

# Guidelines to Accommodate Students and Staff with Environmental Sensitivities: A Guide for Schools.

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by Nancy Bradshaw of Women's College Hospital Environmental Health Clinic and  
Karen Robinson of Canadians for A Safe Learning Environment (CASLE)



Women's College Hospital



## Contacts

Nancy Bradshaw  
community outreach co-ordinator,  
Environmental Health Clinic - [nancy.bradshaw@wchospital.ca](mailto:nancy.bradshaw@wchospital.ca)  
[www.womenscollegehospital.ca](http://www.womenscollegehospital.ca)

Karen Robinson  
president and CEO,  
Canadians for A Safe Learning Environment (CASLE) – [info@casle.ca](mailto:info@casle.ca)  
[www.casle.ca](http://www.casle.ca)

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## The School Environment

The school environment (particularly, indoor air) can have an impact on the health and learning ability of its occupants. Poor indoor air quality and outdoor pollutants around the school (e.g. fumes from idling vehicles) can contribute to asthma, allergies, environmental sensitivities (ES) and other respiratory conditions in children and adults who work in schools (teachers, custodial staff, etc.). For example, in most schools there are exposures to allergens (e.g. dust/dust mites) and asthma triggers (e.g. cleaning products), which can make some children's and adult's allergies, asthma and/or environmental sensitivities worse.

School buildings are often made with less expensive construction materials and some are in poor repair (due to budget constraints), both of which contribute to poor indoor air quality and potentially toxic exposures. School classrooms usually house approximately four times as many occupants per square metre as do office buildings. This higher occupancy increases need for higher ventilation rates. However, ventilation in many schools, or in parts of the school building, may be inadequate. Moreover, some school buildings, especially "portable" classrooms, may contain mould, which can contribute to children's and teacher's allergies, asthma and environmental sensitivities. School supplies can expose children (and adults) to potentially toxic chemicals (e.g. from dry erase makers, art and science supplies).<sup>1,2</sup>

In general, children are more vulnerable to the effects of environmental exposures than adults.

This is due to:

- > their small size: (kilogram for kilogram of body weight, a child will eat more food, drink more water, and breathe more air than will an adult);
- > physiology: children are still developing and the baseline rate of breathing is faster in a child than in an adult;
- > behavior: children often "eat or mouth" objects that adults generally do not ingest (e.g. paint chips), they are closer to the ground where toxic exposures are often more concentrated, and teenagers may be involved in risky behaviours (e.g. graffiti painting), which can expose them to toxins; and
- > children have a longer lifetime ahead of them than do adults, which allows more time for exposures to occur and health problems to manifest later in their lifetime.

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<sup>1</sup> Minister of Health. Indoor Air Quality: Tools for Schools – Action Kit for Canadian Schools. March 2003. From [http://www.hc-sc.gc.ca/ewh-semt/pubs/air/tools\\_school-outils\\_ecoles/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/pubs/air/tools_school-outils_ecoles/index-eng.php).

<sup>2</sup> CASLE. Characteristics of Schools that can Affect Indoor Environment Quality. From <http://www.casle.ca/ArticleDetail/tabid/77/smId/413/ArticleID/44/refTab/56/t/Characteristics-of-Schools/Default.aspx>.

In addition, some children are more vulnerable than others, particularly: children living in poverty and or with nutritional deficiencies; children exposed to environmental tobacco smoke and/or toxins brought home from parents in higher risk occupations (such as farmers exposed to pesticides); and children with genetic variations that may make them more vulnerable to toxic exposures.<sup>3</sup>

## Background Information: Environmental Sensitivities

- Approximately 3% of the population (over 1 million Canadians) has been diagnosed with environmental sensitivities (ES) which include multiple chemical sensitivities (MCS) and electromagnetic sensitivity.<sup>4</sup>
- Approximately 1/3 of the Canadian population (including those with asthma and ES) report symptoms when exposed to perfume and other sources of fragrance chemicals.
- The number of children (under 12 years of age) diagnosed with ES in Canada has not been quantified at this time. It is known, however, that ES does occur in children. In a U.S. survey on the prevalence of ES, 32.4% of survey participants stated that hypersensitivity to environmental exposures first emerged before they reached 20 years of age.<sup>5</sup>
- Environmental Sensitivity is recognized as a disability under the Canadian Human Rights Code. As such, educational institutions (schools) have a duty to accommodate students and staff diagnosed with environmental sensitivities.<sup>6,7</sup>

## Characteristics of Environmental Sensitivities:

- People with ES chronically experience symptoms when they are exposed to a variety of chemicals or other environmental agents (e.g. air born chemicals from new building materials and air electromagnetic radiation from power sources) at low levels tolerated by most people. The symptoms are partially or fully relieved when the person is no longer exposed.
- The triggering agents may not be obvious (i.e. may be masked if the exposure is ongoing).
- There are two distinct stages in the development of ES: *initiation and triggering*.

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<sup>3</sup> Canadian Partnership for Children's Health and the Environment. *Child Health and the Environment*. August 2005: 19-30. From <http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Primer.pdf>.

<sup>4</sup> Park J and Knudson S. *Medically unexplained physical symptoms*. Statistics Canada. 12-1-2007.

<sup>5</sup> Caress, SM and Steineman, AC. *Prevalence of multiple chemical sensitivities: a population-based study in the southeastern United States*. American Journal of Public Health May 2004, Vol 94, No. 5.

<sup>6</sup> Canadian Human Rights Commission. *Legislation and Policies: Policy on Environmental Sensitivities*. June 15, 2007. From [http://www.chrc-ccdp.ca/legislation\\_policies/policy\\_envIRON\\_politique-en.asp](http://www.chrc-ccdp.ca/legislation_policies/policy_envIRON_politique-en.asp).

<sup>7</sup> Ontario Human Rights Commission (OHR): *Guidelines on Accessible Education* at <http://www.ohrc.on.ca/en/resources/Guides/AccessibleEducation?page=AccessibleEducation-CREATING.html#Heading262> (see "Accounting for Non-Evident Disabilities").

- > *Initiation* of an environmental sensitivity (sensitivity or intolerance to a substance that was previously tolerated) often occurs after either a) one large environmental exposure (e.g. chemical spill or fire), or b) ongoing exposure to low to moderate levels of contaminants, often as a result of living and/or working in a “sick building” or a recently renovated space.
- > *Triggering* happens when the person is subsequently exposed to the offending substance(s), in amounts that were previously tolerated. This can trigger symptoms, which lessen or disappear when the person is no longer exposed. These may be substances that the person comes into contact with regularly, like vehicle exhaust fumes; perfume; newsprint; and cleaning and laundry products.
- > A person who initially develops sensitivity to one substance may later be triggered by a broader range of substances.
- > A person can have symptoms triggered by inhaling (breathing in), ingesting (eating or drinking), or absorbing (touching) the substance. The most common substances to which people with ES are intolerant include:
  - > volatile organic compounds (VOCs), released as gases from gasoline, glues, paints, solvents, perfumes and scented personal care products, “air fresheners,” harsh cleaning products, fragranced detergents and fabric softeners, carpets, furnishings (particularly when new) and some building materials (such as pressed wood);
  - > vehicle exhaust fumes;
  - > pesticides (for example, herbicides and insecticides used on lawns and gardens, golf courses, and fruits and vegetables);
  - > electromagnetic radiation (for example, from electric wiring, power lines, cellular phones, computers, televisions and other electrical appliances) and
  - > foods (for example, flavourings such as monosodium glutamate (MSG); food preservatives, such as sodium benzoate; colourings, such as tartrazine or FD&C yellow #5; and allergenic foods, like milk, wheat, corn and eggs).
- > People with ES often also often have allergies to pollens from trees, grasses and weeds, moulds, animal dander (for example, from cats and dogs). They also may have serious food allergies to foods such as peanuts, tree nuts, fish, or shellfish.
- > The *symptoms* may range in severity from mild to debilitating. Symptoms can occur immediately upon exposure to a triggering substance or may be delayed for several hours. Likewise, the symptoms may clear up right away once the trigger is removed, or may persist for hours or days. The following table is a sample of common symptoms experienced in different body systems. Symptoms may occur in several body systems at the same time.

Body System	Symptoms
<ul style="list-style-type: none"> <li>Central Nervous System</li> </ul>	<ul style="list-style-type: none"> <li>Stronger sense of smell than others, feeling spacey, dull or groggy, difficulty concentrating and remembering, headache, restlessness, fatigue, depressed feeling</li> </ul>
<ul style="list-style-type: none"> <li>Upper Respiratory System</li> </ul>	<ul style="list-style-type: none"> <li>Red, watery eyes, stuffy nose, blocked ears</li> </ul>
<ul style="list-style-type: none"> <li>Lower Respiratory System</li> </ul>	<ul style="list-style-type: none"> <li>Cough, wheezing, shortness of breath, heavy chest</li> </ul>
<ul style="list-style-type: none"> <li>Gastrointestinal System</li> </ul>	<ul style="list-style-type: none"> <li>Heartburn, nausea, bloating, constipation, diarrhea</li> </ul>
<ul style="list-style-type: none"> <li>Musculoskeletal System</li> </ul>	<ul style="list-style-type: none"> <li>Joint and muscle pain in the extremities and/or back, muscle twitching or spasms, muscle weakness</li> </ul>
<ul style="list-style-type: none"> <li>Cardiovascular System</li> </ul>	<ul style="list-style-type: none"> <li>Rapid or irregular heartbeat, cold extremities, high or low blood pressure</li> </ul>
<ul style="list-style-type: none"> <li>Skin (Dermatological System)</li> </ul>	<ul style="list-style-type: none"> <li>Flushing, hives, other rashes, itching</li> </ul>
<ul style="list-style-type: none"> <li>Genitourinary System</li> </ul>	<ul style="list-style-type: none"> <li>Frequency &amp; urgency to urinate, painful bladder spasms<sup>8</sup></li> </ul>

<sup>8</sup> *Background Information: Environmental Sensitivities* section of report adapted from Women's Health Matters – Environmental Health Centre (written and updated by Environmental Health Clinic physicians and Community Outreach Coordinator).

## General Recommendations to accommodate students and staff with environmental sensitivities:

### *Scent-Free Environment*★

- The school should initiate a program to eliminate common sources of VOC's in schools by implementing a scent-free policy. Some schools have referred to this as a “scent-smart” policy or program.

### *Perfumes and Fragrances*

- are often the most obvious indoor air pollutant, second to environmental tobacco smoke;
- are an easily identifiable target for improvement of indoor air quality;
- contain up to 4,000 ingredients in the manufacture of fragrance;
- may contain up to 500 ingredients in single perfume – including volatile organic chemicals and known respiratory irritants;
- are often made primarily from petroleum-based chemicals; they may contain approximately 95% of petroleum-based chemicals in their ingredients;
- often contain fixatives (e.g. phthalates), which are used to cause the scent to persist; and
- may contain ingredients have been linked with cancer, birth defects and neurotoxic effects at higher exposure levels.<sup>9</sup>

### *Scent-smart Schools*

- A **scent-smart** program should include:
  - A policy that clearly articulates the **avoidance of fragrances and fragranced/scented personal care products** worn by students, staff, and visitors to the school. This includes, but is not limited to:
    - perfumes and colognes;
    - scented aftershave products;
    - scented personal care products, including: face, hand and body lotions and creams; sunscreens; and hair care products (e.g. sprays, mousses, gels, etc.); and
    - clothes treated with scented fabric softeners or dry-cleaned using perchlorethylene (PERC).<sup>10</sup>

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\*The terms “scent-free” and “fragrance-free” are used interchangeably in this document

<sup>9</sup> Adapted from Women's Health Matters, Environmental Health Centre, Scent-free Spaces at <http://www.womenshealthmatters.ca/centres/environmental/Healthy-Environments/Scent-Free.html>.

<sup>10</sup> See Resources section for websites listing sources of least toxic, fragrance-free personal care products and “green” perchlorethylene-free dry cleaning establishments.

- Clear guidelines re: actions to be taken when staff or students do not follow the policy (i.e. wear scented products to school), such as warnings, sending the offender home to change and shower, or taking further disciplinary actions.
- Purchase and use of least toxic, fragrance-free cleaning products and hand soaps that have been third-party certified as being safer for people with environmental sensitivities, such as Envirodesic<sup>11</sup> (first consideration) and safer for the environment (see Resources).
- Purchase and use of least toxic, fragrance-free school supplies, such as least toxic (preferably no VOC), scent-free dry erase markers, art supplies, etc. (see Resources)
- A communications and education plan to inform and educate staff, students, school board members and parents about the *scent-smart* program and provide clear communications re: the program, such as:
  - signage in the school,
  - guidelines re: products allowed and not allowed in the school, and
  - advance notice when renovations, painting or intensive cleaning (e.g. waxing and stripping of floors) are to take place.<sup>12</sup>

## *Further Accommodation – Beyond scent-free*

- In addition to a scent-free policy, staff or students with ES may require additional measures to accommodate their needs. For example:
  - Seat affected students near a window that provides fresh, clean air (caution regarding pollen season or outdoor pollution sources).
  - Provide a floor model (portable) high efficiency particulate air (HEPA) filter and activated charcoal air filter in the classroom(s) (see Resources).
  - Place affected students and teachers in classrooms that do not have carpet.
  - Leave the air delivery system on after school hours, particularly when cleaning or other activities are taking place. If the system is turned off or air circulation rates are reduced during the night or on weekends, ensure that it is turned on for at least an hour before the students enter. In addition, open windows (at least 2 per classroom) mid-morning and mid-afternoon as weather permits (caution during pollen season).
  - Avoid pets, plants and compost bins in the classroom(s) of affected staff and students. People with ES often experience symptoms when exposed to these.
  - Locate photocopy, laser printers, and laminating equipment in a separate room with dedicated ventilation.

<sup>11</sup> For more information see Envirodesic Certification at <http://www.envirodesic.com/>.

<sup>12</sup> For more information see *Scent-free School Programs* at <http://www.casle.ca/ArticleDetail/tabid/77/smId/413/ArticleID/17/refTab/36/t/Scent-Free-Management-Plan-2008/Default.aspx>.



- > Reduce contamination from outdoor air by implementing a no-idle vehicle-zone around the school.<sup>13</sup>
- > Provide notice in advance of all planned renovations and maintenance projects. Schedule the work during holiday periods or summer break, to allow sufficient time for off-gassing of products and materials. For example, for “heavy” maintenance/cleaning (e.g. floor waxing and stripping), schedule during holiday periods to allow one to two weeks for off-gassing. For more extensive renovations, schedule at the beginning of the summer break to allow two months for off-gassing<sup>14</sup>. Always use least toxic materials and methods for cleaning and renovations.
- > Do not use chemical room deodorizers anywhere in the school, including in washrooms. Freshen air by removing or diluting the offending odor (by cleaning, ventilation or absorption), not by covering it with another chemical.
- > Request information from the individual or the parents about what materials cause symptoms for the individual with ES.
- > Maintain a registry of vulnerable staff and students to ensure parents are notified in the event of unexpected hazards or before unavoidable renovation or maintenance projects, to provide adequate protection for affected individuals.<sup>15</sup>

## *Cleaning Guidelines and Products*

- > Cleaning and disinfection products:
  - > often contain known respiratory irritants, which can aggravate asthma symptoms in children and adults with asthma;
  - > may contain ingredients associated with cancer, endocrine disruption and other negative health effects in humans; and
  - > can be very dangerous when mixed (e.g. mixing chlorine bleach with products containing ammonia creates toxic gasses).<sup>16, 17</sup>

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<sup>13</sup> For more information on *Idle-free Schools* see [http://www.cleanairpartnership.org/idle\\_free\\_for\\_schools](http://www.cleanairpartnership.org/idle_free_for_schools).

<sup>14</sup> These are general guidelines as off-gassing of products and materials vary depending on several factors, such as ventilation rates, VOC levels in products, etc. For more information see *Healthy School Design* at <http://www.casle.ca/ArticleDetail/tabid/77/smld/413/ArticleID/3/refstab/36/t/Healthy-School-Design-and-Construction-Guidelines-2008-Revision/Default.aspx>.

<sup>15</sup> Adapted from Canadians for A Safe Learning Environment (CASLE), *Helping Sensitive Students In and Out of the Classroom*, at <http://www.casle.ca/ArticleDetail/tabid/77/smld/413/ArticleID/45/refstab/56/t/Helping-Sensitive-Students-In-and-Out-of-the-Classroom/Default.aspx> and *Eco Classrooms* <http://casle.ca/Portals/0/articles/Eco-Classrooms.pdf>. Refer to these guidelines for further information and recommendations.

<sup>16</sup> INFORM. *Cleaning for Health*. 2009. Retrieved April 22, 2010 from [http://informinc.org/project\\_cleaning\\_health.php](http://informinc.org/project_cleaning_health.php).

<sup>17</sup> Toxic Free Canada. *Cleaners and Toxins: How to get toxic cleaners out of your workplace and out of the environment*. 2009. From [http://leas.ca/UserFiles/File/pdf/Cleaners\\_Toxins\\_Guide\\_2009.pdf](http://leas.ca/UserFiles/File/pdf/Cleaners_Toxins_Guide_2009.pdf).

- > Take Precautions when Cleaning and Disinfecting:
  - > If it is not possible to avoid carpet in an affected student or teacher's room(s), purchase a HEPA vacuum cleaner, and vacuum the carpet(s) frequently. Consider replacement of carpeting with hard surface flooring using least toxic glues (see Resources).
  - > Do not use a regular vacuum on carpets as they release dust (from the carpet) into the air.
  - > Do not use "mop oil" on mops or any mop that has been treated with a chemical to attract dust. Instead, use a microfiber/self-attractant mop for dry surface cleaning of floors; use a HEPA vacuum; or use a mop dampened with water and a mild mixture of water and baking soda or vinegar. All products, including vinegar, need to be tested by the sensitive individual(s) to ensure they are tolerated prior to their use. Ensure all areas are well ventilated after cleaning.
  - > Implement changes to cleaning schedules to avoid cleaning when the staff and students are in the school. If cleaning must take place during school hours, for example, when cleaning up a spill, use least toxic products and methods. Use a microfiber cloth and water for routine tasks, such as wiping whiteboards.
  - > Musical instruments can be disinfected by using a 3% hydrogen peroxide solution on a microfiber cloth and wiping the instrument for 10 seconds. Hydrogen peroxide is generally tolerated by most people with ES.\*
  - > Purchase least toxic, fragrance-free dry-erase markers. Wipe whiteboards clean with a microfiber cloth and water (do not use fragranced solvent product).
  - > Go through the drawers, cupboards and storage closets in the classrooms and remove any products that are not fragrance-free.
  - > Replace chalk with a low-powder chalk and use damp chalk erasers or a microfiber cloth to clean blackboards.
  - > Remove any toxic, scented products from the art room and storage closet. See Less Toxic Guide and [www.casle.ca](http://www.casle.ca) for art supplies information (see Resources).
  - > Provide fragrance-free mild soap detergents for general hand washing and dishwashing. See Less Toxic Guide (see Resources).
  - > Provide fragrance-free, least toxic soap in washrooms. See Less Toxic Guide (see Resources).
  - > Wipe change rooms down with baking soda in water or trisodium phosphate (TSP) (if tolerated) to help remove odours.
- > Choose least-toxic cleaning materials:
  - > Small doses can affect functions of the body. This is applicable for all children, who are more vulnerable to environmental contaminants than adults, and in particular, to children and adults with environmental sensitivities.

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\*Some disinfection products contain accelerated hydrogen peroxide, which may not be tolerated by all people with environmental sensitivities. It is important to have the affected individual test the product first, for tolerance.

- Individuals with allergies, asthma and other respiratory illnesses; some skin conditions; sufferers of headaches or migraines; and those with ES may all experience difficulties from cleaning product ingredients, including active and inactive ingredients, dyes and added fragrances, natural or otherwise.
- Because individuals with ES have their own array of sensitivities and symptoms, it is wise to include them in making product choices. Read labels, Material Safety Data Sheets (MSDS), manufacturer claims and lab results, if available, to choose products. **Final decisions are best made with the affected individual's input. This may mean having them test the products at home prior to use at the school.**
- Special care needs to be taken in choosing products that can come in direct contact with people. For example, volatile ingredients can enter the halls from custodial rooms containing concentrated cleaning products, from atomized or sprayed products, and from products applied to the skin, such as hand soap.
- In general, choose products that do not have hazard symbols on the label, are **fragrance-free, contain no dyes, preservatives, solvents, phosphates, caustics or chlorines**. Choose products that **do not off-gas volatile organic chemicals (no VOC)**. In addition products should not contain known carcinogens, mutagens, teratogens, or endocrine disruptors.
- Avoid disinfectants and hand sanitizers containing Triclosan. Choose scent-free hand sanitizers that are the least toxic possible, and supervise their use to minimize exposures from overuse.
- Most disinfectants (i.e. for washrooms and water fountains) are toxic by design. Choose scent free and least toxic products, such as hydrogen peroxide, when possible. Disinfect after hours when possible.
- "Green" products are not always adequate for ES people.
  - Ingredients that are fine for the natural environment may still be harmful to humans. For example, d-limonene, from citrus, is a strong solvent and also combines with natural ozone to create formaldehyde. D-limonene is a very common allergen and also usually triggers symptoms in individuals with ES.
  - "Green" products often have added "natural" scents, usually to mask the odours of the active ingredients, and these scents may cause symptoms in people with allergies to these substances and also to ES individuals (e.g. mint, pinene, eucalyptus, and others are common allergens) and ES individuals commonly experience symptoms when exposed to them.
  - Product claims can be misleading. For example, "non-toxic", "hypo-allergenic", "green", "natural", "earthwise", "eco-friendly" ... and many other such words and phrases have no legal meaning. See The Seven Sins of Greenwashing (see Resources).

- > Caution is warranted when using MSDS to choose products. Some ingredients may not be listed. For example, some list only “active” ingredients. MSDS are not required to list ingredients that make up less than 1% of the product, and carcinogens below 0.1% can be exempt.
- > Some companies have developed products with ES in mind. See [www.lesstoxicguide.ca](http://www.lesstoxicguide.ca) and the Healthy Indoors Partnership Buyers Guides (see Resources).
- > “Unscented” or “scent-free” labels can be misleading. Industry Canada says there is no firm rule on “unscented” products. In general there must be only enough masking scent to mask other odours from the product’s ingredients. On average, unscented products contain 0.6% added fragrance, while scented products contain on average 1.5% fragrance.
- > Cleaning products and the custodial closet:
  - > Replace current cleaning products with a product line designed for people with environmental sensitivities (see Resources).
  - > Following the changeover of cleaning products, wash down all surfaces of custodial closets (including door, shelves, containers, etc.) with baking soda in water or trisodium phosphate (TSP) to remove residue from current cleaning products.
- > In general:
  - > Use as few cleaning products as possible and the least toxic product for each job. For example, a good all-purpose cleaner may be able to clean floors, walls, desks and glass.
  - > Use microfiber cloths and mops dampened with water (preferred), mild vinegar and water solution or least toxic (tolerated) cleaning materials for cleaning, particularly if cleaning is necessary during school hours (e.g. wiping whiteboard, wiping spills, etc.). Using microfiber cloths can reduce or even eliminate the need for many cleaning products.
  - > Custodial closet doors need to be kept closed to help prevent concentrated product odours from escaping into the halls.
  - > Squirt, don’t atomize. Squirt cleaning products directly into the cleaning cloth and not into the air toward a surface. This minimizes the presence of respirable droplets.
  - > Avoid use of aerosol propellants.
  - > HEPA vacuum and damp-mop or use self-attractant mops instead of sweeping.
  - > Take care that staff do not bring products from home.
  - > It is recommended that the trial of a product by a sensitive individual take place outside of the school (e.g. in the home) to determine if it is tolerated/acceptable.
  - > Remember that this is a process. There may be more than one trial to find the most tolerated products.

Use recommended guidelines to improve the air quality in the school, such as the *Indoor Air Quality: Tools for Schools Action Kit for Canadian Schools* that is available from Health Canada, or the modified version from CASLE (see Resources – Indoor Air Quality, page 12).<sup>18</sup>

## Final Comment

**All of the recommendations in this Guide will benefit the school environment (indoor and outdoor air quality). Any product(s) that is tolerated by individuals with environmental sensitivities is generally the least toxic product, and therefore, will be safer for all staff and students, particularly those with asthma, allergies and any other respiratory illnesses.**

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<sup>18</sup> Adapted from Canadians for A Safe Learning Environment (CASLE), *Choosing Healthy Cleaning Alternatives* at <http://www.casle.ca/ArticleDetail/tabid/77/smId/413/ArticleID/12/reftab/56/t/Choosing-Healthy-Cleaning-Alternatives/Default.aspx>. Also see *Choosing Cleaning Products* at <http://www.casle.ca/ArticleDetail/tabid/77/smId/413/ArticleID/40/reftab/56/t/Choosing-Cleaning-Products/Default.aspx>.

## Resources (selected)

### Scent-free/Less-toxic Product Lists and Information

- Guide to Less Toxic Products [www.lesstoxicguide.ca/](http://www.lesstoxicguide.ca/)
- Canadians for A Safe Learning Environment (CASLE) [www.casle.ca](http://www.casle.ca) (numerous resources)
- We Share the Air: Dalhousie University  
[http://environmentalhealthandsafetyoffice.dal.ca/radiatio\\_1589.html](http://environmentalhealthandsafetyoffice.dal.ca/radiatio_1589.html)
- Canadian Centre for Occupational Health and Safety  
[www.ccohs.ca/oshanswers/hsprograms/scent\\_free.html](http://www.ccohs.ca/oshanswers/hsprograms/scent_free.html)
- The Canadian Lung Association  
[http://lung.ca/protect-protegez/pollution-pollution/indoor-interieur/scents-parfums\\_e.php](http://lung.ca/protect-protegez/pollution-pollution/indoor-interieur/scents-parfums_e.php)
- Healthy Indoors Partnership, Buyers Guide for Professionals and Consumers  
<https://owa2k3.sw.ca/exchweb/bin/redirect.asp?URL=http://www.casle.ca/ArticleDetail/tabid/77/smids/413/ArticleID/150/reftab/56/>
- The Seven Sins of Greenwashing <http://sinsofgreenwashing.org/>
- Toxic Free Canada. Cleaners and Toxins: How to get toxic cleaners out of your workplace and out of the environment. [http://leas.ca/UserFiles/File/pdf/Cleaners\\_Toxins\\_Guide\\_2009.pdf](http://leas.ca/UserFiles/File/pdf/Cleaners_Toxins_Guide_2009.pdf)

### Indoor Air Quality in Schools

- Health Canada: Indoor Air Quality – Tools for Schools  
[www.hc-sc.gc.ca/ewh-semt/pubs/air/tools\\_school-outils\\_ecoles/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/pubs/air/tools_school-outils_ecoles/index-eng.php)
- Pollution Probe: Healthy Schools.com <http://www.healthyschools.com/>
- Canadians for A Safe Learning Environment (CASLE)  
<http://www.casle.ca/InformationResources/tabid/56/Default.aspx> (numerous resources including information on choosing classroom and art supplies, pest control, air filters, ventilation and air quality testing, modified Indoor Air Quality Tools for Schools Action Kit) <http://www.casle.ca/ArticleDetail/tabid/77/smids/413/ArticleID/3/reftab/36/t/Healthy-School-Design-and-Construction-Guidelines-2008-Revision/Default.aspx> and <http://www.casle.ca/ArticleDetail/tabid/77/smids/413/ArticleID/124/reftab/56/t/Indoor-Air-Quality-Tools-for-Schools-Action-Kit/Default.aspx>
- New Brunswick Lung Association Healthy School Program <http://www.nb.lung.ca/schools/>
- Healthy Indoors Partnership [http://www.cullbridge.com/Projects/Healthy\\_Indoors.htm](http://www.cullbridge.com/Projects/Healthy_Indoors.htm) (contact to obtain information on comparison of portable air filters)
- <http://www.pollutionprobe.org/Reports/schools%20main%20-%20pdf.pdf>

## Environmental Sensitivities

- Womens Health Matters – Environmental Health Centre  
[www.womenshealthmatters.ca/centres/environmental/index.html](http://www.womenshealthmatters.ca/centres/environmental/index.html)
- Canadian Human Rights Commission  
[http://www.chrc-ccdp.gc.ca/research\\_program\\_recherche/publications\\_publications-en.asp#2](http://www.chrc-ccdp.gc.ca/research_program_recherche/publications_publications-en.asp#2)  
(see reports on Environmental Sensitivities May 2007)
- Environmental Health Association of Ontario <http://ehaontario.ca/>
- Environmental Health Association of Nova Scotia [www.environmentalhealth.ca/](http://www.environmentalhealth.ca/)
- Canada Mortgage and Housing Corporation, Building Materials for the Environmentally Hypersensitive <https://www03.cmhc-schl.gc.ca/b2c/b2c/init.do?language=en&shop=Z01EN&areaID=0000000016&productID=00000000160000000007> (CMCH Order Desk - 1 800 668-26420)
- Canadians for A Safe Learning Environment (CASLE) – Eco Classrooms <http://www.casle.ca/ArticleDetail/tabid/77/smId/413/ArticleID/125/refTab/56/t/ECO-classrooms/Default.aspx>

## Children's Environmental Health

- Canadian Partnership for Children's Health and the Environment [www.healthyenvironmentforkids.ca](http://www.healthyenvironmentforkids.ca)
- Canadian Association of Physicians for the Environment [www.cape.ca/children.html](http://www.cape.ca/children.html)
- Toronto Public Health [www.toronto.ca/health/hphe/children.htm](http://www.toronto.ca/health/hphe/children.htm)
- Pollution Probe <http://www.pollutionprobe.org/Publications/Childrens.htm>

## Other

- Green Ontario –Dry Cleaning <http://www.greenontario.org/solutions/drycleaner.html>

## Bibliography

1. Canadians for A Safe Learning Environment, selected resources from [www.casle.ca](http://www.casle.ca)
2. Womens Health Matters, Environmental Health Centre at [www.womenshealthmatters.ca/centres/environmental/index.html](http://www.womenshealthmatters.ca/centres/environmental/index.html)