

Chemical Exposures as Barriers to Access in Hotels: Clearing the Air and the Way to Improved Access

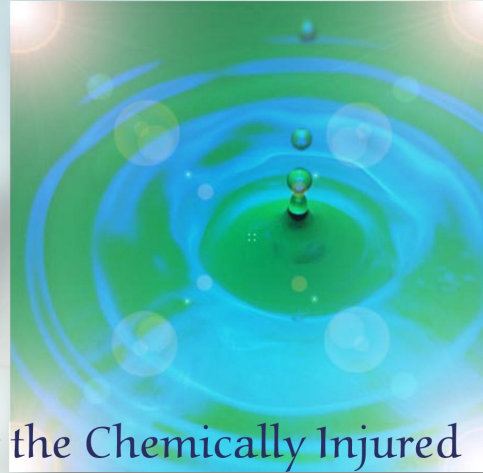
MiACI

Massachusetts Association for the Chemically Injured





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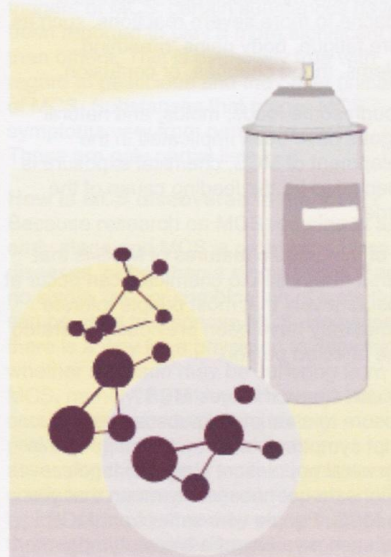


- Founded in 1994, MACI is a non-profit, statewide support, education, resource and referral network for people living with illnesses related to chemical injuries, their families and those dedicated to environmental illness prevention.
- Network extensively with health and education related organizations and public health working groups.
- Members represent a cross-section of the public and the spectrum of sensitivity.

MA Department of Public Health 2004

What You Should Know About

Multiple Chemical Sensitivity



Bureau of Environmental Health
Massachusetts Department of Public Health

The Air We Breathe Matters!

- Improved indoor air quality in hotels could benefit >6.5 million people per day across the U.S.!!!
- U.S. lodging properties provide rooms for 4.7 million travelers daily*
- Hotels employee >1.8 million employees across U.S.*
- Massachusetts lodgings employ > 32,000 people*

*American Hotel and Lodging Association www.ahla.com/uploadedFiles/Massachusetts

Incentive for Change:

National Prevalence of Chronic Health Conditions

- Multiple Chemical Sensitivity disables 4-6%
- Some degree of Chemical Sensitivity 30%
- Fragrance Sensitivity 30.5%
- Asthma ↑
 - Adult 8%
 - 10.4 % in MA, one of highest estimates in U.S.
 - Increased 22.4% 2000-2010
 - Children 9.3% - U.S. & MA
- Respiratory/Skin Allergies 11 and 12%
- Migraines 16%

MACI Member Travel Survey

Difficulties encountered

- Ventilation & HVAC systems poorly designed or malfunctioning.
- Windows don't open
- Fragrance
 - Worn by staff
 - Air fresheners
 - Laundry products
 - Cleaning supplies, Febreze
 - Toiletries
 - Shuttle buses

MACI Member Survey cont.

- Cleaning supplies:
 - Chlorine bleach & petroleum based solvents
 - Pine & citrus (terpene) based cleaners
- Mold
- Cigarette smoke
- Pesticides/Herbicides – building & lawn applications
- Renovations – off gassing of construction materials
- New carpeting/furnishings
- Electromagnetic & radio frequency sensitivity

MACI Member Travel Survey

What is most helpful?

- Housekeeping managers knowledgeable of allergies or sensitivities who demonstrated understanding of the needs/challenges.
- Front desk staff trained to the same level to answer questions with accurate current information.
- Success staying at a hotel depended more on staff at individual hotel than hotel corporation.

A Path Toward Change

- Unfortunately, no standardized program.
- Explore resources offered to assess hotel problem areas & products.
- Consult with others who have implemented fragrance free policies or healthier product programs for lessons learned.
- Recommend consultation with experts knowledgeable of toxins/toxicants & chemical sensitivities after examining areas for change & products in use.
- Spread the good news! Advertise/publicize changes to employees, public & allergy/MCS groups.

Resources

- **The Architectural and Transportation Barriers Compliance Board (Access Board):**
<http://www.access-board.gov/research/completed-research/indoor-environmental-quality/introduction?highlight=WyJtY3MiXQ==>
- The Centers for Disease Control Fragrance Free Workplace Policy:
http://globalindoorhealthnetwork.com/files/CDC_Indoor_Environmental_Quality_Policy_2009.pdf
- Listing of Fragrance Free Policies:
<http://list.ly/list/1xU-fragrance-free-policies-from-around-the-world>
- Dr. Anne Steinemann: <http://drsteinemann.com/>
- Silent Spring Institute: <http://silentspring.org>

U.S. Centers for Disease Control and Prevention

Fragrance Free Policy - 2009

“...to promote and protect the health and well-being of CDC personnel, contractors and visitors; to prevent work-related injury and illness, as well as harm and pollution of the environment...”

- Applies to >15,000 employees
- Policy includes
 - Personal products
 - Cleaning products
 - Renovation, demolition, maintenance/operations activities & products
 - Pest control for lawn & building maintenance

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The 20 Most Common Chemicals Found in 31 Fragrance Products and Some of Their Effects (From 1991 EPA Study)

Reference: Linda Wallace, Environmental Protection Agency

Phone (703) 648-4287

Compiled by Julia Kendall (1995 - 1997)

References: Material Safety Data Sheets (MSDS)

Excerpts from "Health Hazard Information"

Distributed by The Environmental Health Network (EHN) [of California]

P.O. Box 1155, Larkspur, CA 94977-1155; tel. 415.541.5075

Fragrance Product Chemistry

- 3100 stock chemical ingredients
- Fragrance contact allergy = global health issue
 - 1 of top 5 allergens in N. America & Europe
- Loopholes in 1973 labeling law allows non-disclosure
- Campaign for Safe Cosmetics/Environmental Working Group report *Not So Sexy: The Health Risks of Secret Chemicals in Fragrance* (2010)
 - Average of 14 ingredients not disclosed
 - Average of 10 ingredients = sensitizers
 - Average of 4 ingredients = hormone disrupters

Limonene

“All natural” doesn't mean non-toxic

- Lemon or orange scent, dissolves oil
- Used in personal care, air fresheners, cleaning & laundry products
- Reacts with ozone to create formaldehyde and other aldehydes
- Known sensitizer



Product Labels Can Be Deceiving

Actual Chemicals Versus Listed Ingredients in a Popular Fragranced Laundry Product	
Ingredients listed on label	biodegradable fabric softening agents (cationic)
Ingredients listed on MSDS	nonionic and cationic fabric softening agents, perfume, colorant, quality control agents
Actual chemicals (identified in analysis)	<p>*ethanol, d-limonene, methoxy ethane, *α-pinene, *benzyl acetate, isocineole, β-pinene, 2-methoxy propane, linalool, (Z)-3,4-dimethyl-3-hexen-2-one-, *chloromethane, gammaterpinene coeluted with 2, 7 dimethyl-2, 7-octanediol, *acetaldehyde, 2, 4-dimethyl-1, 3-cyclopentanedione, 3-methyl-2-buten-1-ol acetate, α-terpinolene, diethoxy methane, 1,5-dimethyl-1, 4-cyclohexadiene, 1-methyltricyclo[2.2.1.0(2,6)]-heptane, α-terpinene</p> <p>*classified as toxic or hazardous under federal laws</p>

Source: Dr. Anne Steinemann, *Healthier Alternatives to Fragranced Consumer Products*
www.drsteinemann.com

Recommended Changes

- Choose products with no fragrance
- Remove sources of odor, don't cover it
- Ventilate, ventilate, ventilate
- Baking soda, white vinegar, hydrogen peroxide, unscented castile soap as effective cleaners
- Industrial steamers to clean/sterilize w/o chemicals, especially carpets
- Use HEPA filters on vacuums

Selecting Safer Products

- Currently no standardized certification program
- Databases for consumer products may be helpful

- Toxic Use Reduction Institute:

Ten Ways to Find Safer Cleaners:

www.turi.org/TURI_Publications/Tip_Sheet_Series/

[Ten_Ways_to_Find_Safer_Cleaners](#)

- Environmental Working Group:

Skin Deep Guide to Cosmetics: www.ewg.org/skindeep/

Healthy Cleaning Guide: www.ewg.org/guides/cleaners

- The NIH Household Products Database:

<http://householdproducts.nlm.nih.gov/index.htm>

- The Good Guide: www.goodguide.com

Clean Air Room

Room Location

- On a middle floor – locate in neutral zone
- Away from end exterior walls or stairwells
- Away from elevators & generators

Mechanical & Electrical Systems for Room

- Independent ventilation system supplying filtered outside air & exhaust bathroom continuously
- Maintain positive pressure to outside & hallway
- Monitor temperature, humidity, carbon dioxide & monoxide, VOC's
- Filter water to remove chlorine, chemical contaminants.
- Ability to shut off WIFI router, provide cord connection to internet.
- No fluorescent lights

Clean Air Room cont...

Room Finishes and Furnishings

- Ceramic/stone tile or factory-finished wood flooring, not carpeting
- Formaldehyde free and no or low VOC building materials, paint, caulking, adhesives
- Seamless tub enclosure or large format tiles w/ cured epoxy grout
- No vinyl wallpaper or furnishings

Clean Air Room cont...

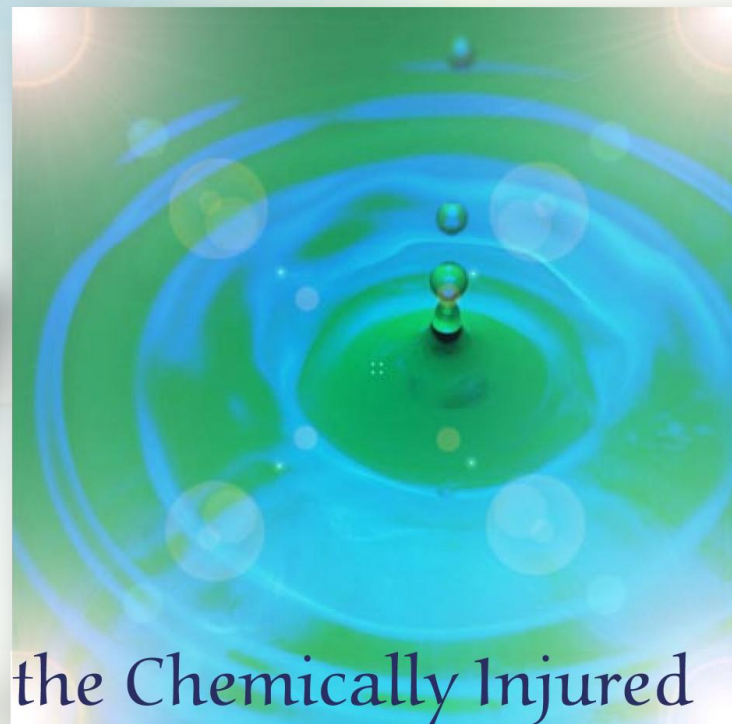
Room Finishes and Furnishings

- No particle board.
- Minimize use of fabrics, use inherently fire-resistant materials where necessary
- Non-toxic furnishings & mattress
- Barrier cloth covers on pillows & mattress
- Cotton blankets rather than down or synthetic fill

Multiple Chemical Sensitivity Awareness Week

May 11-17





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