

Multiple Chemical Sensitivities (MCS), Environmental Sensitivities (ES), Electrical Hyper-Sensitivities (EHS) and Housing

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Background

Safe, healthy housing is the number one health-care need of people with Multiple Chemical Sensitivities (MCS), Environmental Sensitivities (ES), and Electrical Hyper-Sensitivities (EHS).

The failure of housing providers to adequately accommodate the unique needs of tenants with environmental or multiple chemical sensitivities is a human rights issue that is becoming increasingly significant¹. For people with environmental sensitivities, their health and ability rests with the actions of others, such as building managers, neighbours and other tenants². According to a study headed by the CMHC, 86% of people with Environmental Sensitivities improved significantly after access to safe housing³. Some who had a bleak prognosis almost completely recovered.

Almost 3% (over 1 million) of Canadians are disabled by MCS/ ES/ EHS, (even though most doctors are unable to correctly diagnose the conditions) while 58,000 have AIDS⁴. People with MCS/ES must practice chemical avoidance like people with peanut allergies practice peanut avoidance. The ability to control one's environment is the only way to practice the level of chemical avoidance that is necessary to maintain one's health and ability.

Fragrance chemicals, tobacco smoke, and other volatile organic compounds (VOC's) from building materials and cleaning products do not recognize air-space boundaries, as was demonstrated with smoking sections in restaurants. Smoking has now been banned in indoor public spaces, and while some scent-free workplaces exist, there are no protections for people with environmental and chemical sensitivities in their homes and apartments.

Second hand exposures to the above mentioned VOC's occur everywhere. Fumes from BBQ's, wood smoke, asphalt, tar, dryer vents, pesticides, fertilizers, vehicle exhaust, etc. occur outdoors, and easily migrate indoors without adequate measures. Electro Magnetic Fields and Radiation (EMF/EMR) from cell towers, WiFi zones, DECT phones, transmission lines and transformers travel through walls and affect people with EHS. Some suffer adverse effects from both MCS/ES and EHS, restricting their lives even more in effort to avoid exposures.

MCS/ES and EHS affect every aspect of life. Every single activity or purchase has a cost/benefit analysis attached to it. Ordinary excursions and purchases can be exercises in moving from one assault (exposure) to the next. Attempting avoidance of triggering substances is near impossible away from home; therefore the quality of the home environment is critical to one's quality of life.

Affordable housing is often situated near industrial sites with high chemical emissions, highways with heavy diesel traffic, garbage dumps, manufacturing, agricultural or golf course fertilizers and pesticides, high voltage power lines or cell towers, etc, or it is mouldy, not well maintained, with repairs done using the cheapest (and usually most toxic) materials available. In other words, places that people with chemical and environmental or electrical sensitivities must avoid.

¹ The Centre for Equality Rights in Accommodation (CERA) is an Ontario-based non-profit human rights organization that promotes human rights in housing and challenges discrimination. The purpose of the Guide is to provide housing workers, social service providers and community advocates with tools to help them effectively challenge discrimination in housing.

<http://www.equalityrights.org/cher/index.cfm?nav=tools&sub=duty8>

² CHRC. *The Medical Perspective of Environmental Sensitivities*.

http://www.chrc-ccdp.ca/research_program_recherche/esensitivities_hypersensibilitee/toc_tdm-en.asp

³ Canada Mortgage and Housing Corporation (CMHC).

⁴ Statistics Canada, AIDS Committee of Toronto (ACT).

They need to be away from major sources of emissions and pollution, including businesses that deal with volatile organic compounds (VOC's), like hair salons and public laundromats. In urban areas, this is very difficult, so the safety of the indoor environment becomes even more important.

When one develops MCS/ES/EHS and needs to find a safer place to live, there is no organized help. There are no registries of safer places, no agents who know what to look for, few landlords who understand that even a small repair or touch up with problem materials could result in months of ill health. Rare are the places with safe tenants (who don't pollute the air) or buildings with safe maintenance plans. Too many people become very ill searching for a safe home, as each subsequent exposure adds to a cumulative toxic load. Many become homeless, and more than a few commit suicide as a direct result of not having access to safe housing⁵.

People with chemical injury and MCS or EHS currently face obstacles at virtually every turn in life. The severity of MCS/ES/EHS range from mildly disabling to severe and life threatening. Part of the debilitating disability is cognitive, with major fatigue, so that something as simple as making phone calls can become over-whelming. Word recall is difficult, and asking potential landlords questions about maintenance practices and other tenants' habits, when suffering from exposures, is a sure fire way to be rejected, and not be taken seriously, or risking a visit to an unsafe environment from other's belief or attitude that it wouldn't make a difference.

The cumulative effects of these exposures, especially when occurring long-term, are debilitating. The longer one remains in an environment with triggering substances, the more disabling and difficult life becomes. One cannot recover unless exposures are avoided. The sooner one is able to avoid exposures, the more likely one is to avoid complete disability. Early solutions are easy and cost effective, compared to the difficulties encountered once one has severe MCS/ES/EHS.

Clean air, water and food are crucial elements of life. Prevention is the best, most cost effective way of dealing with MCS/ES and EHS. Timely access to safe housing allows people to regain control of their health and abilities. Complete control and separation of air space is required in the homes of people with MCS/ES. Ways to ensure no wireless and cell or transmission tower EMF/EMR encroach into one's living space are necessary. Plans to minimize harm from exposures must also be made for all shared spaces like hallways and elevators.

Safe housing at the earliest opportunity after injury and diagnosis, along with safe shelters to avoid periodic events like renovations and repairs, road paving, pesticide, etc., prevents the deterioration of health and allows the injured an opportunity to recover, as well as the possibility of returning to a productive life. Without these, people can become completely incapacitated and fully dependent on government and other supports. Until environmentally safe housing is developed, assistance needs to be made available for those diagnosed with these illnesses and disabilities.

Safe Housing is critical. Safe housing is the primary medical need of people with MCS, ES, and EHS.

The number of lives affected is growing, and so far nothing has been done to address the needs of the people who are being injured by common everyday chemical and electrical exposures.

It is time for this to change.

⁵ Environmental Illness Society of Canada (EISC). *Socio-Economic Impacts of Environmental Illness in Canada*.

Recommended transitional housing supports for people living with MCS/ES, and EHS

- Safe emergency shelters for both short and medium term durations since ordinary shelters are not accessible. Short term refuge is required during neighbourhood events like road paving, pesticide use, renovations or repairs, heat waves, or loss of housing and health.
- Housing subsidies attached to the individual instead of a location, to aid in affording safer environments wherever one may be found., since they are currently few and far between and the search often transcends municipal boundaries
- Specialized housing workers and case managers are desperately needed, as the search is tremendously difficult. People are forced to try to advocate for themselves now, with ill health, and reduced cognitive abilities, and are usually exposed to more harm than good when seeking help. This also leads to many doing without basic necessities like food, clothing, housing and healthcare.
- Transitional safe housing for the time between when emergency shelter is required and permanent housing can be found.
- Safe storage facilities (to avoid contamination and loss of belongings due to facility or other user pesticides and “air-fresheners”) when between housing
- Safe and knowledgeable scent-free home-care is needed, when people become too physically or cognitively ill to take care of themselves after exposures (long term or infrequent/occasional)
- Financial assistance* and expertise to make appropriate retrofits can help people stay in their own homes, if at all possible (some places cannot be made safe enough)
- Small multi-unit buildings could be renovated to accommodate the needs of mildly to moderately disabled members of this group, and small private bungalows for the more severely impacted.
- Education is necessary for landlords, contractors, real estate agents, service providers and the public about MCS/ES, chemical contaminants, safe alternatives and the need to follow strict protocols.

*CMHC does have a program called RRAP which recognizes the needs of people with MCS/ES, but landlord co-operation, funding and expertise are not always available.

Recommendations for MCS/ES/EHS safe new developments or retrofits

- Mixed income, affordable and subsidized when necessary, housing complexes, built beyond green (ie. using LEED Platinum + and Building Biology guidelines), with non-toxic, no-VOC materials, excellent mould elimination strategies, no shared air, excellent air-filtration, radiant floor or radiator heat, no WiFi or cell towers, low Electro Magnetic Field (EMF) building practices, (no fluorescent lighting) with individual laundries and vented storage areas in each unit.
- Shared areas (halls, stairs) need to have special air controls and full house air filtration and ventilation to prevent cross contamination and air mixing between areas. All spaces must be individually vented, with private HVAC in units
- Ground floor units need to be accessible from the outdoors, for people with severe MCS/ES who cannot share hallways, while others with moderate MCS can be housed in upper level units with strict written agreements about what can and can't be done where air-quality and EMF/EMR are concerned.
- Whole building water filtration to purify water and remove chlorine and pollutants.
- Personal vented laundry closets (Washer/Dryer) are also required. Individuals with MCS/ES rarely tolerate the same laundry products as others, and cross contamination of clothing can be catastrophic when one is already struggling to survive, so personal use machines are necessary.
- Within each unit, a private locker type space with ventilation to allow storage and offgassing of problem materials and medical equipment as required, ie new items brought into the home, like mail, supplies, occasional-use items that are rarely tolerated but necessary for sustaining some manner of life, and many need to stock up in advance to allow the offgassing of items before use, so extra safe storage space becomes crucial
- Low EMF/EMR appliances with proper shielding between rooms and units.
- Building should be sound-proofed as sound sensitivity is also common.
- Units to be wheelchair accessible, as Chronic Fatigue Syndrome (CFS), Fibromyalgia (FM), and other health issues may develop or are already co-occurring.
- Some residents have no human contact and have pets. Others are allergic to animals, and need separated space to be safe. Separated building wings can accommodate this.
- The site should have a secure shared use specially vented off-gassing area for larger or more toxic things like appliances, so that stoves, fridges, computers etc. can be offgassed, sometimes for months before being safe to use. Possibly combined with a unit to bake off VOC's or bedbugs/pests.
- Delivery system / area that does not send exhaust fumes into units.
- Units should be well protected from garbage and disposal areas.

Individual Unit recommendations for people with MCS/ES/EHS

- Solid wood, ceramic tile, or polished concrete floors, no carpeting
- Many people will need an extra room to house the computer and home office, since they are confined to working from home, if at all, or computers are the only social access possible. Special venting for computers and televisions, and EMF reduction strategies need to be considered in the design.
- Bedrooms should be empty of most everything but the bed, so size can be reduced. Clothing is best stored elsewhere. Vented closets may be necessary for the more severely affected.
- *Subsidies usually cover one bedroom per person, considering more space to be “over-housing”, yet without safe access to other places such as libraries, parks, theatres, malls, restaurants, due to levels of exposures - many people are housebound, making the home the entire world experience. Most can agree that providing an extra room and larger living area to people without safe access elsewhere does not constitute “over-housing”. However, it must also be said, that if appropriate safe housing is accessible early enough, the decline in health is usually prevented so this would eventually become unnecessary.
- Enclosed private Washer and Dryer or drying closet
- Private vented storage area
- Bathrooms with FIR sauna technology to aid in detox (easy to incorporate during build)
- Filtered Heat Recovery Ventilators (HRVs) and A/C's with individual controls
- Enclosed, not open concept kitchens, with extra counter space and storage, as most meals are made from scratch and need more preparation space. At least one counter should be lower so prep can be done while seated. Non porous materials to prevent mould and offgassing. Extra storage space for cooking materials and foods, including larger fridges for fresh vegetables etc. Extra outlets for equipment, and good venting for fumes.
- Windows that open, with good natural light, and safe shutter system to block out light when necessary (window covering textiles can be problematic).
- Home office and other areas need to be properly shielded from EMF/EMR and have possibility to vent computer when necessary (off-gassing can be an issue for years)
- Remote control of all electronics at switch if required by those with more severe EHS.
- Upper levels should have balconies to inner courtyard for safe, easy access to outdoors. Ground level units should have easy access to patio area in the courtyard space. Wind breaks are advisable.

Recommendations for creating the ideal inclusive community environment

- Basic needs should be available within or near the community/complex. Lack of safe transport, and toxicity of most retail and medical environments make access difficult.
- Specially vented visiting rooms, with outdoor access for visitors, (social workers, and delivery people) who could risk resident health if not suitably detoxed, one with glass wall partition and separate access to protect the most vulnerable residents.
- Community space to hold chemical free functions: meetings, concerts, classes, performances, exhibits, parties, etc.
- A business incubator space for residents to develop and put into practice business plans.
- An interior courtyard and garden space surrounded by the buildings, to protect the out-door area from neighbouring winds, creating safer spaces to sit outside.
- Community garden space to grow organic vegetables.
- Retail store that sells chemical free basic needs: organic foods and produce, supplements, personal care, clothing, etc.
- Specialized medical and dental offices, or in-home visitations.
- Gym, sauna, chemical free pool for fitness on site - as public space is rarely accessible
- Resource center on the premises which could provide information and supports to GTA/province on invisible disabilities. May be staffed by residents on a rotational or wellness basis.
- Many of these ideas have been successfully implemented in Community Living projects.

Agreements

- Signed agreements with all tenants, owners, maintenance managers, etc... about acceptable protocols for furnishings, cleaning, maintenance, repairs, as well as general product use for all residents, interior visitors and property management. Tenants should be consulted as to most appropriate methods for repairs in their units when necessary.
- Application screening process about level of individual sensitivity, to determine awareness of problem materials and acceptable approaches to living in proximity to others with MCS/ES/EHS is necessary.
- Educational sessions and contracts about acceptable products and procedures.
- People with MCS/ES/EHS often need longer time to accomplish things than regular people, any advance notification requirements may need to be longer than usual

References and Resources

7 units designed for the environmentally sensitive

Barrhaven Environmentally Sensitive Units, Nepean, Ontario

<http://www.aeha.ca/barrhaven-housing.htm>

A healthy home (one that incorporates healthy design elements, non-toxic building materials, and proper construction techniques. It "breathes", emits no toxic gasses, and is resistant to mold).

http://www.architecturalhouseplans.com/healthy_homes

Addressing Indoor Air Quality in Toronto

http://www.toronto.ca/health/hphe/pdf/air_hip_report.pdf

http://www.toronto.ca/health/hphe/pdf/air_hip_report_part_d.pdf

Building Biology

<http://www.buildingbiology.net/>

Dr. Grace Ziem

Environmental Control Plan for Chemically Injured Persons and Preventing Chemical Injury

<http://www.chemicalinjury.net/EC/2%20Environmental%20Control%20Plan.doc>

Ecology House, San Rafael, California (built in 1994)

To provide safer affordable housing for eleven disabled, low income individuals with Environmental Illness and/or Multiple Chemical Sensitivity

<http://www.tikvah.com/cc/eh>

Healthy Construction Guidelines and Healthy Construction or Remodel Kit

<http://www.architecturalhouseplans.com/products>

IEQ Indoor Environmental Quality

A project of the National Institute of Building Sciences (NIBS) with funding support from The Architectural and Transportation Barriers Compliance Board (Access Board)

http://ieq.nibs.org/ieq_project.pdf

LEED for Homes (a rating system that promotes the design and construction of high-performance green homes. A green home uses less energy, water and natural resources; creates less waste; and is healthier and more comfortable for the occupants. Benefits of a LEED home include lower energy and water bills; reduced greenhouse gas emissions; and less exposure to mold, mildew and other indoor toxins. The net cost of owning a LEED home is comparable to that of owning a conventional home).

<http://www.cagbc.org/leed/systems/index.htm>

Report on a failed attempt to create a safe unit in a regular apartment building in Vancouver BC.

<http://www.sheltair.com/library/enviromentally%20hypersensitive.pdf>

Research House for the Environmentally Hypersensitive

-note that safer alternatives are now available for some of the materials used

<http://www.cmhc-schl.gc.ca/en/inpr/bude/heho/upload/Research-House-for-the-Environmentally-Hypersensitive.pdf>

RRAP - Residential Rehabilitation Assistance Program for Persons with Disabilities

CMHC offers financial assistance to allow homeowners and landlords to pay for modifications to make their property more accessible to persons with disabilities. These modifications are intended to eliminate physical barriers, imminent safety risks and improve the ability to meet the demands of daily living within the home.

http://www.cmhc-schl.gc.ca/en/co/prfinas/prfinas_003.cfm

“The Medical Perspective on Environmental Sensitivities”

http://www.chrc-ccdp.ca/research_program_recherche/esensitivities_hypersensibilitee/toc_tdm-en.asp

Ontario Human Rights Code : Policy and Guidelines on Disability and the Duty to Accommodate

1.3 Non-Evident Disabilities

The nature or degree of certain disabilities might render them "non-evident" to others. Chronic fatigue syndrome and back pain, for example, are not apparent conditions. Other disabilities might remain hidden because they are episodic. Epilepsy is one example. Similarly, environmental sensitivities can flare up from one day to the next, resulting in significant impairment to a person's health and capacity to function, while at other times, this disability may be entirely non-evident.

http://www.ohrc.on.ca/en/resources/Policies/PolicyDisAccom2?page=PolicyDisAccom21_.html#Heading84

Accommodating Persons with Disabilities

Under the Code, persons with disabilities have the right to full integration and participation in society. They should be able to access services, employment, and housing, and face the same duties and responsibilities as everyone else.

Employers, landlords, service providers, and others have a duty to consider the needs of persons with disabilities up-front. This means designing for buildings, processes, programs or services inclusively. If existing physical structures, systems, or attitudes create barriers, they must be removed. Where it is impossible to remove barriers without undue hardship, special arrangements must be made so that persons with disabilities can fully participate. This is what is called "accommodation."