



Association pour la santé environnementale du Québec  
Environmental Health Association of Québec



**EHAC • ASEC**  
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## **Resources for Medical Students**

### **RECENT RESEARCH ON MULTIPLE CHEMICAL SENSITIVITY (MCS):**

**1) Molot, Sears and Anisman (2023)- “It’s Time to Catch Up With the Science”**

<https://www.sciencedirect.com/science/article/pii/S0149763423001963?via%3Dihub>

**2) Molot et al. (2021)- pathophysiological mechanisms of MCS and genetic TRPV receptor role in sensitivity**

[https://www.degruyter.com/document/doi/10.1515/reveh-2021-0043/html#j\\_reveh-2021-0043\\_ref\\_131](https://www.degruyter.com/document/doi/10.1515/reveh-2021-0043/html#j_reveh-2021-0043_ref_131)

**3) Hu and Baines (2018)- Ontario Ministry of Health Taskforce findings**

<https://www.cfp.ca/content/64/6/413.short>

**4) Anne Steinmann’s research on everyday VOC exposure:**

Fragranced products (2020): <https://link.springer.com/article/10.1007/s11869-020-00928-1>

Pandemic products and toxic VOC emissions (2021):  
<https://link.springer.com/article/10.1007/s11869-020-00912-9>

Car air fresheners and toxic VOC emissions (2020):  
<https://link.springer.com/article/10.1007/s11869-020-00886-8>

Common household products and toxic VOC emissions (2019):  
<https://link.springer.com/article/10.1007/s11869-019-00754-0>

Association pour la santé environnementale du Québec - Environmental Health Association of Québec  
Environmental Health Association of Canada - Association pour la santé environnementale du Canada  
CP 364, Saint-Sauveur, Québec J0R 1R1  
aseq-ehac.ca □ ehac-asec.ca  
514 332 4320



Fragranced laundry product and dryer vent emissions (2021):  
<https://link.springer.com/article/10.1007/s11869-020-00929-0>

**5) Miriam Diamond's research on exposure inequities:**

WAN Y, DIAMOND, ML, & SIEGEL, JA. 2020. Elevated Concentrations of Semi-volatile Organic Compounds in Social Housing Multi-unit Residential Building Apartments. Environ Sci Technol Lett. <https://doi.org/10.1021/acs.estlett.0c00068>

**6) Other research on exposure inequities- PM Concentrations higher in Toronto social housing buildings (2022):**

<https://www.sciencedirect.com/science/article/abs/pii/S2210670721007691>

**7) The nationally representative 2007-2010 Canadian House Dust Study (2022) associations between house dust, chemical exposure, and characteristics of housing interiors (such as air fresheners, carpet, cat products):**

<https://www.mdpi.com/1660-4601/19/16/10329>

**8) UCLA bibliography of academic articles about the intersections of chemical exposure, environmental inequity, MCS, and gender:**

[https://csw.ucla.edu/wp-content/uploads/2017/03/CE\\_WG\\_Master\\_Bibliography\\_11.2017.pdf](https://csw.ucla.edu/wp-content/uploads/2017/03/CE_WG_Master_Bibliography_11.2017.pdf)

**MCS DISABILITY ADVOCACY:**

**1) Letter Template for Clinicians:**

[https://aseq-ehaq.ca/wp-content/uploads/2021/04/Letter-of-support-EN\\_Website.pdf](https://aseq-ehaq.ca/wp-content/uploads/2021/04/Letter-of-support-EN_Website.pdf)

**2) Canadian Human Rights Commission Duty to Accommodate and Policy on Environmental Sensitivities:**

<https://www.chrc-ccdp.gc.ca/en/about-human-rights/what-the-duty-accommodate>

<https://www.chrc-ccdp.gc.ca/en/resources/publications/policy-environmental-sensitivities>

**2) UCLA Center for the Study of Women compilation of resources on gender, race, class and chemical sensitivity:**

<https://csw.ucla.edu/cswresearch/chemical-entanglements/>

**3) Article (2003) supporting the view that “chemical-free living space and chemical avoidance were rated by 95% of respondents as helpful:”**

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1241653/pdf/ehp0111-001498.pdf>

**4) Perales et al. (2022) study demonstrating that air quality accessibility interventions improve MCS:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8822326/>

**5) Fragrance-Free Poster (Why Fragrance-Free Facilities? *Fragrance is the new second-hand smoke*)**

[https://aseq-ehaq.ca/pdf/fragrance-free\\_Colour\\_EN.pdf](https://aseq-ehaq.ca/pdf/fragrance-free_Colour_EN.pdf)

[https://aseq-ehaq.ca/pdf/fragrance-free\\_B-W-1-EN.pdf](https://aseq-ehaq.ca/pdf/fragrance-free_B-W-1-EN.pdf)

## **MCS CLINICAL ASSESSMENT AND EDUCATION:**

**1) Marshall et al. (2002) “Identifying and managing adverse environmental health effects: Taking an exposure history:” CH2OPD2 mnemonic (Community, Home, Hobbies, Occupation, Personal habits, Diet and Drugs)**

<https://www.cmaj.ca/content/166/8/1049.long>

**2) Link to the Chemical Intolerance Self-Assessment (QEESI) from University of Texas Health San Antonio:**

<https://tiltresearch.org/qeesi-2/>

**3) Toxicant Induced Loss of Tolerance (TILT) booklet:**

[https://issuu.com/elisco/docs/tilt\\_ebook](https://issuu.com/elisco/docs/tilt_ebook)

## **MCS EXPOSURE PREVENTION RESOURCES:**

**1) ASEQ-EHAQ Eco Living Guide:**

<https://EcoLivingGuide.ca>

**2) Environmental Working Group Product Guides:**

EWG Skin Deep Database (assesses over 97 000 personal care products):

<https://www.ewg.org/skindeep/>

EWG Guide to Healthy Cleaning (assesses over 2500 cleaning products):

<https://www.ewg.org/guides/cleaners/>



EWG (2023) Article “What are VOCs?” <https://www.ewg.org/news-insights/news/2023/09/what-are-vocs>

**3) Nova Scotia Integrated Chronic Care Service (ICCS) (2022) Approved Scent-Free Product Guide and (2018) Scent-Free Resource Binder:**

<https://www.nshealth.ca/sites/nshealth.ca/files/patientinformation/1943.pdf>

[https://www.nshealth.ca/sites/nshealth.ca/files/scent\\_free\\_resource\\_binder\\_1.pdf](https://www.nshealth.ca/sites/nshealth.ca/files/scent_free_resource_binder_1.pdf)

**4) UCLA Center for the Study of Women Fragrance-Free Toolkit:**

<https://csw.ucla.edu/toolkit>

**5) Clean Air Guide:**

<https://tiltresearch.org/wp-content/uploads/sites/46/2021/03/Create-a-Clean-Air-Oasis-5.0.pdf>