



Musculoskeletal Symptoms Among Electricians - Occupational Research by Hunting et al Reported in the American Journal of Industrial Medicine Aligns with Local 353 Research



By: Gary Majesky, *WSIB Consultant & Executive Board Member*

This month I want to review a research study whose results mirror many of the occupational findings that Local 353 has documented over the years. Unfortunately there is no legislative presumption that if you work in construction certain musculoskeletal injuries are deemed work related.

Some occupational diseases, including asbestos related lung disease are captured by presumptive provisions in the *Workplace Safety and Insurance Act* and schedule 3 of the regulations, but not physical injuries.

A study by a research team led by Dr. Hunting investigated the presence of musculoskeletal symptoms among electricians in order to evaluate the role of cumulative trauma disorders (CTD) among electricians in IBEW Local 26, Washington D.C. Three hundred and eight (308) apprentices and journeyman participated in the study, with a majority being young individuals (under age-30).

The survey highlighted that: 1) low back discomfort is common in young construction workers, and resulted in medical care, missed work, or light duty for almost 35% of participants; 2) neck discomfort is also very common requiring doctor visits or work modification for almost one quarter of the participants; these construction workers continued to work with symptoms that are classified as a CTD; and 4) history of injury is correlated with the subsequent musculoskeletal symptoms.

Chronic musculoskeletal stress resulting from strained postures or repetitive, forceful movements can cause chronic musculoskeletal conditions such as tendinitis, epicondylitis, carpal tunnel syndrome, and low back pain. These and similar conditions are known collectively as cumulative trauma disorders (CTDs), and frequently studied among manufacturing workers.

Musculoskeletal disorders from both acute and chronic stress also cause considerable disability in the construction industry, where work is strenuous and workers typically handle heavy materials and experience both static and dynamic postural stresses. While the study found many of these strains and sprains were acute in nature, undoubtedly many were the result of chronic physical stresses. Other investigators and L.U. 353 research prepared by the Occupational Health Clinics for Ontario Workers has also identified considerable symptom prevalence of pain, aching, stiffness, burning, numbness, or tingling consistent with the findings in the *Hunting* study.

The *Hunting* study noted the majority of study participants were relatively young and worked a median of 5 years in the electrical trade. The distribution by ethnicity was 71% white, 25% black, and 4% other minority groups. Ninety-eight percent were male. Participants

reported **Most Frequent Symptoms** in the Lumbar Spine/Back (157/308 = 51%), and Hand/wrist (144/308 = 47%)

Proportion of IBEW Study Participants with CTS, by Various Definitions (N – 308)						
	Neck No. (%)	Shoulder No. (%)	Forearm/Elbow No. (%)	Wrist/Hands No. (%)	Back No. (%)	Knee No. (%)
Symptoms occurring 3 times, or lasting >1 week	116 (38)	89 (29)	47 (15)	144 (47)	157 (51)	103 (33)
Symptoms occurring once per month, or lasting > 1 week, no traumatic injury	49 (16)	35 (11)	21 (7)	73 (24)	64 (21)	49 (16)

Participants were also asked whether specific activities made their symptoms worse, and if so, which activities. For about two thirds of the symptoms across all bodily locations, the symptoms were exacerbated by work, and in particular by tasks such as lifting, working overhead, and working with hand tools.

The study participants noted the “most serious or troublesome” were injuries to the lumbar spine/back (27%), knee (15%), and hands/wrist (14%).

In my experience high quality research on its own will not result in a worker’s compensation claim being allowed because claims are adjudicated on the individual facts and merits. However, there is a body of epidemiological research that our members’ aches, pains and injuries are strongly associated with the physical demands of the electrical trade.

Why is this important? Members need to be mindful that work injuries can result in two ways. There are acute injuries (tripped, stumbled, fell or struck) in which there is an immediate cause and effect work injury, and on the other hand, gradual onset injuries where the job demands represent the mechanism of injury. Too often members fail to make the work related connection that their daily job is the mechanism of injury in the absence of single episode trauma.

The *Hunting* study also confirms that young electricians are also susceptible and prone to cumulative trauma disorders related to the job even though there is a bias that younger workers are more resilient to injury. Over the years I’ve also heard outrageous arguments that the longer a worker is exposed to physical labour their bodies become habituated to strenuous physical work and less prone to injury, but our Local 353 research suggests the opposite. When in doubt submit a WSIB claim and call the union.

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