

*Scientific Review****Common Solvents Harm Health***

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Many chemicals normally regarded as safe have been shown to produce negative airway symptoms after contact.

Millqvist, a researcher from the Asthma and Allergy Research Group in Sweden, published a review covering the causes of increased airway symptoms from chemicals in the occupational environment.

Individuals exposed to organic solvents during work suffered from increased levels of nasal irritation when compared to those not exposed to solvents.

The subjects studied in Sweden experienced pronounced airway sensitivity. This was due to sensory nerve reactivity in the airway and associated with variations of nerve growth factor as a result of chemical exposure.

Brain scans also showed an increased activation of a certain part of the brain when under exposure to chemicals.

Chemical sensitivity exists in six percentage of the population of Sweden. Roughly 6.3% of the United States population is diagnosed with multiple chemical sensitivity (MCS), and another 8% report symptoms of chemical sensitivity.

There are more than 40 studies on MCS published from the United States, Canada, Europe, Japan, and Australia which have shown that most cases of MCS are initiated after one or more exposures to organic solvents and three classes of pesticides. In other words, an exposure to these chemicals triggers the beginning of MCS.

Symptoms of chemical sensitivity go beyond nasal irritation and include negative neurological, pulmonary, cardiac, and rheumatic health effects, among others.

Once initiated, the effects of chemical exposure are experienced when low levels of common environmental chemicals are encountered, including fragrances, cleaners, pesticides, and other petrochemicals at concentrations that are below regulatory toxicity thresholds and that are normally deemed as safe.

The more severe cases of MCS can be totally and permanently disabling.

The research of Millqvist provides a basis for solvents initiating chemical sensitivity and airway symptoms.

Reference

Millqvist E. Mechanisms of increased airway sensitivity to occupational chemicals and odors. *Curr Opin Allergy Clin Immunol.* 2008 Apr;8 (2):135-9.

