



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

ENVIRONMENTAL SENSITIVITIES

Help and Resources

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**Association pour la santé environnementale du Québec / Environmental Health Association of Québec
(ASEQ-EHAQ)**

C.P. 364, Saint-Sauveur, Québec J0R 1R0 / P.O. Box 364, Saint-Sauveur, Québec J0R 1R0

☎ 514-332-4320 ☎ 450-227-4143 office@aseq-ehaq.ca

www.aseq-ehaq.ca / www.EnvironmentalSensitivities.com / www.ecoasisquebec.ca



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What are Environmental Sensitivities (ES)

Environmental sensitivities (**ES**) encompass all sensitivities including multiple chemical sensitivity (**MCS**) and electromagnetic hypersensitivity (**EHS**), and is caused by one large exposure or several smaller exposures over time to substances or agents commonly found in our environment including the workplace. These may be **chemicals** (pesticides, fragranced products, cleaning or personal products, petrochemicals, etc.), **biological** (mould), **electromagnetic** (wireless radiation for communications, fields from electrical services and appliances), etc. Exposure to these substances or agents can sensitize the person, who then reacts to very low doses, with symptoms in multiple physiological systems in several organ systems. Continued or even new exposures to triggers can lead to more intense and new symptoms. These exposures appear to be tolerated by the general population.

Prévalence

Multiple Chemical Sensitivities, population 12 years and more, Québec

Multiple Chemical Sensitivities (MCS)	Number, 2016	% 2016	Number, 2015	% 2015
Québec	230,500	3.2	173,500	2.5
Canada	1,008,400	3.3	940,500	3.1

Source: Canadian Community Health Survey, Statistics Canada



Examples of triggers / exposures *(Non exhaustive list)*

[Click here to view more triggers](http://www.hypersensibiliteenvironnementale.com/index.php/en/a-question-of-biology/pathways-into-the-body)

<http://www.hypersensibiliteenvironnementale.com/index.php/en/a-question-of-biology/pathways-into-the-body>

Chemical agents	Flame retardants, rubber, volatile organic compounds (VOCs), diesel, ink and printed material, petrol or natural gas, smoke (tobacco, wood, etc.), vehicle exhaust, fresh tar or asphalt, interiors of new cars, dry cleaning fluid, building and renovation materials (e.g. caulking, grout, shellac, paint, sealants, varnish, etc.), markers, new furniture and furnishings, new carpets, pesticides, petrochemicals, insecticide spray, shower curtains, chemicals and VOCs released by new products, nail polish and solvents, soft vinyl, etc.
Biological agents	Mould
Electromagnetic fields	Electromagnetic fields, smart meters, electrical lines and devices, fluorescent lights, mobile phones, tablets and computers, cellular towers, Wi-Fi, etc.
Workplace exposures	Glues and solvents, exposures to volatile organic compounds (VOCs), exposures to gases and fumes (firefighters), gases and fumes from welding, exhaust gases, Isocyanates, paints and paint thinners, pesticides, dust from wood, flour, metal, etc., chemicals used in the manufacture of plastics, adhesives, etc.
Scented products	Air fresheners and incense, fabric softeners, sunscreen, detergents and soaps, new plastic, cleaning products (e.g. disinfectants, bleach, floor cleaners, furniture cleaners, etc.), personal care products (e.g. : deodorants, hair spray, body lotions, aftershave lotions, makeup, etc.), baby care products, perfumed products (colognes, essential oils, perfumes, devices emitting all kinds of perfumes, potpourris), etc.
Other	Foods, supplements, medications, food flavorings, colours, preservatives, etc., sound, vibration, light, temperature, wood terpenes, etc.

Note:

This is not an exhaustive list of exposures in the workplace. Sensitivities caused by a substance can lead to reactions to other chemicals, including unrelated personal and household cleaning products, smoke, food, etc.



Symptoms *(Non-exhaustive list)*

[Click here to view symptoms](#)

http://www.hypersensibiliteenvironnementale.com/images/pdfs/en/HE_figure_symptoms_en.pdf

<i>Systems</i>	<i>Symptoms</i>
Central Nervous & Neurological	Sense of smell heightened, neurological pain (skin burning most often), migraines, intense headaches, dizziness, vertigo, confusion, feeling dull, weak or foggy, lack of coordination and / or balance, tinnitus, cognitive problems (brain fog), poor concentration, difficulty remembering, memory loss, hyperactivity, restlessness, anxiety, tension, depression, insomnia, sleep problems, night sweats, fatigue, exhaustion
Respiratory & Immune	Distress and / or difficulty breathing, coughing, wheezing, shortness of breath, asthma, chest pain, frequent bronchitis or pneumonia, congestion, itching or runny nose, allergic rhinitis, sinus infections and / or pain, sore throat, swollen glands, flu-like symptoms
Eyes	Red, painful, , watery eyes, disturbed vision
Gastrointestinal	Excessive drooling, bleeding gums, heartburn, abdominal or stomach pain, nausea, bloating, constipation, diarrhea
Endocrine	Fatigue, lethargy, fluctuating blood sugar, hormonal disturbances or imbalances
Musculo skeletal	Muscle spasms and / or pain, joint pain and / or swelling, backache, burning sensation in the muscles, extreme pain in the face, jaws and mouth, weakness, allodynia, inflammation
Cardiovascular	Palpitations, rapid and / or irregular heartbeat, hypertension or hypotension, cold extremities
Skin	Eczema, rashes, itching, hives, redness, rash, redness, cuts or lesions
Genitourinary	Frequency and urgency to urinate, incontinence, spasms in the bladder



Diagnostic criteria

Taking an Exposure History (CH2OPD2)

<https://www.aseq-ehaq.ca/wp-content/uploads/2017/03/Taking-an-Exposure-History-CH2OPD2.pdf>

The Quick Environmental Exposure and Sensitivity Inventory (QEESI)

<https://www.aseq-ehaq.ca/wp-content/uploads/2017/03/QEESI-EN.pdf>

Multiple Chemical Sensitivities (MCS)

Initiation and subsequent sensitization observed in cases of environmental sensitivities:

1. Symptoms are reproducible following repeated chemical exposure;
 2. The condition is **chronic**;
 3. Lower exposure levels than those previously tolerated, or tolerated by the general population, lead to the manifestation of symptoms;
 4. **Symptoms improve or disappear when the incitants are removed**;
 5. Responses occur to **multiple chemically unrelated substances**;
 6. Symptoms involve multiple organ systems;
- ✓ **Still not refuted** in the literature published almost two decades later
 - ✓ Definition used both in clinical practice and in research
 - ✓ **Recently (2018) confirmed** by the MOHLTC of Ontario by a group of experts using the Delphi process

Bartha, L., et al., *Multiple chemical sensitivity: a 1999 consensus*. Archives of Environmental Health: An International Journal, 1999. **54**(3): p. 147-149.

McKeown-Eyssen, G.E., et al., *Multiple chemical sensitivity: discriminant validity of case definitions*. Archives of Environmental Health: An International Journal, 2001. **56**(5): p. 406-412.

Nethercott, J.R., et al., *Multiple chemical sensitivities syndrome: toward a working case definition*. Archives of Environmental Health: An International Journal, 1993. **48**(1): p. 19-26.

Ontario Ministry of Health and Long-Term Care, *Guiding Principles for the Diagnosis of Environmental Sensitivities/Multiple Chemical Sensitivity*. Centre for Effective Practice, 2018.



Treatment

Ottawa Environmental Health Clinic:

<https://www.oehc.ca/treatments/treatments.html>

The basic principle of treatment is the avoidance of triggers, so as to create an environment where the body can heal:

- Recognize the current or potential triggers, by taking the exposure history of the person: community, housing, hobby (leisure), occupation, personal, diet, drugs (drugs) (CH2OPD2);
- Consider current or potential exposures as well as stresses that may contribute to the condition, reducing or eliminating them as much as possible;
- Identify the toxic load of the body, such as heavy metals or chlorine compounds, using appropriate tests, and intervene in a targeted manner to reduce this overload.
- Make up for nutritional deficiencies such as vitamins and minerals, which make it more difficult for the person to metabolize the triggering agents;
- Opt for organic food;
- Minimize exposure to radiation from wireless communication technologies (radio frequency radiation).



Support for people who suffer from environmental sensitivities

A diagnosis is necessary as the first means of support.

Ask the person to keep a record (log) of exposures and symptoms to identify sources of exposure and monitor progress:

http://www.hypersensibiliteenvironnementale.com/images/pdfs/en/9-activity_journal_symptoms.pdf

Checklist of strategies for better health management

<http://www.hypersensibiliteenvironnementale.com/images/pdfs/en/8-checklist.pdf>

Tips to best manage the illness (SEEDS)

http://www.hypersensibiliteenvironnementale.com/images/pdfs/en/7-SEEDS_of_health.pdf

Environmental health in hospitals - A practical guide for hospital employees:

Part 1: https://www.aseq-ehaq.ca/wp-content/uploads/2014/08/env_health_in_hospital_part_1.pdf

Part 2: https://www.aseq-ehaq.ca/wp-content/uploads/2017/03/2019-Env_health_in_hospital_part_II.pdf

Maintain employment and / or avoid isolation, stigma and exclusion:

Letters of support for accommodation in the workplace (e.g. fragrance-free environment, ecological renovations, cable Internet connection rather than Wi-Fi, good ventilation, avoidance of triggers (for example, avoid isocyanates by substitution), etc.).

To help the person manage their sensitivities as well as possible and keep their job, a letter explaining their needs is useful.

Tips for obtaining accommodation without a lawyer

http://www.hypersensibiliteenvironnementale.com/images/pdfs/en/model_letter.pdf



For more information on personal accommodation, please visit:

Centre canadien d'hygiène et de sécurité au travail

https://www.ccohs.ca/oshanswers/hsprograms/scent_free.html

Family education and support, so that the person is accommodated:

www.EnvironmentalSensitivities.com

In order to implement a fragrance-free policy in your health-care establishment:

The case for making health-care in Québec fragrance-free

www.aseq-ehaq.ca/fragrance

Canadian Centre for Occupational Health and Safety

https://www.ccohs.ca/oshanswers/hsprograms/scent_free.html

Scent-Free Buildings

<https://iaqforum.ca/iaqcanada/wp-content/uploads/2019/06/CCIAQB-Module-6-Eng.pdf>



List of products generally tolerated

(Using less toxic products is a way to prevent environmental sensitivities)

How to choose healthy products - for persons who suffer from environmental sensitivities and for their entourage

http://www.hypersensibiliteenvironnementale.com/images/pdfs/en/11-essential_tips.pdf

<https://www.aseq-ehaq.ca/wp-content/uploads/2017/03/tps-on-how-to-chose-healty-products.pdf>

<https://www.aseq-ehaq.ca/wp-content/uploads/2017/03/Recomended-Products-en-1.pdf>

Ecological solutions for everyday living

www.ecolivingguide.ca

www.aseq-ehaq.ca/eco-life

www.EWG.org

www.thinkdirtyapp.com/

Information on EHS (Electro hypersensitivity)

Introduction to Electro Hypersensitivity (EHS)

<https://www.aseq-ehaq.ca/ehs/?lang=en>

How to cope with EHS

<https://www.aseq-ehaq.ca/how-to-cope-with-electro-hypersensitivity/?lang=en>

Products to avoid:

- Technologies emitting electromagnetic fields (EMF), in particular wireless / Wi-Fi networks (or at least deactivating them);
- Cellular phones and other wireless devices (or, at least, turn on airplane mode);
- Internet of Things wireless control systems.



Practices to adopt:

- Distance from cell phone towers and other transmitting devices such as smart meters;
- Use only wired and not wireless / Wi-Fi connections.

Information on mould

Québec

<https://www.quebec.ca/en/health/health-issues/a-z/health-problems-caused-by-mould/>

Canadian Centre for Occupational Health and Safety

<https://www.ccohs.ca/topics/hazards/health/mould/>

Management Strategies for Moulds and Microbiologic Agents

<https://iaqresource.ca/wp-content/uploads/2019/06/CCIAQB-Module-10-Eng.pdf>



Resources for persons suffering from environmental sensitivities

<i>Article</i>	<i>Resource</i>	<i>Email/website</i>	<i>Telephone number</i>
Air Purifier (whole house)	Epurair	https://boutique.epurair.com/	1 800.205.1108
Cotton masks, air purifiers (for a room), etc.	Modern Alchemy	https://www.modernalchemyair.com/ info@modernalchemyair.com	1 877.467.7873
Water purifier	Solutions Limpides	https://solutionslimpides.com/	450.531.9756
Sauna	Sauna Ray	info@saunaray.com	1 877.992.1100
Face masks and ceramic oxygen masks, non-toxic oxygen tubing, etc.	Ottawa Environmental Health Clinic	https://www.oehc.ca/index.html admin@oehc.ca	613.721.9800
	Environmental Health Center Dallas	https://www.ehcd.com/	214.373.5161
Protective clothing for electromagnetic fields	Confections Artisanales La Fille au Chapeau	https://www.lafilleauchapeau.ca/en/ luci@lafilleauchapeau.ca	450.962.0461



Environmental sensitivities / Multiple chemical sensitivities

Marshall, L., et al., *Environmental Sensitivities-Multiple-Chemical Sensitivities Status Report*. Environmental Health Clinic – Women’s College Hospital, Toronto (Ontario), 2010

<https://www.aseq-ehaq.ca/wp-content/uploads/2014/08/esmcsstatusreportjune220112.pdf>

The Medical Perspective on Environmental Sensitivities

<https://www.chrc-ccdp.gc.ca/eng/content/medical-perspective-environmental-sensitivities>

The Canadian Committee on Indoor Air Quality and Buildings, *Guide for Indoor Air Quality. Module 13: Addressing Chemical Sensitivities*. 2019:

https://iaqforum.ca/iaqcanada/wp-content/uploads/2019/09/CCIAQB-Module-13-Addressing_Chemical_Sensitivities_Final_V2_Eng.pdf

Eco solutions for everyday living

<https://www.aseq-ehaq.ca/eco-life>

Environmental Health Association of Québec

<https://www.aseq-ehaq.ca/?lang=en>

Environmental Sensitivities – education and awareness project

www.EnvironmentalSensitivities.com

ECOASIS – *Affordable, healthy housing for people suffering from environmental sensitivities*

www.ecoasisquebec.ca

Radiofrequency Radiation: What Makes Smart and Healthy Buildings

Clegg, Frank M., Margaret Sears, Margaret Friesen, Theodora Scarato, Rob Metzinger, Cindy Lee Russell, Alex Stadtner, and Anthony B. Miller. “Building Science and Radiofrequency Radiation: What Makes Smart and Healthy Buildings.” *Building and Environment*, August 6, 2019, 106324. <https://doi.org/10.1016/j.buildenv.2019.106324>.



Information on fragrances and their effects on health and how to establish a fragrance-free policy in a healthcare establishment

The case for making health-care in Québec fragrance-free

www.aseq-ehaq.ca/fragrance

Canadian Centre for Occupational Health and Safety

https://www.ccohs.ca/oshanswers/hsprograms/scent_free.html

Artificial scents have no place in our hospitals

<https://www.aseq-ehaq.ca/wp-content/uploads/2017/03/artificial-scents-hospitals.pdf>

Scent-Free Buildings

<https://iaqforum.ca/iaqcanada/wp-content/uploads/2019/06/CCIAQB-Module-6-Eng.pdf>

Human Rights Commission

Canadian Human Rights Commission, Policy on Environmental Sensitivities (*on accommodation of persons suffering from environmental sensitivities*)

<https://www.chrc-ccdp.gc.ca/eng/content/policy-environmental-sensitivities>

Human Rights and Youth Rights Commission (Québec)

<http://www.hypersensibiliteenvironnementale.com/images/pdfs/en/6-Letter from the Human Rights Commission of Quebec.pdf>