

CSM

Chemical Sensitivities Manitoba

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May 23, 2004

TOPIC: Proposed Multiple Chemical Sensitivities Policy for the Workers Compensation Board (WCB) of Manitoba.

Background / Introduction

Individuals with Multiple Chemical Sensitivity (MCS) report a lack of tolerance or hypersensitivity to a wide variety of chemicals and environmental agents. This hypersensitivity has been associated with multiple types of acute and chronic exposure to organic chemicals (1,2). MCS is also known by other names which include Environmental Illness, Environmental Sensitivities, Idiopathic Environmental Intolerance, and Chemical Hypersensitivity. At present, there is no accepted diagnostic test for MCS but, however, the 1999 MCS consensus definition is widely used as a diagnostic tool (3). The etiology and pathophysiology of MSC still have to be identified. It is still being debated if MCS has a physical cause or it is pschogenic in nature.

In a 2000/2001 Canadian Community Health Survey, it was estimated that approximately 2% of the Canadian population had physician-diagnosed MCS (4). There are some plausible theories that may explain the wide array of symptoms that MCS individuals experience following a chemical exposure (5). One study states: “all of these unusual effects have a common thread: the exposures have always occurred in response to mixtures of chemicals – not to individual components” (6).

With the dose-response relationship in fundamental toxicology, as the dose increases, the proportion of affected individuals increases (as well as the intensity of the effect). What is also recognized is that a proportion of the population can show allergic responses to lower levels of chemical exposures (7). These responses can be identified by appropriate medical testing. However, in a small percentage of the population, there is a hypersensitivity to very low-level chemical exposure (7). These chemicals can be found in the workplace, at home or in the environment. Some of these individuals exhibit multiple chemical sensitivities.

Background / Introduction cont'd

As previously mentioned, to quantitatively validate MCS is problematic. Although there is a lack of appropriate dose–response information for chronic low-level chemical exposure, it should **not** be concluded that there are no resulting health effects from such an exposure. Individuals with MCS who work in industry, as well as in office buildings, can experience an unusual array of symptoms when exposed to low levels of chemicals in the workplace.

In industry, workers generally know what chemicals are being used and the appropriate measures are normally taken to reduce the exposure and stay at or below the Occupational Exposure Level /Threshold Limit Value (OEL/TLV) for each chemical. The TLV does not protect individuals with MCS – they react at levels far below the TLV. This has been documented in many peer-reviewed medical papers. Office workers are not always aware of all the chemicals within their office environment. As a result, a conscious effort has to be made in order to reduce office emissions.

We cannot continue to ignore the fact that workers are being exposed to an increasing number of chemicals in the workplace. Most ignored is the chronic low-level chemical exposure where symptoms are not usually expected and can be more of an insidious nature. We are not fully aware of the additive nor synergistic effects of all the chemicals in the workplace and, as a result, the precautionary principle should apply.

In Manitoba, a Workers Compensation claim for MCS can be quite problematic. A MCS diagnosis is generally not accepted nor recognized by the Workers Compensation Board (WCB) of Manitoba. There is no WCB Policy nor Act that covers MCS. Workers who develop MCS symptoms during their employment sometimes recognize the link between their work environment and their illness. Generally, individuals with MCS would not use a MCS diagnosis for a WCB claim; they would use another medical diagnosis (if possible) that is more likely to give positive results for compensation. As a result, it is not possible to accurately determine the number of workers in Manitoba who have developed MCS during their employment and continue to be affected by workplace chemicals, nor those who have had to stop working as a result of their illness.

It has been cited by the WCB of Manitoba that the casual link between workplace chemical exposure and the resulting array of symptoms is not “strong” enough evidence for compensation. Hence, the workplace is not viewed as the dominant cause of the illness. However, MCS is recognized as legitimate and disabling illness by some government agencies such as the Canada Pension Plan (CPP) and the Canada Mortgage and Housing Corporation (CMHC).

The reason for this Multiple Chemical Sensitivity (MCS) policy proposal is to set guidelines for the adjudication of a MCS claim by the Workers Compensation Board of Manitoba. Chemical Sensitivities Manitoba (CSM) urges the Workers Compensation Board of Manitoba to review this emerging illness in conjunction with workplace chemical exposure and act in a responsible manner to the needs of affected workers. To negate the link between Multiple Chemical Sensitivities and workplace chemical exposure is to deny the fact that chemicals in the workplace can have a negative effect on our health, even at low levels of exposure.

The recognition of MCS by WCB Manitoba would be a proactive measure with regards to awareness and understanding of chemical sensitivity problems in the workplace and, hopefully, reduce the frequency of such problems. Also the recognition of MCS acknowledges the fact that people have different degrees of sensitivity to chemicals. There is sufficient existing evidence to indicate that these sensitivities are on the increase (8).

MCS can be a serious disabling health problem and a challenge for some workers. Often, for such workers, there is both financial and social loss. Afflicted workers can become productive workers again by having disability benefits and appropriate help for job accommodation, return to work, or job retraining and professional medical help, if needed.

References:

1. Kutsogiannis DJ, Davidoff AL. A multiple center study of multiple chemical sensitivity syndrome. *Archives of Environmental Health* 2001 May/June; 56(3): 196 – 207.
2. Davidoff AL, Keyl PM, Meggs W. Development of multiple chemical sensitivities in laborers after acute gasoline fume exposure in an underground tunneling operation. *Archives of Environmental Health* 1998 May/June; 53(3): 183-9.

References cont'd:

3. 34 signatories. Multiple Chemical Sensitivity: A 1999 Consensus. *Archives of Environmental Health* 1999 May/June; 54(3): 147-149.
4. Personal e-mail communication between Statistics Canada and Sandra Madray. 2002.
5. Pall ML. NMDA sensitization and stimulation by peroxy nitrite, nitric oxide, and organic solvents as the mechanism of chemical sensitivity in multiple chemical sensitivity. *Federation of American Societies for Experimental Biology Journal* 2002 Sep; 16(11): 407-17.
6. Winder C. Mechanisms of multiple chemical sensitivity. *Toxicology Letters* 2002; 128: 85 – 97.
7. Zeligler HL. Toxic effects of chemical mixtures. *Archives of Environmental Health* 2003 Jan; 58(1): 23-29.
8. Ashford A, Miller C. Chemical exposures: Low levels and high stakes. 2nd edition. Van Nostrand Reinhold

Proposed Multiple Chemical Sensitivities Policy

Claims for multiple chemical sensitivities (MCS) will generally be accepted where the worker has been occupationally exposed to chemicals and/or environmental toxins and it can be reasonably assumed that multiple chemical sensitivities arose out of and in the course of employment.

Claims for multiple chemical sensitivities will be generally accepted under the following circumstances:

- Where the worker is occupationally exposed to any chemical or environmental toxin or a combination thereof, from either an acute exposure or a chronic low-level exposure. Quantitative exposure data is not mandatory. Continuous or repetitive occupational exposure to the chemicals or environmental toxins can constitute a major component of the occupational activity but can also be an inherent part of the work environment.

Occupational exposure levels can be:

- significantly below the Threshold Limit Values (TLVs).
 - at or above the Threshold Limit Values (TLVs).
- Where the worker has chronic low-level occupational chemical or environmental toxin exposure(s) for a minimum of six months with the exposure level at or below the OEL/TLV, a minimum interval of 8 months between the first exposure to the offending chemical(s) and the date when the claim is filed is required.
 - Where the worker has acute occupational chemical or environmental toxin exposure(s) which can include a one time exposure in excess of the Threshold Limit Value – Ceiling (TLV-C), a minimum interval of 2 months between the exposure to the offending chemical(s) and the date when the claim is filed is required.

Claims that do not meet the above guidelines should be individually judged on their own merit having regard to the nature and combination of the chemicals or environmental toxins, the degree and duration of the exposure and other factors peculiar to the individual case. Consideration will be given where it appears to be evident that multiple chemical sensitivities resulted from the exposure to workplace chemical or irritants. The benefit of a reasonable doubt applies, in context with a balance of probabilities.

References:

- WCB Policy 44.20. Disease/General
- WCB Policy 44.10.20.10 Pre-existing Conditions
- WCB Policy 44.20.30.60 Occupational Diseases – Laryngeal Cancer

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