

Report from the Fink and Associates Seminar of July 23, 1997
Repetitive Strain Injury - The Ghost That
Haunts 200 Front St.

"North America is in the midst of a RSI epidemic" - Toronto Star, April 15/95

"RSI plagues female musicians"- Globe and Mail, July 29/97

Several years ago Dr. Pitner and his colleagues looked for micro-organic evidence of disease or damage in victims of Repetitive Strain Injury (RSI), particularly musicians, and could find none. Dr. Devlin, a physiatrist at Toronto's Mount Sinai Hospital, speaking at the Fink & Associates Seminar, noted that the Australian experience with RSI indicated that the disease reached epidemic proportions when time off was compensated for and waned when it was not. In a study of telephone operators working in a state with generous WCB coverage, a large incidence of RSI was reported. Operators in a state with restricted coverage, working on the same machines or on machines of a lesser ergonomic design, had a very small incidence. These and other studies led Dr. Devlin to conclude that RSI is a social phenomenon and not a medical lesion.

The Ontario Experience

Corporate Data Services of the Ontario Workers' Compensation Board did a detailed study of the incidence of Repetitive Strain injuries in Ontario. In 1994 there were 5033 cases of RSI accepted, illustrative of a steady increase over the 1,587 claims in 1984. In 1994 RSI represented 4% of all claims. More importantly, they constituted 7% of all claims made by women workers that year, in contrast to 2.7% of claims for men. The average days lost for such a claim were 64, nearly double that of other claims, each claim costing \$6091 in 1995.

The "Metal Fatigue" Theory

There were no known reports of RSI affecting stenographers working on typewriters prior to 1980, and yet RSI among computer key board operators is legion. Julie Grossman, a physiotherapist speaking at the Seminar, suggested that usage of a keyboard was more intense due to the number of applications a computer contains. Furthermore, she postulated that the uniform application of typing at a keyboard that does not require non-keyboard corrections to text or paper removal, makes the keyboard a more intense experience. This is the "metal fatigue" theory of human anatomy. Each limb has only so much give and take in it, and therefore at some point the limit is exceeded and it cracks. Dr. Devlin pointed out that in reality it has been shown that heavy use of a joint actually strengthens it and prevents injuries. Older lawyers remember secretaries who spent long hours steadily banging away at old IBM Selectrics without suffering "metal fatigue" in their arms. There are no studies to indicate that 5 minute breaks from keyboarding will defeat RSI injuries. The "metal fatigue" theory ranks with the "unresolved problems at death causing ghosts to appear" theory, and is equally plausible. RSI is a "ghost" that haunts Compensation Boards across North America.

Carpal Tunnel Syndrome is to Repetitive Strain, what Bats are to a Haunted House

Carpal Tunnel injuries are among the more common forms of a RSI, and at first glance the most easily identifiable. If tracking down RSI is like proving or disproving that a ghost has entered your home, a carpal tunnel complaint would be more akin to having at least an observable bat flying around. Carpal Tunnel Syndrome (CTS) as a disease entity got its start in the 1950s when Dr.

Phalen observed that swelling of the wrist caused by pregnancy, diabetes, tenosynovitis (swelling of the tendon sheaths) etc. produced reproducible features on clinical examination (Phalen's test). Secondly, interference with the median nerve passing through the carpal tunnel could also be observed through nerve testing. Phalen however stated that a work related cause of Carpal Tunnel would be most unusual.

Ontario's Experience with Carpal Tunnel

21% of repetitive strain injuries, and thus 1% of all work injuries in Ontario in 1995 were from CTS according to Corporate Data Services of the WCB.

Research Professors in Michigan Invent Industrial Carpal Tunnel

Professors Armstrong and Silverstein of the University of Michigan "discovered" work related carpal tunnel syndrome. Workers at a seat cover factory who used their hand repetitively had more symptoms consistent with CTS than those who didn't. The same observation was present at a turkey boning factory. Dr. Norton Hadler has criticized these studies because of their small sample size and because no EMG testing was done of the complaining workers to further prove that they indeed had CTS. Hadler believes that industrial related Carpal Tunnel is a myth. Interestingly, in a later study when Prof. Silverstein attempted to introduce ergonomic changes into the work place in order to reduce Carpal Tunnel instances, the reverse happened. Prof. Silverstein postulates that the increased awareness of the problem through the introduction of work modifications may have caused a greater number of workers to come forward with their CTS complaints! One problem with proving that ergonomic improvements reduce Carpal Tunnel is that most research is private and proprietary to the industrial company which is benefiting from the research. Thus the public and scientific community are kept in the dark.

The Exorcist

An alternate explanation for Armstrong and Silverstein's observations is that if you set traps for ghosts and spend time talking about ghosts, more inhabitants of a house will come to believe that they are in fact sharing their residence with a ghost. Robert Verlinga, an ergonomist who spoke at the Fink & Associates Seminar, made it clear that the application of ergonomics at the workplace is scientifically validated for making decisions on production design for comfort and efficiency, but is not a foolproof guarantor that a particular job function performed by a particular worker will not result in a complaint of a repetitive strain injury. In answer to a question about warm up exercises, Dr. Devlin commented that the placebo effect (sugar pills in medical research studies always reduce the disease and its effect for a time, based on human belief), is a powerful influence on the outcome of Repetitive Strain syndrome whether or not the proposed cure has any scientifically proven effect - sort of like an exorcist.

Ghost Busting at the Appeals Tribunal

The manner in which the Workers' Compensation Appeals Tribunal and Hearings Branch of the Workers' Compensation Board have dealt with Carpal Tunnel injuries and Repetitive Strain in particular, discussed below, is a further illustration that the law in this area more resembles "ghost busting" than it does the application of medical legal principles.

In WCAT Decision 630/94, a report from Dr. Vaughn Bowen, a plastic and orthopaedic surgeon at Toronto Hospital and hand disease specialist is quoted as follows:: "it must be remembered that CTS is very common and there are many cases that are not etiologically related to the work place.

. . The kind of occupations that tend to be related to CTS are repetitive jobs that involve a lot of activity from the finger flexor tendons and particularly when these are associated with flexion of the wrist. A job in which the patient is working with the wrist and hand in an unnatural position, particularly in flexion, is also a risk factor. Other factors that are of importance is the amount of exposure, the number of hours per day at the activity and also the number of days per week are also likely related. The use of vibrating tools might also be related." In this case, the WCAT panel ruled against the worker because her symptoms did not develop until she was on layoff 4 years after doing the repetitive work.

This decision also quotes one other doctor to say that up to 50% of Carpal Tunnel cases are of unknown causation. The rationale adopted by the WCAT here is that since the worker can't prove there's a ghost through proximal timing of work and symptoms, there must not be a ghost. But what if Carpal Tunnel appears at the same time work is being performed. If the house seems to shake at the same time the observance of a ghost is reported do we have proof a ghost exists?

A Whole Lot of Shaking Going On

The answer to this question is contained in WCAT Decision 53/94. The worker spent 3 hours per day peeling potatoes and carrots along with other chores related to cooking for a boat crew. The Compensation Board Doctor, Dr. Gergley, Dr. Renaud a noted rheumatologist, and Dr. Goulet, a physiatrist, all stated that "the work of a cook is not work of repetitive movements since it varies in time and space" and did not support the claim.

The Intelligent Witness

In WCAT Decision 53/94, Dr. Vaughn Bowen's paper is again quoted by the WCAT panel, but not on the topic that many cases are not work related, but reference is made to Dr. Bowen's opinions only in regards to pregnancy, arthritis, and repetitive flexion at work being a cause of CTS. A Workers' Health Clinic doctor said the claimant's CTS was from cooking. The WCAT Panel decided for the worker because: (a) the CTS had no apparent cause other than work; and (b) the worker was "intelligent, articulate, truthful and consistent". In other words, if the house shakes and a ghost is immediately reported by an intelligent, articulate, truthful and consistent observer, there must have been a ghost.

The Slings and Arrows of Outrageous Fortune

The same existential reasoning "I exist therefore I am" applies in the case of Repetitive Strain causing back disability. In WCAT Decision 673/96, a nurse's aid was awarded benefits on account of having to lift mentally ill patients over the years. Quoting from 2 medical discussion papers by Dr. Gertzbein and Dr. Harris (orthopaedic surgeons) that twisting, bending and lifting can cause tears in the intervertebral disc, the WCAT Panel concluded that this must have happened to the worker's discs over time even though there had been no evidence of an accident, or that the worker's discs were in fact torn.

Weightlifters and Landscapers

Yet another example of "if a' exists therefore b' " reasoning is contained in WCAT Decision 237/96, regarding bone chips in the elbow. The perpetrator is a distinguished orthopaedic doctor, Dr. Stewart Wright. The worker was a landscape gardener for 2 years (during the summers), and before that worked in a factory in Portugal. Dr. Wright wrote: " I would suggest that the degenerative changes in this worker's elbow are likely related to overuse over many years. I

would feel that any activity which involved excessive load of his upper extremities would be sufficient to accelerate the symptomatology and quite likely the course of the disease process. This is the type of scenario which I have seen previously in athletes such as weightlifters whose symptoms continue to worsen as they continue lifting heavy weights."

This again is the "metal fatigue" theory of human anatomy. But how does Dr. Wright know what the "breaking point" is of the elbow joint? Perhaps practicing weight lifting for 10 years at an Olympic level, or throwing curve balls for 6 is obviously enough, but where does Dr. Wright draw his inspiration for 2 years of seasonal landscaping? There is constant legal confusion at WCAT and the Board between the symptoms appearing at work, (which is a highly noticeable point because use of the particular joint is integral to maintaining the employment relation); and the symptoms being caused by work. The latter is compensable but the former is non-compensable. This confusion arises when compensation judges attempt to pin down the existence of a ghost without adequate scientific proof, particularly when the adjudicators themselves have seen ghosts as illustrated in a statement made to this lawyer recently at a hearing: "I was working in the garden yesterday and a day later my back was killing me".

Welding After "Metal Fatigue"

Three other WCAT Decisions should be noted. Decision 689/94 states that rheumatoid arthritis is not normally compensable. Decisions 193/94 and 11/94 both state that if the diagnosis is Repetitive Strain then the condition should improve when the worker is removed from the job. This is a very important precedent for employers because long term repetitive strain disability could be classified as chronic pain, if it doesn't improve after the worker is removed from work. Chronic pain disability under the new Workers' Compensation law has strict limits on entitlement to benefits. However, why a RSI would improve, if the adjudicator already accepted the metal fatigue theory in granting entitlement, is beyond understanding. Once a metal part is broken, it does not come back together short of welding.

Anatomy of a Loss

Our office made an "all out attempt" to reduce the costs to an employer of a bilateral Carpal Tunnel disability. An ergonomist reported to our office that a sewing operator would have possibly injured her left wrist in a sewing operation because the left wrist was guiding the material into the sewing machine, but not her right hand. An ergonomist was employed, as our law firm attempted to bypass the trap of trying to prove a ghost doesn't exist when other doctors claim it does.

At the Hearings Branch, the report of the ergonomist was dismissed because the ergonomist did not see the worker doing the job herself - the ergonomist relied on an associate to help prepare his report. Additionally, the worker spent 5% of her time folding sheets (a job not referred to in the report) and the ergonomist could not say at exactly what point carpal tunnel will occur. The worker developed a bilateral problem in the right wrist within 2 months of a Carpal Tunnel diagnosis in her left wrist. The job in fact placed very little stress on the right wrist. Even after having an operation to "cure" her Carpal Tunnel, following a positive EMG (nerve conduction test), the worker's condition deteriorated. All these points lead to the inescapable conclusion that the worker didn't have work related Carpal Tunnel in the first place, a conclusion which escaped the WCAT and the Appeals Officer.

The case went to the Appeals Tribunal in Decision 822/96, where the Panel completely ignored the ergonomist's report for no stated reasons, and ruled that since the employer could not prove

the carpal tunnel problem was as a result of menopause, notwithstanding the worker is menopausal, no relief could be afforded the employer. This again is a fall back to the reasoning: noises at night equals ghosts in the attic, and ignore any scientific evidence. This failure of the carpal tunnel operation upon the worker in this case also buttresses a point made by Dr. Devlin at the Fink & Associates Seminar - EMG testing is not particularly reliable because the quality of the testing is poor, and over-reading the results is a common occurrence. Any employer has a great deal of reason to be skeptical when a worker is diagnosed with work-related CTS.

Date of Accident

Decision 822/96 also comments on what test should be used in determining the date of accident for repetitive strain injuries. This is important because employer reinstatement obligations are 2 years from the date of accident and NEER plan obligations are for approximately 3 years. The earlier the disability the less liability for the employer. The WCAT stated that the first day the worker sought medical treatment, wherein the doctor indicated there may in future be a work disruption, is the first day of accident.

A Last Resort

Litigating RSI is a last resort. If a sizable segment of the population believe ghosts exist, then they exist, whether proven scientifically or not. A far better approach is to utilize treatment programmes such as those of the Health Recovery Clinic and a graduated return to regular duties, coupled with a determined effort to have the Compensation Board appropriately "monitor" the claim. If people believe in ghosts, why not engage in chasing them away, or move into a new house if that's the cheapest solution?