrees.

[79] Policy defines the words "where such activity represents a significant component of the employment" as meaning that the worker has been exposed to the processes for sufficiently long that it is biologically plausible that the hand-wrist tendinopathy resulted from the employment activities. Employment activities that involve minimal or trivial use of the hand-wrist as described in item 14(1) of Schedule 1 do not amount to "a significant component of the employment."

[80] That Dr. Potiuk observed the worker's radial and ulnar deviation of greater than ten degrees were movements that were brief, dynamic, and had no set pattern does not mean that they were minimal or trivial. He also seemed to consider that the worker would have to have ten awkward wrist or elbow movements per minute for greater than 120 minutes for work to be a relevant risk factor. But this is based on general guidelines in the practice directive for all ASTDs and is not set out under the presumption.

[81] In any event, Dr. Robinson commented that Dr. Potiuk's assessment of awkward right wrist postures from the JSV was inaccurate in that he underestimated the extent of the worker's right wrist awkward postures. Dr. Robinson advised that, after viewing the video, right wrist ulnar deviation greater than ten degrees was frequently observed when using the mouse and while keyboarding for about 75% of the work shown in the video. The worker's job entails keyboarding and using the mouse almost exclusively. That awkward posture is shown for about 75% of the time when she is using the mouse and keyboarding in the video strongly supports that frequent awkward right wrist postures that stress her affected right wrist extensors are a significant component of her employment.

[82] Based on my observations of the JSV, and the evidence of the worker and Dr. Robinson, I have no hesitation in finding that the worker's frequently repeated right wrist movements involving

150, 4600 Jacombs Road, Richmond, B.C. V6V 3B1
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Fax: (604) 664-7898 | wcat.bc.ca

ulnar/radial deviation greater than ten degrees (which placed stress on the affected right wrist extensor tendons) represents a significant component of her employment.

[83] As the worker meets two of the three criteria for hand-wrist tendinopathy, and as I find both were a significant component of her employment,[5] I am satisfied the worker's claim meets the presumption under section 137 of the Act for hand-wrist tendinopathy. I must now consider whether there is evidence that rebuts the presumption. If the evidence is more heavily weighted in favour of a conclusion that it was something other than the employment that caused the worker's hand-wrist tendinopathy, then the contrary will be considered to have been proved and the presumption is rebutted.

[84] The employer submits that the worker's household duties are a non-occupational risk factor. From this I understand the employer to be arguing that, if the presumption applies, the worker's household activities are the more likely cause of her hand-wrist tendinitis and this would rebut the presumption. That is not a compelling argument. My reasons follow.

[85] The employer's reliance on household duties to rebut the presumption is based on the worker having said during the JSV that her symptoms were aggravated when she engaged in "heavy work, like cleaning bathtubs and stuff." The employer contends the fact that the worker's symptoms are aggravated when engaged in non-work activity undermines Dr. Milde's opinion that the worker's symptoms were relieved when away from work. The employer notes Dr. Potiuk commented that normal household duties could have affected the tendons and tissues involved. As a result, the employer submits that household duties are a non-occupational risk factor.

[86] I first note that the employer did not address the worker's evidence that she first noticed intermittent right elbow symptoms about six months prior to seeing Dr. Milde, and "she only noticed symptoms at work." It was not until her symptoms noticeably increased with work over the six weeks prior to seeing Dr. Milde in March 2018 that they then started bothering her outside of work. This evidence does not suggest that the worker's household duties were causative of her hand-wrist tendinopathy.

[87] Moreover, when Dr. Potiuk was asked if household activities were a non-occupational causative factor, he indicated that normal household duties could affect the tendons and tissues involved, but he was unable to comment on whether this was a risk factor with the information provided. This opinion does not provide support for rebutting the presumption.

[88] In the absence of sufficient evidence to rebut the presumption I find that the worker's right hand-wrist tendinopathy developed due to the nature of her employment.

---

[5] It follows that it was unnecessary for me to address the factor of force in relation to hand-wrist tendinopathy under the presumption.

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Fax: (604) 664-7898 | wcat.bc.ca

Right Lateral Epicondylopathy

[89] Policy item #C4-27.30 addresses ASTDs recognized by regulation, which includes epicondylopathy. The policy provides that epicondylopathy is a tendinopathy that is recognized as an occupational disease by regulation under subsection 138(2) of the Act. Lateral epicondylopathy involves the lateral epicondyle of the elbow, which is the bony origin for common wrist extensors and supinator tendons. The policy states that lateral epicondylopathy is characterized by pain at the lateral elbow with contraction of the muscles that extend the wrist, such as with gripping and resisting wrist extension.

[90] The policy further provides that medical/scientific evidence on epicondylopathy does not as a whole confirm a strong association with employment activities and its mechanisms of development are obscure. Some individual studies do indicate an excess incidence of epicondylopathy in employments with tasks that are strenuous to the muscle-tendon structures of the arm. One often referred to theory suggests that microtears at the attachment of the muscle to the bone may be due to repetitive activity with high force sufficient to exceed the strength of the collagen fibres of the tendon attachment. This in turn may lead to the formation of fibrosis and granulation tissue. As the medical/scientific evidence does not clearly relate epicondylopathy to any particular process or industry, the Board assesses work causation in the context of each individual case based on consideration of all relevant risk factors.

[91] The Board recognizes that where the worker was performing frequent, repetitive, forceful, and unaccustomed employment-related movements (including forceful grip) of the wrist that are reasonably capable of stressing the inflamed tissues of the arm affected by epicondylopathy, and in the absence of evidence suggesting a non-work-related cause for the worker's epicondylopathy condition, a strong likelihood of work causation will exist. These factors are not preconditions to the acceptance of a claim for epicondylopathy nor are they the only factors that may be relevant. For example, lateral epicondylopathy has been shown to occur in tennis players (some studies showing a strong causative association) who are well-accustomed to the motions and forces involved. The issue to be determined in any individual claim is whether the evidence leads to a conclusion that the epicondylopathy is due to the nature of the worker's employment.

[92] As one of the risk factors under policy item #C4-27.30 is unaccustomed employment-related wrist movements that are reasonably capable of stressing the inflamed tissues of the arm affected by epicondylopathy, I will first make a finding of fact about the alleged unaccustomed nature of the worker's work activity in the fall of 2017 when her symptoms began.

[93] After listening to the oral hearing recording and reviewing the evidence on file, I found the worker's testimony to be credible. This is particularly so with respect to her evidence concerning the two aspects of the alleged unaccustomed nature of her work as of October/November 2017.

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Fax: (604) 664-7898 | wcat.bc.ca

[94] With respect to the worker's evidence that there was greater mousing and scrolling required since October/November 2017 owing to the increased use of drop-down boxes and tabs, I find that the employer misunderstood the worker's evidence at the oral hearing in this regard.[6] The employer contends that the new electronic claim system that had more tabs and drop-down menus began to be implemented in 2013 and not 2017 or 2018. This is correct and is consistent with the worker's evidence, but the employer did not address and has not provided any compelling evidence to rebut the worker's further testimony in that regard.

[95] Specifically, the worker testified that, while the electronic claims system had been in place for about five years, they began using the electronic claim system to a fuller capacity with the addition of the second monitor in the fall of 2017. In particular, they were now using the drop-down boxes and tabs to a fuller capacity. This resulted in increased mouse usage and scrolling. For example, before the dual monitors, they would type in notes, but after the second monitor was in place, they would then have to add those notes into the drop-down boxes under the appropriate tabs.

[96] With respect to the second component of alleged unaccustomed work, the employer contends that the addition of a second monitor did not likely result in any significant change in the worker's job duties. In that regard, the employer notes Dr. Robinson's comment that the worker was using dual 22-inch monitors "equally;" however, the employer emphasizes that Dr. Robinson did not interview the worker. It contends his statement in this regard is unsupported.

[97] With respect to whether the monitors were used equally, the video evidence only shows both monitors were on and the worker was moving the mouse cursor back and forth between them. Overall, I do not know whether or not she spent equal amounts of time on each monitor throughout her work day. Yet, even if they were not used "equally," I do not find this detracts from Dr. Robinson's opinion as he based his assessment of risk factors on what he observed in the JSV video. I am also mindful that the term "equally" may simply mean "in the same manner" in contrast with "to the same extent."

[98] In any event, the worker submits that the amount she had to move her right wrist (to move the mouse cursor) with the addition of the second computer monitor increased (as demonstrated in the JSV) and this was an unaccustomed activity.

[99] There is no dispute that a second monitor was added to her workstation in the fall of 2017. Nonetheless, the employer relies upon the case manager's and Dr. Potiuk's opinions to say that this did not result in unaccustomed work because the addition of the monitor only created a

[6] This may be as a result of it relying on the WCAT panel's summary of evidence in the decision that has been set aside; rather, than the worker's actual testimony. I find that the previous WCAT panel erred in his summary of the worker's evidence in this regard.

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slight change in the worker's wrist movements. With respect, I disagree. The worker has consistently indicated that the addition of the second monitor required much more cursor movement (and resulting wrist movement) to go from one screen to the other. This was apparent from the JSV. Indeed, despite writing in the JSV report that there was only a "slight change" in the worker's right hand and wrist movements working with a second monitor, the case manager actually said during the JSV itself that there was "quite a bit of movement" to go from one screen to another.

[100] I am also mindful that, while Dr. Weiss did not think the Board had done sufficient investigation into the cumulative duration of co-contraction of the flexor and extensor tendons, he still indicated that a second monitor would be expected to materially change the use of a computer mouse, including dragging the cursor and the time the cursor needs to be held in place. In my view, it is obvious that there is more cursor movement (and resulting wrist movement, particularly in ulnar deviation) when working on dual monitors.

[101] The employer further contends that the JSV video evidence is consistent with Dr. Potiuk's opinion. It notes that at the 5:40 mark of the JSV video, the worker is asked to and demonstrates moving the mouse cursor from screen to screen. The employer agrees this shows quite a pronounced movement; however, it contends that such a movement (and less pronounced) only occurs three to four times in the 7:02-minute video prior to being asked to demonstrate that movement. With respect, I do not agree.

[102] At the 5:40 mark, the case manager changed the camera angle so as to better capture the worker moving the cursor between screens. But, from my observation, moving the cursor to the second screen occurred at least 12 times before the 5:40 mark. I also cannot ignore that the worker had paused in her work on several occasions to talk to the case manager, such that she was not working steadily throughout the first 5 minutes and 40 seconds, or thereafter. Further, with the camera angle in the new position, I did not see how the movement was less pronounced when the worker moved the mouse cursor from screen to screen. Moreover, when the worker is first shown moving the cursor from one screen to the other (at 00:43), it was apparent that the movement was quite pronounced, even from the initial camera angle.

[103] For the above-noted reasons, I find that there were two unaccustomed aspects to the worker's job duties starting in the fall of 2017.

[104] Drs. Robinson and Potiuk both relied on the Board's Practice Directive #C4-2 when considering other risk factors (Dr. Potiuk appears to have relied on the case manager's summary of the practice directive in relation to epicondylopathy and not the actual practice directive). Practice Directive #C4-2 provides assessment guidelines for consideration of posture, force, magnitude, and duration. The directive states that the risk factors listed are to be used as guidelines only. They are not absolutes. The numbers are entry level numbers to be considered as a threshold when assessing a single risk factor. The threshold may change where there are two or more risk

150, 4600 Jacombs Road, Richmond, B.C. V6V 3B1
Tel: (604) 664-7800 | 1-800-663-2782
Fax: (604) 664-7898 | wcat.bc.ca

factors present. Where the worker's job duties do not meet all or some of the applicable risk factor(s) listed, the claim may still be acceptable. Consideration must also be given to the cumulative effects of multiple risk factors. This means that Board officers have to weigh the cumulative, or combined, effects of exposure to risk factors when adjudicating ASTD claims (such as continuous exposure versus intermittent exposure; or combinations of force and posture).

[105] With respect to posture, in addition to wrist ulnar and radial deviation greater than 10 degrees, the following are also considered to be awkward postures: elbow pronation and supination greater than 80 degrees, elbow flexion greater than 120 degrees, and elbow extension greater than 0 degrees.

[106] With respect to repetition, the practice directive indicates that movement of the wrist and elbow for more than two hours is a risk factor if the wrist/elbow is moving two times per minute through full range of motion for the joint, or ten times per minute (or more) if the wrist/elbow is working through less than a full range of motion.

[107] It is again important to understand the tissues engaged that might lead to epicondylopathy. Policy item #C4-27.10 explains that, when assessing whether an employment-related risk factor caused or contributed to the development of a worker's ASTD, the Board considers: the location of the anatomical structure affected; the risk factors involved in the worker's employment activities; the muscle groups, tendons, and joints involved in performing the worker's employment activities; and whether there is a biologically plausible connection between the employment activities and the development of the ASTD. It is for this reason that it is important to identify what muscle and tendon groups are engaged in lateral epicondylopathy.

[108] Policy item #C4-27.30 is not overly helpful in that regard. It speaks generally to the muscle-tendon structures of the arm, and more specifically to the common wrist extensors and supinator tendons. But the question is what movements engage those wrist extensors and supinator tendons.

[109] When the case manager requested an opinion from Dr. Potiuk, the case manager summarized "Schedule B, Chapter 4 of the Claims Management Manual for ASTD Assessments" (CMM),[7] in

[7] I am unaware of any Schedule B, Chapter 4 of the Claims Management Manual for ASTD Assessments. Rather, I understand that the case manager's reference to this comes from templated language when requesting clinical opinions. The template language then summarizes, in part, policy in Chapter 4 of the RSCM II on epicondylitis and Practice Directive #C4-2.

Workers' Compensation Appeal Tribunal

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Fax: (604) 664-7898 | wcat.bc.ca

addition to the Board's Practice Directive #C4-2 on ASTD risk factors. The case manager wrote as follows:

> 1. **Epicondylitis as recognized by regulation (Section 6 of the Workers' Compensation Act) as detailed in Schedule B, Chapter 4 of the Claims Management Manual for ASTD Assessments, and/or Practice Directive # C4-2:**
>
> **Definition:** Localized inflammation of the muscle and tendon where they attach to the bone (epicondyles) at either side of the elbow. Lateral is tennis elbow and medial is golfer's elbow.
>
> **Risk Factors:**
> Lateral Epicondylitis: Repetitive, forceful and awkward postures involving the extensor muscle group of the wrist and forearm supinators. Unaccustomed use of the extensor muscle group.
>
> …
>
> **Current Board Ergonomic Guidelines for Use of the Wrist:**
> No more than 10 awkward wrist movements per minute continuously for greater than 120 minutes. Awkward postures are defined as wrist flexion of greater than 25 degrees from the resting posture of 0 degrees; extension greater than 25 degrees from resting posture of 20 degrees and radial or ulnar deviation greater than 10 degrees from neutral.
>
> **Current Board Ergonomic Guidelines for Use of the Elbow:**
> No more than 10 awkward elbow movements per minute continuously for greater than 120 minutes. Awkward postures of the elbow are defined as elbow flexion of greater than 120 degrees and elbow extension beyond neutral of 180 degrees (hyperextension).[8]
>
> [footnote added]

[110] The risk factors above for lateral epicondylitis make it clear that the extensor muscle group of the wrist and forearm supinators are of relevance. Consistent with this, Dr. Robinson specifically indicated that the main considerations in identifying relevant work-related risk factors were hand, wrist, or forearm activities that involve the extensor tendons of the wrist/forearm. And, as I earlier found, based on Dr. Robinson's expertise, the wrist/forearm extensor tendons will

[8] The case manager's summary of the practice directive risk factors failed to include that elbow pronation and supination greater than 80 degrees is a risk factor for ASTDs. As Dr. Potiuk appeared to rely on this summary, he did not address elbow pronation and supination.

Workers' Compensation Appeal Tribunal

150, 4600 Jacombs Road, Richmond, B.C. V6V 3B1
Tel: (604) 664-7800 | 1-800-663-2782
Fax: (604) 664-7898 | wcat.bc.ca

experience increased internal tension during activities that involve finger extension, fourth and fifth finger abduction, wrist extension, wrist radial and ulnar deviation, forearm pronation/supination, and gripping efforts.

[111] Dr. Potiuk's opinion indicates that he was looking for awkward wrist, forearm, and elbow postures in relation to both of the diagnosed ASTDs. Dr. Potiuk indicated that he looked for awkward wrist flexion, extension, and ulnar/radial deviation; awkward elbow flexion and extension; and awkward forearm postures. He noted only some awkward radial and ulnar deviation (again indicating that it was brief, dynamic, and of no set pattern), and concluded there were insufficient risk factors for lateral epicondylitis, further commenting that the worker was accustomed to her work.

[112] Dr. Robinson indicated that the relevant criteria for determining work-relatedness of lateral epicondylitis includes consideration of the exposure to some of the same risk factors outlined in policy item #C4-27.11 for hand-wrist tendinopathy. This would be in keeping with the fact that radial and ulnar deviation of the wrist involve the extensor tendons of the wrist/forearm, and policy item #C4-27.30 indicates wrist movements are a factor. I have already found that the worker's use of the mouse and keyboarding duties involve frequently repeated right wrist ulnar deviation greater than ten degrees (which is identified as an awkward posture) and that these movements represent a significant component of her employment.

[113] In keeping with policy item #C4-27.30, I find that, at the time the worker began developing symptoms of lateral epicondylopathy, she was exposed to frequent, repetitive, and unaccustomed, employment-related movements of her right wrist (ulnar deviation) that are reasonably capable of stressing the inflamed tissues of the arm affected by epicondylopathy. I am unable to find that she was exposed to forceful movements, however. As Dr. Robinson explained, the JSV did not quantify force. He could not say whether or not the worker's job exceeded thresholds for high force in pinch grip or fingertip force application. This is consistent with Dr. Weiss's concern as well.

[114] The employer submits that it is not enough for some of the policy factors under item #C4-27.30 to be present as the policy uses the conjunctive term "and." I recognize that not all the specific risk factors under policy item #C4-27.30 are present; however, they are not the only risk factors for epicondylopathy. As stated in policy item #C4-27.30, the factors outlined in that policy are not preconditions to acceptance of the claim and they are not the only factors that may be relevant.

[115] Despite the policy statement above, the employer further submits that Dr. Robinson relied heavily on the worker's forearm being pronated at greater than 80 degrees during her work as a risk factor; however, neither Board policy nor practice indicate that forearm pronation is a risk factor for epicondylopathy (the practice directive indicates "elbow" pronation greater than 80 degrees is an ASTD risk factor).

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Tel: (604) 664-7800 | 1-800-663-2782
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[116] I am satisfied that forearm pronation beyond 80 degrees is a relevant risk factor for epicondylopathy as it engages the extensor tendons, and Dr. Potiuk also indicated awkward forearm postures could be a consideration.

[117] The employer then submits that the JSV does not demonstrate the worker's right elbow or forearm are pronated greater than 80 degrees, as the majority of the time when using the mouse, the worker's index and middle fingers sit higher than her thumb (as they are sitting on the raised mouse and the thumb is nearly touching the desk). According to the employer, it does not require medical expertise to put one's hand flat (which it contends is 90 degrees of pronation), raise the knuckles of the index and middle fingers as if resting on a mouse and watch the forearm rotate outwards away from 90 degrees. As to the degree to which rotation results in a move away from 90 degrees, the employer submits that Dr. Potiuk concluded there were no awkward elbow or forearm posture movements required. According to the employer, this supports that the rotation to hold the mouse rotated the forearm more than 10 degrees to a posture that is not greater than 80 degrees of pronation.

[118] While the employer may consider that the worker's right forearm was not exposed to greater than 80 degrees of pronation, I again give greater weight to the expertise of the ergonomist in assessing postures pursuant to the JSV. I find as fact that the worker was exposed to sustained right forearm pronation beyond 80 degrees for both mouse and keyboard use.

[119] Dr. Robinson wrote that there were sufficient risk factors present in the worker's daily activities to support the biological plausibility of straining the extensor tendons at the lateral epicondyle of the right elbow. Highly repetitive movements and awkward postures of the right hand, wrist, and forearm were observable when the worker was using the mouse and keyboarding. They included sustained forearm pronation greater than 80 degrees; sustained and repeated ulnar deviation greater than 10 degrees; sustained fingertip grip of the mouse between the thumb and small finger; rapid, repeated extension of the index finger to use the scroll wheel; and ulnar deviation with extension and abduction of the small finger to use the keys on the right side of the keyboard.

[120] The employer maintains that the only risk factor for epicondylopathy was ulnar and radial deviation; however, it was infrequent, there was no force, and the worker was accustomed to her work. I am unable to agree with the employer that the only risk factor for epicondylopathy was ulnar and radial deviation. Instead, I find that in addition to unaccustomed work that placed greater stress on the worker's extensor tendons, she was exposed to frequent and repetitive ulnar deviation beyond 10 degrees, in combination with sustained right forearm pronation beyond 80 degrees, and the other contributing risk factors that Dr. Robinson identified.

[121] Policy item #C4-27.10 provides that when determining whether the worker's employment was of causative significance in causing or aggravating the worker's ASTD, the Board considers a number of factors, including the mechanics of the employment activity in question (for example,

if the condition is bilateral, did the employment activity require movement of the limb to a greater degree on one side); and whether any changes took place in either the worker's employment or non-employment activities prior to or at the time of onset of the ASTD.

[122] The worker keyboards with both hands, but uses the mouse with her right hand. As Dr. Robinson correctly observed, the worker's right hand when keyboarding is reaching more for the right-hand side of the keyboard, in addition to using the mouse. I find the employment activity is to a greater degree on the right side. And, I have already found that there were changes in the worker's employment prior to/at the onset of her ASTD in the nature of the addition of a dual monitor and the increased use of drop-down boxes and tabs concurrent with the introduction of the dual monitor.

[123] Policy item #C4-27.10 addresses the analysis of risk factors. It states that determining whether an ASTD is due to the nature of a worker's employment requires an analysis of risk factors relevant to the causation of ASTDs for the purposes of subsections 138(2) and (3). The Board considers all relevant risk factors in a particular case. The presence or absence of some risk factors may suggest work causation, while the presence or absence of others may suggest non-work-related causation. Risk factors may act directly in causing an ASTD or they may act indirectly by creating the conditions that may lead to an ASTD. Risk factors are not equal nor can they be consistently ranked in order of importance. Their relative importance will vary with the circumstances of each claim. Individual judgment is exercised in each case to determine the weight to be given to each risk factor having regard to the available evidence.

[124] In this regard, I also think it important to note that, when assessing whether a worker's employment was of causative significance in the development of an ASTD, the Board generally considers how the worker interacts with the work environment and employment-related risk factors, such as task variability (the degree to which the task remains unchanged thus causing loading of the same tissues in the same way) and work-recovery (rest) cycle (the availability and distribution of breaks in a particular activity to allow the tissue to return to a resting state for recovery).

[125] The worker is essentially using her mouse and keyboard all day, every day at work. There is little apparent task variability, such that her affected tissues are loaded the same way throughout her day. There is no indication she has breaks from her tasks other than at lunch and two coffee breaks (or when working on legacy files at times).

[126] Furthermore, the fact that (like hand-wrist tendinopathy) the lateral epicondylopathy symptoms developed contemporaneous to the addition of the second monitor, and the symptoms abated when she was away from the workplace, offers some additional support that the work activity was of causative significance to the worker's lateral epicondylopathy despite the absence of excessive forces on the elbow. Drs. Milde and Weiss both thought this abatement of symptoms was an important factor.

150, 4600 Jacombs Road, Richmond, B.C. V6V 3B1
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[127] Overall, I find that the worker's claim should be accepted for both right hand-wrist tendinopathy and right lateral epicondylopathy. The worker meets the presumption in section 137 of the Act for hand-wrist tendinopathy, and I further find that there were sufficient risk factors present in the worker's employment to conclude that she also developed right lateral epicondylopathy due to the nature of her employment pursuant to section 136 of the Act.

Conclusion

[128] I allow the worker's appeal and vary the review officer's decision. I find that the worker developed right wrist extensor tendinopathy and right lateral epicondylopathy due to the nature of her employment.

Appeal Expenses

[129] In the set-aside WCAT decision, the panel wrote as follows:

> [57] The worker requested reimbursement of transportation expenses to attend the oral hearing. Item #16.1.2 of WCAT's *Manual of Rules of Practice and Procedure* states that WCAT will generally order reimbursement of certain expenses for a worker's attendance at an oral hearing if the worker was successful on the appeal. The worker was successful on her appeal and I order the Board to reimburse the worker's transportation expenses from her home address to Castlegar, British Columbia within the perimeters of the Board's policy.
>
> [58] Item #16.1.3 of the *Manual of Rules of Practice and Procedure*, based upon the wording in section 7(1)(b) of the Workers Compensation Act Appeal Regulation, provides that WCAT will generally order reimbursement of expenses for obtaining or producing evidence, regardless of the result in the appeal, where the evidence was useful or it was reasonable for the party to have sought such evidence in connection with the appeal. WCAT will usually order reimbursement of the evidence at the applicable Board rate.
>
> [59] The June 1, 2019 medical opinion of Dr. Milde was useful and reasonable to have been obtained. I order the Board to reimburse the worker in the amount of $1,581.57 for this opinion. The invoice from Dr. Milde does not indicate that any taxes were charged for this opinion, but in the event that they were I order the reimbursement amount to be inclusive of any taxes charged.

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> [60] The worker requested reimbursement in the amount of $1,653.75 for the report of Dr. Robinson. I find that the report of Dr. Robinson was both useful on this appeal and reasonable to have been obtained. The Board does not have a fee schedule or guide for ergonomic assessments and I am guided, although not bound by, WCAT-2012-02739 which outlined that generally it would be reasonable to reimburse in accordance with the fee guide set by the British Columbia Society of Occupational Therapists.
>
> [61] Dr. Robinson charged $175 per hour for his preparation, assessment, and the report. The British Columbia Society of Occupational Therapists fee for private practice occupational services (2019) notes a large range of fees for services. Generally, professional time for medical-legal services is billed from between $150 to $250 per hour. Dr. Robinson charged in the range of this scale for his services and I find that these charges were reasonable and should be reimbursed at the rate he charged. He spent a total of nine hours on this report, which was itemized in detail and appeared to be realistic. The report was thorough and clear in its explanations without using unnecessary technical verbiage and was useful for me as a decision-maker.
>
> [62] I order the Board to reimburse the worker the sum of $1,653.75 for the report of Dr. Robinson. This amount is inclusive of all relevant taxes, which I also order be reimbursed.

[130] Although the above appeal expenses have already been reimbursed, as the WCAT decision has been set aside it is necessary for me to address expenses anew. I agree with the panel's orders as set out above and adopt them as my own. The employer did not take issue with the previous orders in that regard.

[131] Since the set-aside decision was made, the worker provided the medical-legal opinion from Dr. Weiss dated June 17, 2020. He charged $1,660.65 ($1,581.57 plus $79.09 for GST). The employer objects to reimbursement of this report, arguing that it was unreasonable to request yet another opinion.

[132] I disagree. When the worker's representative requested Dr. Weiss's opinion on February 25, 2020, Dr. Milde had already indicated that the more appropriate diagnosis of the worker's symptoms in March 2018 was an inflammatory arthritis.[9] On that basis, the representative asked Dr. Weiss to provide an opinion regarding the cause and/or aggravation of both an inflammatory arthropathy and tenosynovitis. It was Dr. Weiss's report that led me, in part, to make a referral

[9] It is within WCAT's jurisdiction to address a new diagnosis on appeal. This can occur when there is a new diagnosis being offered to explain the symptoms. See *WCAT-2004-04309*.

for investigation to the Board in relation to the new diagnosis as Dr. Weiss clearly disagreed in his June 2020 report that the new diagnosis was appropriate.

[133] In these circumstances, I find that Dr. Weiss's June 17, 2020 medical-legal opinion was both useful to the consideration of the appeal and it was reasonable for the worker to have sought such evidence in connection with the appeal.

[134] Item #16.1.3.1 of the MRPP provides that, with respect to medical-legal reports and opinions, WCAT will usually order reimbursement at the rates established by the Doctors of BC[10] Fees for Uninsured Services. The current amount under that fee schedule for a medical-legal opinion is $1,869.00. As the expense for Dr. Weiss's June 17, 2020 medical-legal opinion is within that fee schedule, I order the Board to reimburse the worker in the amount of $1,660.65 for that medical-legal opinion.

[135] No other appeal expenses were requested. As none are apparent, I make no further order for appeal expenses.

Elaine Murray
Vice Chair

[10] The British Columbia Medical Association is now known as the Doctors of BC.