



Questions and Answers on the Biological Aspects of Multiple Chemical Sensitivity (MCS)



Empowering Community and Removal of Barriers (ECRoB) Project

What is Multiple Chemical Sensitivity (MCS)?

MCS is an acquired, recurrent, and chronic health condition affecting different organ systems. (Government of Ontario, 2018) It is associated with exposure to a single or repeated chemical, biological, or physical agent and is defined by manifestations of dermatological, allergic, gastrointestinal, rheumatological, endocrinological, cardiological, and neurological signs and symptoms. (Damiani G., et al. 2021)

What causes MCS?

We now recognize the presence of numerous harmful chemicals in our everyday environments, impacting our health. Research is exploring how these chemicals affect our body's defense mechanisms, considering genetic factors and metabolic consequences. The field of toxicology has evolved, moving away from simplistic models of disease.

What are common triggers for MCS?

Triggers for MCS can vary widely between individuals. Common triggers for people with MCS include:

- fragrances, colognes, essential oils, incense
- petrochemicals & petrochemical products
- mould
- pesticides
- smoke
- plastics

How is MCS diagnosed?

MCS does not have a standardized medical test for diagnosis. MCS is largely diagnosed based on symptom presentation. (Bartha et al. 1999) If a physician suspects an environmental factor is the cause of a patient's health problem, they usually look closely at the medical history and exposure, completing a physical exam and prescribing routine laboratory tests.

What are the key characteristics of MCS according to validated consensus studies?

The MCS validated consensus definition remains unrefuted in the published literature more than twenty years after publication and is commonly used in research studies on MCS. (Molot, 2023)

The MCS validated consensus definition was based upon previous work and comprises criteria that reflected an internationally consistently observed pattern of symptom presentation. This was agreed upon by 34 North American clinicians and researchers who collectively had experience with thousands of MCS patients. (Molot, et al., 2023). These criteria were validated by the Ontario Ministry of Health-funded Environmental Hypersensitivity Research Unit (EHRU) at the University of Toronto (McKeown-Eyssen et al., 2000). The criteria include the following:



1. The symptoms are reproducible with [repeated] chemical exposure;
2. The condition is chronic;
3. Low levels of exposure [lower than previously or commonly tolerated] result in the manifestation of the symptoms;
4. The symptoms improve or resolve when the incitants are removed;
5. Responses occur to multiple chemically unrelated substances;
6. Symptoms involve multiple organ systems

What are the symptoms of MCS?

Symptoms of MCS can range from mild to severe and may include headaches, dizziness, fatigue, respiratory issues, cognitive problems, and skin reactions. These symptoms typically occur upon exposure to triggers. (ASEQ, 2012)

How is MCS treated?

There is no known cure for MCS. Avoidance of triggers through the use of fragrance/scent-free, lowest-emission, and least-toxic products is best for the management of this medical condition. Lifestyle changes to healthy ecological strategies for everyday living centred on product choice, organic food, clean air, water, and healthy housing are the basis of managing MCS. Consultation with a healthcare professional who knows about MCS is advised.

Is MCS recognized as a disability?

MCS is a disability recognized by the Canadian Human Rights Commission and protected under the Canadian Human Rights Act like any other disability (CHRC, 2007; CHRA, 2007).

Can MCS be prevented?

To prevent MCS, maintain optimal indoor air quality through product choice. Choose fragrance-free, lowest-emission and least toxic products for all needs, and applications. Make it a practice to always read labels, avoid greenwashing, depend on certified logos, and invest in organic or healthy items that do not off-gas toxic chemicals in your living space.

What should I do if I suspect I have MCS?

If you suspect you have MCS, consult with a healthcare provider who is knowledgeable about Multiple Chemical Sensitivity (MCS). They can help with diagnosis, management of your living space, support in the workplace and at other locations such as educational institutions, and healthy lifestyle improvements.



MCS is a medical condition and recognized disability with varying levels of recognition and understanding. It can significantly impact an individual's life. Consult with knowledgeable healthcare professionals and patient advocacy groups for guidance and support. Stay informed about the latest research and treatment options, and explore strategies to mitigate the impact of this disability.

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