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**FERTILIZERS,  
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WHEN  
THE ENVIRONMENT  
**MAKES YOU ILL**

Need to  
understand,  
need  
to act

# WHEN THE ENVIRONMENT MAKES YOU ILL

Need to  
understand,  
need  
to act

Training on environmental sensitivities

## INFORMATION DOCUMENT ON ENVIRONMENTAL SENSITIVITIES

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This document is an overview of the information provided in a training workshop designed for people with environmental sensitivities and their entourage. The project was financed by the Québec Ministry of Education, Leisure and Sports.

The idea behind this project came from an analysis of the needs expressed by ASEQ-EHAQ and its members, which revealed a need for clear, simple and accurate information, in French, on the biological and legal aspects of environmental sensitivities. One of the consequences of the illness is isolation and a limitation of activities. It therefore seemed important to bring the information directly to the people in their region by offering them workshops on the subject.

The main purpose of this training is to encourage people with environmental sensitivities to become aware of their needs, to better manage their medical condition and to regain their place in society. The training workshops are therefore intended as a place of sharing and recognition. They aim at increasing empowerment of people with environmental sensitivities by providing simple, efficient tools to help them master material that can be complex at times.





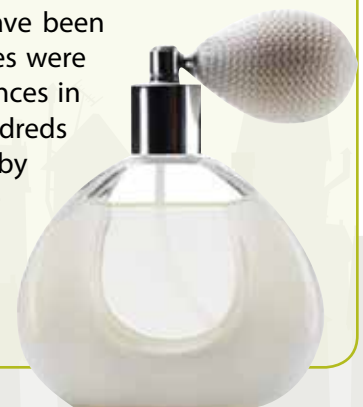
## WHEN HEALTH DEPENDS ON THE ENVIRONMENT

**P**eople who suffer from environmental sensitivities react negatively to all kinds of contaminants, but at lower levels of exposure that seem to cause no reaction in most people. Reactions can lead to symptoms that are inconvenient, quite serious, or even debilitating. According to the latest data from Statistics Canada (2007), environmental sensitivities are becoming a more common health issue. Yet in Quebec, the people who are most severely hit often have difficulty receiving appropriate care and recognition as having a condition on a par with sufferers of other illnesses.

To understand why it is so difficult to have environmental sensitivities recognized, it is important to place them within the framework of an emerging environmental illness. Recognizing an environmental illness calls into question our values and the choices we have made as a society. Prevention sometimes means making major changes in the way we do things. How can we ask men and women to stop wearing perfume in public places, when we are bombarded with advertisements asserting that buying a certain perfume will unleash our powers of seduction, or a particular cream will make us look ten years younger, or women who use a specific deodorant—in addition to being young and pretty—will also have infinite energy enabling them to perform 18 hours a day without even breaking into a sweat? If commercials are to be believed, we now need perfumes to make our homes more inviting and to “breathe happiness.” And some potpourris can even whisk us all the way to the Virgin Islands! To suggest that these perfumes are unnecessary and can even make some people ill is swimming against the tide, to say the least. It is therefore not surprising that the road to recognition of environmental illnesses is filled with obstacles.

### Perfumes

Perfumes are considered the most concentrated form of fragrances. They have been used for hundreds of years to mask unpleasant odours. In the past, fragrances were extracted from plants, flowers and animals. Today, 80% to 95% of the substances in fragrances are synthetic or derived from petroleum. Fragrances contain hundreds of chemical products, and can come in as many combinations. Testing done by the Réseau Environnement Santé revealed that one perfume can contain more than 800 chemical substances. These same petrochemical molecules are also used to manufacture aromas (raspberry, strawberry, lime, etc.) that are found, among other things, in food.





Nevertheless, it is important to keep in mind that what is considered a controversial or an emerging illness today may not necessarily be considered so tomorrow. Progress in science has allowed a better understanding of phenomena that were first met with circumspection or even denial. In the 1960s, people who first complained of the effects of second-hand cigarette smoke were considered marginal for inconveniencing others with their unreasonable demands. Likewise, in the 1960s and 1970s, people who first called into question the safety of pesticides such as DDT were seen as extremists or conspiracy theorists with little credibility. Yet today, Quebec public policy concurs with them.

Gradually, scientific knowledge of environmental sensitivities is growing. It is likely that once the biochemical mechanisms explaining the symptoms of environmental sensitivities have been properly identified, we will look upon the debates taking place today surrounding the illness and the treatment given to patients through a very different lens.

Throughout the process of having an environmental illness recognized, the message is conveyed by the words chosen to discuss the harmfulness or harmlessness of a substance or what is deemed to be the root cause of an illness. In 2007, according to the Ministry of Sustainable Development, Environment, Wildlife and Parks, the cyanobacteria invading the lakes in Quebec became known as “green-blue algae.” The term brings to mind the colours of a rainbow rather than highly toxic organisms. The term “environmental sensitivities” was first referred to as multiple chemical sensitivity. In the United States, the chemical products industry lobbied to have the word “chemical” removed from the name. They preferred the term “idiopathic environmental intolerance,” which suggested that the illness was of unknown origin.

We have opted for the term “**environmental sensitivities**,” which includes not only sensitivities to chemical products (pesticides, cleaning products, solvents, perfumes, etc.), but also sensitivities to biological contaminants such as mould and sensitivities to electromagnetic radiation. This term also has the advantage of reflecting what we currently know of the illness. It involves an individual who is in a heightened state of susceptibility to several irritants and agents frequently encountered in the environment.



## Several terms refer to environmental sensitivities:

Sensitivity to  
chemical products

**Gulf war  
syndrome**

**Multiple chemical  
sensitivity**

**Idiopathic  
environmental  
intolerance**

**MCS**

**Sensitivity  
to the environment  
& chemicals**

**21st-century illness**

Chemical injury

**Sick building syndrome**

**Polytoxicosensitivity**

Electrosensitivity

In the past, when the use of some products has been called into question following recognition of illnesses linked to their toxicity, industries have not hesitated to use scientific data to ensure that regulations to protect the public were not adopted. For a long time, the tobacco industry was able to seed “doubt” concerning the carcinogenic properties of nicotine. Recognition of the risks associated with asbestos was similarly delayed when scientists working for the industry deliberately prolonged the process by submitting contradictory scientific data.

In Washington D.C., there is a research institute called the Environmental Sensitivities Research Institute. The name is misleading since it suggests it seeks to have environmental sensitivities recognized. However, the truth becomes evident when one discovers most of the members of the Board of Directors are representatives from the chemical products industry. As such, one could call into question the objectivity of the findings in two scientific studies funded by the institute which concluded that environmental sensitivities do not truly constitute an illness.



The reality is that understanding environmental sensitivities is a real challenge for scientists for several reasons:

- “ Environmental sensitivities challenge the dominant medical model where one specific cause brings about one specific effect.
- “ As opposed to the conventional toxicology model, there is no linear relationship (dose-effect) between the level of exposure to a substance and the effects that it produces.
- “ Furthermore, there is n't just one toxic product responsible. It is, rather, the combined effects of several contaminants and the capacity of the human body to detoxify. This capacity varies in people depending on genetics and individual susceptibility.
- “ The effects are felt in different systems of the body and not necessarily at the same time.
- “ Symptoms (for example headaches, fatigue, respiratory difficulties, and burning eyes) are also common in other illnesses.

Moreover, certain symptoms that could differentiate environmental sensitivities from other conditions are cognitive in nature: for example, difficulty concentrating, feeling “dazed”, dizzy or brain fogged. Physicians are therefore unable to prescribe specific tests that are commonly available to “define” these kinds of symptoms, and diagnosis depends heavily on the reporting of the patient and the relationship between exposures and symptoms. The credibility of the patient therefore comes into play. Since 60% to 80% of people affected are women, environmental sensitivities are too often erroneously linked to emotional and irrational “feminine” causes, rather than to an illness with a physiological base.

Regardless of the complexity of obtaining scientific recognition of environmental sensitivities, what is clear is that they do cause much suffering. We believe that we should not wait to have a complete understanding of environmental sensitivities before providing support, accommodation and adequate treatment for those stricken. Germany, Austria, Luxembourg and Japan recognize environmental sensitivities on the same footing as any other illnesses. We hope that the province of Quebec will follow suit in order that people suffering from this illness no longer have to simultaneously be sick and carry the burden of having to fight to see their condition recognized.



## ENVIRONMENTAL SENSITIVITIES : A QUESTION OF BIOLOGY

**O**ver the past eighty years, tens of thousands of chemical substances have been manufactured. Chemical preservatives have been added to food and cosmetics. Pesticides have been synthesized to increase agricultural production. Substances have been made to waterproof furniture and clothes, while others make plastic either more pliable or more solid. Countless other products have been incorporated into construction materials to prevent mould build-up or oxidization. These substances are made for specific end-use applications, yet they inevitably find their way into the air we breathe, the water we drink and the food we eat. Today, all humans on the planet are contaminated to varying degrees by these substances. Between one hundred to three hundred artificial chemicals can be found in the human body.

The scientific community was first alerted in the 1960s about the harmful effects of pesticides on the reproduction cycle of certain animals. Yet, only recently have we begun to see a link between this soup of substances and chronic illnesses such as heart and lung diseases, type 2 diabetes, obesity, declining fertility and learning disabilities in children, to name but a few.

We used to think fetuses were protected from these contaminants. But at birth, babies have already inherited a significant amount of contaminants from their mothers. We believe that in the near future, “environmental” illnesses will become more common, since they are provoked by exposure to ubiquitous toxic substances in our daily environment and workplaces.

*Up to now,  
environmental concerns have focused on  
fish in rivers, endangered species,  
forests, water and climate.  
As if “the environment”  
was something external to us.  
Today we realize that we are absorbing  
environmental pollution.*



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During this intensive development and commercialization of chemical products and different technologies, some people have stepped forward complaining of health issues and problems linked to exposure to chemical substances, biological material (mould) or electromagnetic radiation. This is when we began to talk about environmental sensitivities. “Sensitivities” because they concern symptoms that appear with very low exposures, at levels where most people feel no ill effects. “Environmental” because it refers to contaminants that are ubiquitous in the environment.

### Are people suffering from environmental sensitivities a warning that environmental pollution has reached a critical threshold?

According to some, the people suffering from environmental sensitivities are “early toxin detectors”. They represent a warning signal of the introduction of substances, including biological and physical agents, into our daily environment that pose a risk to our health. It is for this reason an analogy is often made between people suffering from environmental sensitivities and the canaries used in coal mines during the 19th and 20th centuries. The canaries reacted to low levels of toxic gases long before the miners did, thereby giving the latter time to evacuate a mine and avoid lethal poisonings.



## The Environmental Sensitivities Cycle

Increasingly, scientists are identifying a two-phase process leading to environmental sensitivities.

### Phase 1: Onset of the illness

The onset of the illness takes place either after chronic low-level exposure to contaminants or after one high-level exposure to a chemical substance, electromagnetic radiation, or a biological agent. The factors involved are called initiating agents (Table 1).

#### The most common initiating agents of the illness are:

- Pesticides
- Volatile organic compounds (VOCs: solvents, perfumes, formaldehyde and other petrochemical products, exhaust gases from vehicles)
- Moulds
- Electromagnetic radiation and/or fields

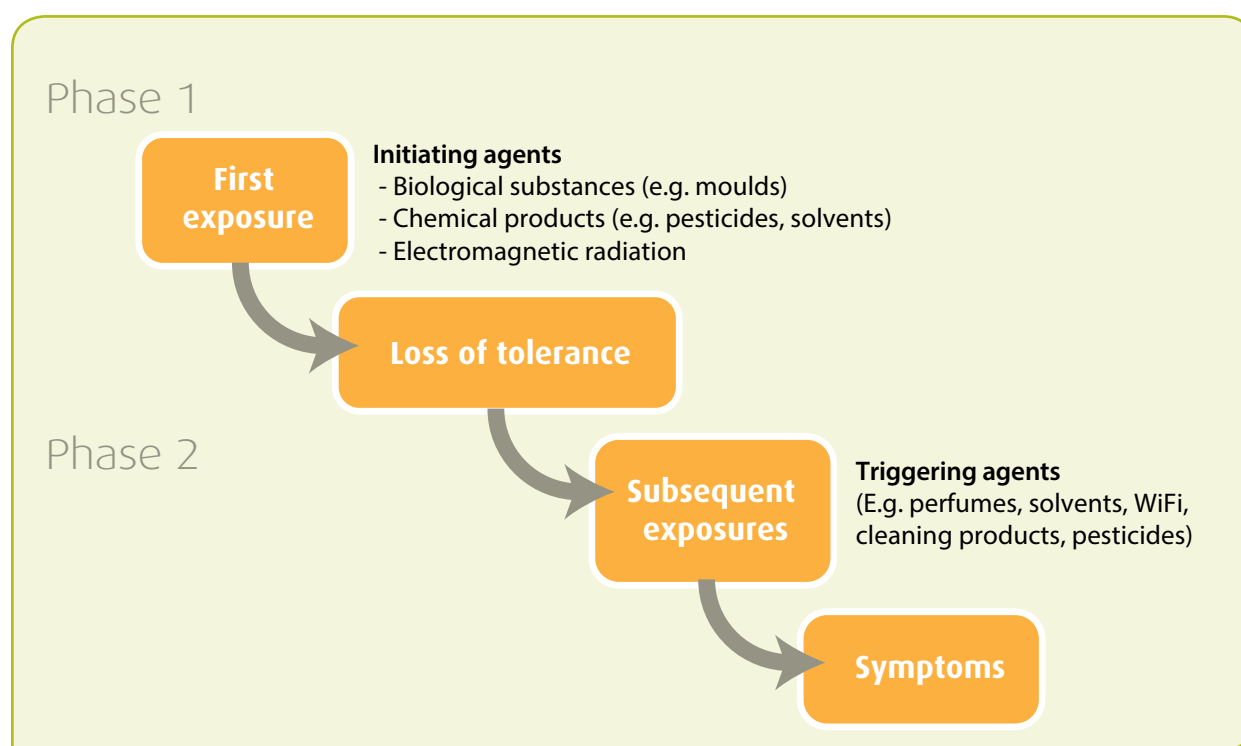


These agents can emanate from the structure of a building, some types of furniture and equipment, neighbourhood surroundings, cleaning products, etc. There are also environmental factors which can worsen the symptoms of environmental sensitivities such as lighting, humidity, heat, cold and noise.

The initiating agents cause a loss of tolerance in affected people, thereby triggering the environmental sensitivities cycle.

## Phase 2: Manifestation of the illness

Once environmental sensitivities are triggered, people who are affected often react to several other **triggering agents** (Table 1), even at very low doses or concentrations. A series of metabolic reactions then brings about many **symptoms** (figure 1), resulting in a chronic condition.





**Table 1** Agents likely to bring about the onset of environmental sensitivities.

Type of agent	Examples of agents	Examples of sources or products
<b>Volatile Organic Compounds (VOCs)</b>	Formaldehyde	Urea-formaldehyde foam insulation* Wood glues** (e.g. plywood and pressed wood/ chipboard) Paint
	Solvents	Varnishes Paint thinners and strippers, glues Air fresheners
	Perfumes	Perfumes, personal care products, Household cleaning products Fabric softeners
	Off-gassing mixtures	Equipment (e.g. computers) Furniture
	Products containing petrochemicals	Carpets Ink from books and periodicals Fuels, petroleum
<b>Combustion products</b>	Tobacco smoke Vehicle exhaust Barbecue or wood smoke	Cigarettes Buses, trucks, cars Barbecues, wood stoves, fireplaces
<b>Microbial products</b>	Moulds Mycotoxins Bacteria Metabolites produced by moulds or bacteria	Mould or bacteria in structures Mould or bacteria in ventilation and air conditioning systems Microbes in older documents Mouldy furniture Soil (plants)
<b>Pesticides</b>	Insecticides Herbicides Fungicides Algaecides	Products to kill insects Products used to kill weeds Products used to kill fungi Swimming pools products, including chlorine
<b>Natural inhalants</b>	Pollen  Animal dander	Tree pollen (Spring) Ragweed (August-September) Dogs, cats, horses, etc.



<b>Foods</b>	Allergenic proteins Preservatives Individual/specific flavouring agents	Peanuts, milk, gluten Sulfites in dried fruits and wine Monosodium glutamate (MSG) Artificial flavours and colours Curry, cinnamon, hot pepper
<b>Electromagnetic radiation</b>	Lighting	Lamps Screens Fluorescent light bulbs
	Radio waves and microwaves	Wiring problems Energy-efficient devices Computers
	Very low-frequency electromagnetic fields	Television Telecommunications equipment Power lines
	Telluric currents	Power supply systems that let the current pass through the ground, pipes or structures
<b>Other factors</b>	Temperature Noise	Workplace or home infrastructure

\* Now prohibited in Canada. \*\* Prohibited in new products in many countries.

Source: Sears, 2007.

## Pathways into the body

Exposure to initiating and triggering agents can take place via the respiratory system, the digestive system, skin contact, contact with infectious agents, injection of products and medical interventions. Exposure can happen as early as mother to child transmission during pregnancy and breastfeeding.

The body reacts differently depending on the type of exposure and whether it is a chemical, physical or biological contaminant.





## Physical Reaction to Triggering Agents

### Chemical agents

Once inside the body, several defense mechanisms against chemical contaminants are set into motion. Most contaminants are transformed by enzymes present in our cells to facilitate their elimination in urine, stool, sweat, breast milk, or they are transferred to the hair and nails.

*In the case of environmental sensitivities, it is suspected that these defense mechanisms do not work properly. Research continues on this subject.*

Researchers are exploring many hypotheses in order to find a detailed explanation of what happens on a biological level. Although much research is taking place, there is no consensus in the scientific community yet. But several promising avenues are being explored, notably those looking into:

- Large amounts of accumulated chemical products in the body
- A body's compromised capability to transform and eliminate toxic substances
- Over-excitation of parts of the brain which could trigger sensitivities

### Biological agents

The biological agent most commonly linked to environmental sensitivities is mould. According to certain studies, 14% to 30% of dwellings in Canada have problems with mould or excessive humidity. Moulds have spores that produce toxic substances called **mycotoxins**, which can be released into the air. Although moulds have been identified as being both initiating and triggering agents of environmental sensitivities, it is still unknown how they induce the illness. Their effects on health depend on the pathway and level of exposure, the type of mould and the susceptibility of the exposed individuals (state of health, age, etc.).

### Electromagnetic radiation

Electromagnetic radiation includes a broad range of frequencies: low frequencies from power supply currents, radio waves, microwaves, infrared and visible light, X-rays and cosmic rays. The biological effects of most of these frequencies are unknown. They have been associated with tinnitus (ringing in the ears), brain tumours, neuroma (tumours) in the auditory vestibular nerve, changes in brain glucose metabolism as a result of cellular phone frequencies, effects on the heart and lungs, as well as skin physiology.



## Symptoms

Symptoms manifest themselves differently from person to person (Figure 1). The list of possible symptoms is very long and is not exclusive to environmental sensitivities. In the same individual, symptoms vary depending on the trigger, the level or dose of exposure, as well the duration of the exposure. In general, symptoms resolve once triggers are avoided, but will reappear with another exposure. Symptoms may take minutes, hours or days to resolve, even when the triggering agent has been removed. They may also appear within minutes, hours or several days after exposure to the triggering agent.

*One low-level isolated exposure, for example, a person wearing perfume and sitting a couple of metres away from a person suffering from environmental sensitivities, could cause the latter to manifest symptoms such as headache, confusion, breathing difficulties or loss of balance.*



An individual's level of tolerance to exposure is variable with time. Thus, the more a person is exposed to triggering agents, the stronger the symptoms, and the more the person will develop sensitivities to other agents. When a person manages to reduce the level of global exposure, the tolerance to specific triggers sometimes increases, and the symptoms become less severe. Therefore, certain exposures can be tolerated in some instances, for a certain period of time, and then not be tolerated at other times. This makes understanding the condition difficult for those who are suffering and for the people around them.

We don't know why certain people are more sensitive than others. There does seem to be an individual susceptibility involved (age, state of health, other illnesses), as well as a genetic predisposition to developing environmental sensitivities. It is important for sufferers to identify and avoid the agents that cause symptoms and to receive the care needed to recover and maintain good health. However, it does appear that people suffering from environmental sensitivities will be affected, to some degree, all their lives.





Figure 1 Symptoms

### Nervous system

- Heightened sense of smell
- Difficulty concentrating
- Memory problems
- Apparent variability in mental processes
- Feeling dull, weak or foggy
- Feeling 'spacey'
- Headaches
- Restlessness, hyperactivity, agitation, insomnia
- Low stress tolerance
- Irritability
- Depression
- Lack of coordination or balance
- Anxiety
- Seizures

### Gastrointestinal tract

- Heartburn
- Nausea
- Bloating
- Constipation
- Diarrhea
- Abdominal pain
- Inflammation

### Skin

- Flushing (whole body or isolated areas)
- Hives
- Eczema
- Other rashes
- Itching

### Eyes

- Red, watery eyes
- Dark rings under the eyes
- Blurred, altered vision

### Pain



### Ears

- Blocked ears
- Pain, infections
- Ringing in the ears (tinnitus)

### Respiratory system

- Stuffed, running, itchy nose
- Congestion, painful or infected sinuses
- Nosebleeds
- Cough
- Wheezing
- Breathing problems
- Chest tightness
- Asthma
- Frequent bronchitis or pneumonia

### Cardiovascular system

- Rapid or irregular heartbeat
- Cold extremities
- High or low blood pressure

### Genitourinary system

- Frequent and urgent need to urinate
- Painful bladder spasms

### Musculoskeletal system

- Joint and muscle pain
- Muscle twitching or spasms
- Muscle weakness

### Endocrine system

- Fatigue
- Lethargy
- Blood sugar fluctuations



## Prevalence

From a public health standpoint, infectious diseases dominated the 19th century. Then during the 20th century, cancer was the main concern. At the beginning of the 21st century, public health officials are looking increasingly at **chronic diseases and illnesses** that are closely associated with an increasingly polluted environment. These conditions include environmental sensitivities, but also heart and lung diseases, allergies and food intolerances, learning disabilities in children, fertility problems, as well as other emerging illnesses such as fibromyalgia and chronic fatigue syndrome.

In 2003, according to the National Population Health Survey conducted by Statistics Canada, between 2 % to 3 % of the population (depending on the age) stated they had been diagnosed with multiple chemical sensitivities by a health care practitioner. Although environmental sensitivities may occur at any age, it would seem that the number of cases increases with age and that the condition affects women three times more than men (Table 2). There is every reason to believe that the proportions are similar in the Quebec population.

**Table 2** Prevalence of diagnosed multiple chemical sensitivities

	% OF THE POP	% OF WOMEN	% OF MEN
12 years old and older	2,2	3,1	1,2
12 to 24	0,8	1,0	0,6
25 to 39	1,6	2,0	1,1
40 to 49	2,7	3,7	1,5
50 to 59	3,5	5,2	1,7
<b>60 to 64</b>	<b>3,6</b>	<b>5,8</b>	1,4
65 to 69	3,3	4,6	1,8
70 to 79	3,1	4,2	1,8
80 and older	1,9	2,3	1,1

Source: National Population Health Survey, Statistics Canada, 2007.

Since these numbers reflect only those who went to a “health care professional” due to their symptoms, the number of affected people with environmental sensitivities could be much higher. Different studies in the United States have revealed that between 11% to 33% of those surveyed stated they had heightened sensitivities to common household chemical products. As for sensitivities to electromagnetic phenomena, it is estimated that it affects between 1.5 % to 8% of the population.



Environmental sensitivities affect all socio-economic groups. However, people from lower socio-economic groups are more susceptible to suffer from them. It should be noted that, in general, people with lower incomes are more likely to be exposed to environmental contaminants and to stress factors related to their unstable financial situation.

## Getting a diagnosis

At present, there is no diagnostic test to easily and quickly identify environmental sensitivities. If a physician suspects an environmental factor is the cause of a patient's health problem, the physician usually looks closely at the medical history and exposure, does a complete physical exam and prescribes routine laboratory tests.

**Six diagnostic criteria have been identified for environmental sensitivities:**

1. Symptoms are reproducible with repeated exposure (meaning that symptoms appear each time the person is exposed to a specific trigger)
2. The condition is chronic
3. Symptoms manifest themselves at low levels of exposures (lower than previously tolerated by the patient or commonly tolerated by the rest of the population)
4. Symptoms improve or resolve when exposure ceases
5. The patient reacts to multiple chemically unrelated substances
6. Symptoms involve multiple organ systems

**To these six criteria, researchers have added four symptoms clinically observed in patients:**

1. Having a stronger than average sense of smell
2. Having difficulty concentrating
3. Feeling "spacey"
4. Feeling dull, gloomy or foggy

Although the last two seem vague and are difficult to measure, they are quite real to the people who experience them. These symptoms are especially useful to establish a diagnosis of chemical sensitivities.





### In Search of a diagnostic test

In some cases, a diagnosis of environmental sensitivities to chemical products can be based on chemical analyses of patients' blood, urine, hair or tissue to determine the levels of toxic substances present. Biomarker discovery, (e.g. an abnormally high or low level of a substance in the blood linked with the metabolism of a toxic invader) or the presence of a genetic marker is the most promising approach to diagnose environmental sensitivities.

### Access to treatment

Once a diagnosis of environmental sensitivities has been established, the patient's priority is the avoidance of agents that trigger symptoms. In Quebec, there is no consensus among physicians regarding treatment.

In the rest of Canada, there are a few environmental health clinics. Patients are advised to eat organic foods, drink purified water, ensure that their living space is exempt of all contaminants and to avoid places that could trigger reactions as much as possible. **Under the supervision of a physician**, the following treatments may also be proposed: inducing sweating, a rotation diet to identify triggering foods, chelation therapy (to help excrete heavy metals from the body), immune system stimulation, vitamins and minerals, food and inhalant desensitization, etc. The supervision of a health care practitioner is especially important for sufferers of environmental sensitivities because they also react to low doses of medication.





## CULTURAL AND SOCIAL RESPONSE TO ENVIRONMENTAL SENSITIVITIES

One would think, when people affected with environmental sensitivities talk of their difficulties or request accommodation, that they are met with sympathy and understanding. After all, no one claims that their symptoms are not real, even though no consensus exists among researchers as to what most likely causes them.

Unfortunately, both anecdotal experiences from sufferers and scientific studies reveal that the opposite often occurs. People suffering from environmental sensitivities are frequently not taken seriously or people simply don't believe them. They are marginalized in the workplace and sometimes lose their jobs. Their request for accommodation could result in co-workers wearing more perfume, neighbours spraying more pesticides or janitors using more cleaning products - all of them making it clear that they will make no concessions. They may lose friends who are unwilling to believe that they are unable to go to a shopping centre or a movie theatre. They may even be ostracized



by their families. In addition to being ill, sufferers are confronted with hostility from the people around them when they speak of their health or request an accommodation. Of course, this is not always the case. But it is clear that environmental sensitivities generally provoke a more negative reaction than better known chronic conditions such as respiratory difficulties or allergies.

Why do environmental sensitivities arouse such hostility in certain people? Although there is no one definitive answer, certain explanations can be given. First, the legitimacy of any invisible disability (back pain, heart condition, diabetes, etc.), is more likely to be called into question than disabilities that are easily visible (a person in a wheelchair or with a guide dog). Indeed, the physical appearance of people suffering from environmental sensitivities seems quite intact. Therefore, how could they possibly suffer from a serious illness caused by invisible molecules that don't seem to affect others?



Furthermore, people express their identity and individuality not only through their clothes and hairstyle, but also with the perfumes that they wear. It is through these distinctive traits that they try to make themselves beautiful and desirable. To state that this intimate affirmation of identity poisons the bodies of others is often mistakenly perceived as a personal attack. Moreover, changing the way we wash, style our hair and dress represents more than a mere inconvenience. These rituals and behaviours have a symbolic value that is deeply entrenched in our habits. It is therefore easier to turn against the person with sensitivities than to question oneself and the majority of the population.



Finally, many people do not want to consider the possibility that chemical pollution, electromagnetic radiation or mould in buildings could be affecting their body as well. By denying the harm to people suffering from environmental sensitivities, they can continue to believe that they are safe. In fact, many authors connect the negative response to environmental sensitivities with the long-term threat that they pose to both our economic system based on industrial development and to our current lax approach in managing the risks associated with the production of toxic chemical substances and our use of modern technologies.

Regardless of the reasons for the hostility directed at people suffering from environmental sensitivities, it is nevertheless unacceptable. To fully understand what those affected go through, it is important to keep in mind that in addition to being ill, sufferers contend with their condition not being recognized and endure hostility aimed at them. As a result, their trust in the people close to them and in people in general, is often severely shaken.





## ENVIRONMENTAL SENSITIVITIES: EMPLOYMENT AND HOUSING

**T**his section discusses two key areas regarding the basic needs of people suffering from environmental sensitivities: employment and housing.

A person with environmental sensitivities may have enjoyed a successful career until their sensitivities appeared. But because ***environmental sensitivities are often not recognized, or their very existence is negated or delegitimized***, it is not uncommon for a person with this medical condition to lose their job. This should not be the case.

### Filing a CSST claim (workers' compensation)

When a serious work exposure brings about environmental sensitivities resulting in a person's inability to work, that person can file a claim with the Commission de la santé et de la sécurité au travail (CSST), Quebec's occupational health and safety board. Two conditions must be met: (1) It must concern a worker as defined by law (the person must not be self-employed), and (2) the person must provide a medical certificate attesting the condition. Over the past several years in Quebec, the Commission des lésions professionnelles (CLP), the administrative tribunal that hears appeals of CSST decisions, has awarded the right to CSST compensation to at least ten workers who developed environmental sensitivities linked to exposures—usually to solvents—in the workplace. These were hard-won victories, requiring sufferers to vigorously fight for several years before their rights were finally recognized. These cases illustrate that in law, as in medicine, it is not necessary to know everything about a disease before recognizing its effects on an individual.

However, if workplace exposure causes symptoms without rendering the person unable to work, the most appropriate course of action is to request an accommodation by virtue of the Quebec Charter of Human Rights and Freedoms, or for people working in areas under federal jurisdiction, by virtue of the Canadian Human Rights Act.

It should be noted that people whose incapacitation has been recognized by the CSST cannot invoke the right to a reasonable accommodation once they return to work. The courts have ruled that in the case of a work-related accident or an occupational disease, the measures available concerning accommodations are limited to those stipulated in the Act Respecting Industrial Accidents and Occupational Disease.



**Example: A claim accepted by the Commission des lésions professionnelles (CLP), the administrative tribunal that hears appeals of CSST decisions.**

For illustrative purposes, the following is a case where a worker occupying the post of electronics technician was repeatedly exposed to an adhesive and accelerant used to glue parts together in a factory that manufactures security products. When a gluing station was temporarily moved near the worker's workstation, she immediately began to experience vertigo, dizziness, headaches, facial spasms and pain in her chest. She went to the emergency room by ambulance where she was seen by a neurologist who first noted that her "symptoms suggest anxiety or the onset of anxious depression." Unfortunately, this kind of psychologization of the symptoms of people with environmental sensitivities is commonly done by doctors who know little about the illness. Ultimately after a thorough examination and more in-depth tests at the hospital, the final diagnoses made by the neurologist and then by the worker's physician were much more accurate. She was diagnosed with cephalgia, spasms on the left side of the body, neuropathic pain and left brachialgia (pain in the arm), all of which are symptoms linked directly to the exposure to adhesive and accelerant fumes. She returned to work after a one-month leave period. Due to the cooperation of her managers, her workstation was moved far from where parts were being glued together. Furthermore, whenever the adhesive was to be used elsewhere in the factory, she would be informed and could therefore avoid the area, which allowed her to minimize her symptoms. The migraines that were sometimes triggered by the fumes were controlled with medication.

At the Commission des lésions professionnelles (CLP) hearing, in accordance with the Act Respecting Occupational Health and Safety, the employer was required to provide the tribunal with the Material Safety Data Sheet of the products—highly toxic solvents—the worker had been exposed to. The employer requested that the claim be rejected on the grounds that no other person exposed to the solvents had complained of similar symptoms. However, the CLP tribunal ruled in favour of the worker because she had no prior history of anxiety or depression, and also because her testimony concerning the exposure to the solvents as being the cause of her health problems was quite convincing.





## A Disability which gives the right to a reasonable accommodation

In November 2011, the Commission des droits de la personne et des droits de la jeunesse du Québec (Québec’s human rights commission) stated:

[TRANSLATION] “The definition of the basis of a handicap in the Charter of Human Rights and Freedom retained by the Commission as well as the interpretation of this ground by tribunals in Quebec is sufficiently broad and open for people suffering from environmental sensitivities to invoke this ground.”

Even if in August 2012, there had not yet been a decision recognizing environmental sensitivities as a handicap according to the Charter, there is every reason to believe that Quebec tribunals would consider them as such. In fact, in the legislation of most Canadian provinces—including Ontario and British Columbia—as well as in Canadian federal law, environmental sensitivities have clearly been recognized as being a “handicap” in tribunal decisions, in acts and in legal advice provided by human rights commissions.

Considering environmental sensitivities as a disability means a sufferer has the right to request a reasonable accommodation from an employer, a landlord or service provider, as long as the accommodation does not cause undue hardship.

The scope of the right to a reasonable accommodation varies depending on the sector at issue (employment, housing, public or private services) and on the circumstances. By virtue of the Charter, a medical certificate is not necessary to request an accommodation. However, if a disagreement exists between the parties, the type of accommodation required will have to be justified by a certificate. Once again, finding a well-informed and sympathetic physician is essential. As already highlighted elsewhere, this is probably the biggest challenge facing people suffering from environmental sensitivities.



### Reasonable accommodation in the workplace

In the area of employment, a first measure of reasonable accommodation is when the employer of a person suffering from environmental sensitivities establishes a “fragrance-free working environment” policy.

In Ontario, an arbitral tribunal decision confirmed that a high school in Toronto was required, among other things, to not only adopt a fragrance-free policy applicable to everyone, including students, but also to have the teacher with environmental sensitivities approve all cleaning products used in the building where she worked.

The Public Service Labour Relations Board has already decided that a federal department was required to accommodate a worker with environmental sensitivities by allowing her to work from home and by providing the equipment needed to do so.

### Reasonable accommodation in housing

In Quebec, although it is clear by virtue of the Quebec Charter that owners have an obligation to provide reasonable accommodations to lessees, there is little guidance on the issue in case law. For example, it has not yet been ruled under which circumstances a lessee with environmental sensitivities could request the installation of an air exchanger in an apartment. This is in stark contrast to the situation in Ontario, where a collaborative project between the Environmental Health Clinic in Toronto and a tenant rights group has been set up.

That being said, a lessee’s right to the “peaceful enjoyment of the premises”, as stated in the Civil Code of Québec, could serve as grounds for requests made by tenants with sensitivities. For example, if cigarette smoke from other dwellings has detrimental effects on the tenant’s health, an owner could impose a no-smoking clause on other lessees, even during the term of a lease. Furthermore, a tenant who does not have the peaceful enjoyment of a dwelling because of odours or fumes from other dwellings, or even from other sources, can request the rescission of a lease.



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## Reasonable accommodation from public and private service providers

There are few legal precedents concerning accommodation requests from people suffering from environmental sensitivities with regards to public services (health services, government buildings) or private services (from restaurants, movie theatres, airlines, etc.). However, this does not necessarily mean people do not make them or that requests are not granted when they do.

Let us turn to Nova Scotia as an example of a more hospitable world for people suffering with sensitivities. All provincial hospitals, all municipal offices in Halifax and the Halifax Regional School Board have adopted “No-Scent” policies. Even though the objective is to educate rather than enforce norms with disciplinary action or refusal of services from a hospital in the case of non-compliance, these policies demonstrate a social awareness of environmental sensitivities which is still lacking in Quebec. This awareness came



about in Nova-Scotia in a dramatic way. At the beginning of the 1990s, more than 300 people working in a new hospital—including a physician—developed incapacitating environmental sensitivities after exposure to an anti-corrosive product in the hospital’s boiler. Since then, an environmental health clinic has opened its doors.

Another example, this time in an educational context in British Columbia, is that of a college student with sensitivities who was granted permission, for several courses, to sit by an open window or in the corridor adjacent to the classroom or to ask another student to take notes or record classes for her. However, the human rights tribunal has justified the requirement that the student be present for courses based on experiential learning.





Regarding services offered by the private sector such as restaurants, movie theatres and taxi companies, the obligation to grant reasonable accommodations also exists, but it is also limited by “undue hardship.” For example, to expect a restaurant to ask all clients with fragrances to leave the premises to accommodate a client with sensitivities who unexpectedly arrives would no doubt present undue hardship. However, a request made to a restaurant owner several days in advance, asking waiters to take into account the needs of a person affected with environmental sensitivities by not using fragrances, reserving a place by a window and providing information on the menu would be much more reasonable.

In short, the obligation to provide reasonable accommodations could, in certain cases, be grounds for recourse. Accommodation requests can also serve as a way to educate public and private service providers on the needs of people with environmental sensitivities and convince them to take certain steps. Reasonable accommodations require above all an open mind and a real commitment from both sides to work together to find an acceptable solution for all.

### **The right to a workplace free from psychological harassment**

Unfortunately, people with environmental sensitivities who invoke the right to a reasonable accommodation in their workplace are sometimes subject to hostile gestures or rejection from certain colleagues: grimaces (scowls, frowns, sneers, etc), verbal abuse, antagonistic gestures such as increasing the use of or spilling perfume, laughter and other unkind behaviour when, for example, the sufferer is wearing a mask. It is therefore important to know that in Quebec, **by**



**virtue of the Act Respecting Labour Standards, all employees have a right to a workplace free of psychological harassment.** The employer has the obligation to prevent psychological harassment. When such gestures are brought to an employer’s attention, reasonable means must be taken to put a stop to them. Furthermore, the Quebec Charter stipulates that no one can be harassed because of a handicap or because of means used to alleviate a handicap.

Despite the fact that the provisions concerning psychological harassment in the Act Respecting Labour Standards are not applicable in federal law, most federal employees nevertheless have policies addressing harassment in the workplace that provide grounds to file a complaint.

People with environmental sensitivities have, like everyone else, the right to have their dignity respected at work!



## MANAGING THE ILLNESS

There is no cure for environmental sensitivities, but it is possible to minimize symptoms. What is the key? **To avoid all kinds of contaminants and triggers as much as possible. Reducing exposure to actual and potential triggers lessens symptoms.** Studies show that early diagnosis combined with immediate reduction in exposure to triggers is associated with better outcomes. In this way, many people have been able to regain a level of tolerance to ambient contaminants, bringing about an improvement in their quality of life on a day-to-day basis.



Environmental groups and associations addressing environmental illnesses have made much information available on products to avoid and alternative solutions. There are resources intended specifically to better manage environmental sensitivities such as, a diary to record exposures and symptoms, templates for letters requesting accommodation, examples of fragrance-free policies and advice on how to adapt one's daily life to the constraints imposed by this condition. Various resources and links have been made available at [www.EnvironmentalSensitivities.com](http://www.EnvironmentalSensitivities.com). Please refer to the tool kit and useful links available on this site.





## COLLECTIVE STRENGTH

**S**ome individuals will probably always be more affected than others by chemical, biological and electromagnetic pollution. But each and every one of us will benefit, to varying degrees, from the reduction of environmental contamination. Reduced exposure would positively impact the health and quality of life not only of those with environmental sensitivities, but also of people with respiratory or heart problems, migraines, etc. These are just a few examples. However, the list of medical conditions linked to environmental contamination, or those that are worsened by it, continues to grow.

In many parts of the world, there are initiatives that aim at reducing exposures to contaminants in the environment. In Quebec, in large part due to the efforts of the founders of the Environmental Health Association of Québec (ASEQ-EHAQ), the government has adopted a province-wide policy banning home lawn-care pesticide use, thereby reducing exposure to harmful products for the entire population.



In addition to government regulations, increasingly more programs are being put in place to promote the responsible management of contaminants. “Smoke-free” hotels are opting for the use of fragrance-free and non-toxic cleaning products. Event organizers are asking people not to wear perfume, to avoid the use of cell phones and Wi-Fi, and organic and vegetarian food is made available on site. Governmental and non-governmental organizations are advocating the construction of healthy buildings.

The high number of people with environmental sensitivities is but one clue among many that we must re-examine our current way of managing the risks associated with the industrial production of chemical substances and the development of new technologies. Our exposure, albeit at low levels, to an array of known toxic substances - e.g. benzene found in cologne, paint solvents, or volatile organic compounds in vinyl - is permitted by law. But people with environmental sensitivities and the skyrocketing number of chronic diseases linked to exposures challenge that approach. We don't really know how low-level exposures to a multitude of physical and chemical contaminants will affect us as they accumulate over time.



This is the first time in history that everyone is contaminated with and exposed to a multitude of pollutants that didn't exist or existed only in small quantities a mere sixty years ago. Traditional toxicology is not equipped to deal with this kind of contamination. To tackle all these uncertainties, we advocate an approach based on the precautionary principle, rather than one that assumes exposure to environmental contaminants is safe until proven otherwise. What if our health and that of our children depend on taking this new approach?

Health Canada's Pest Management Regulatory Agency recognizes people with environmental sensitivities as belonging to a vulnerable population. Both the Quebec Human Rights Commission (Commission des droits de la personne et des droits de la jeunesse) and the Canadian Human Rights Commission recognize environmental sensitivities as constituting a "handicap" entitling sufferers to reasonable accommodation. Yet, much work remains to be done to ensure that people with environmental sensitivities receive appropriate treatment and continue to work and maintain their quality of life as much as possible.

Small gestures made individually can add up and benefit everyone. Examples include asking grocers or pharmacists to sell fragrance-free products, educating health care professionals or employers on the positive outcomes of establishing fragrance-free areas, requesting reasonable accommodations, etc. The more the general population hears about environmental sensitivities, the more open they will be to finding accommodations for sufferers. On a much larger scale, groups such as the Environmental Health Association of Québec (ASEQ-EHAQ) have been working for years to have the condition recognized.

Alone, the task at hand may seem insurmountable. But by joining together, we can change things for the better.

***Why don't we work **together** to ensure that  
the environment no longer makes people sick?***





For more information:  
[www.EnvironmentalSensitivities.com](http://www.EnvironmentalSensitivities.com)

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